

## SAVE ENERGY, CUT COSTS, IMPROVE COMFORT, REDUCE CARBON

Save 20-50% on heating & cooling costs

Airius - The world leaders in Destratification technology



## Lloyds TSB

Mercedes-Benz



## The co-operative

















GE imagination at work

Audi

























































































**ALSTOM** 













**Swiss Re** 

## 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.

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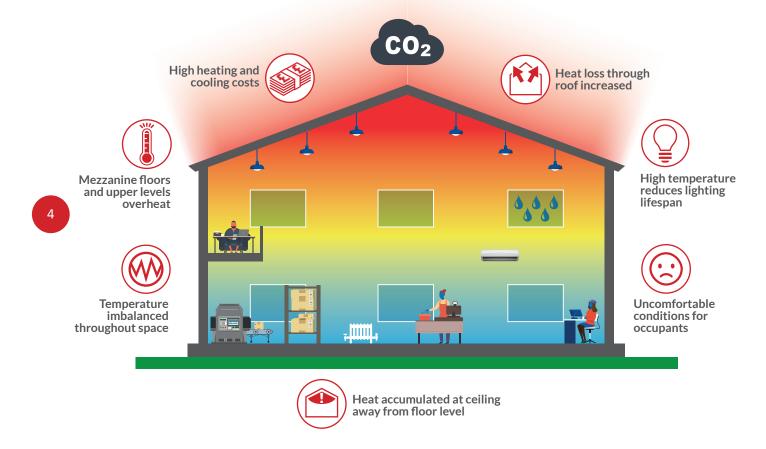
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## Stratification

hermal 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

irius 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 across the floor until it hits a vertical surface and/or air coming from neighbouring Airius fans and then it rises back up towards the ceiling.



As this air rises it entrains back into the descending column which creates millions of tiny vortices, making the air move 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. Savings on average are between 20 - 50%, although higher levels have been recorded (See Lush Cosmetics Case Study, page 35).

Benefits:

20% - 50% energy savings | 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?

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

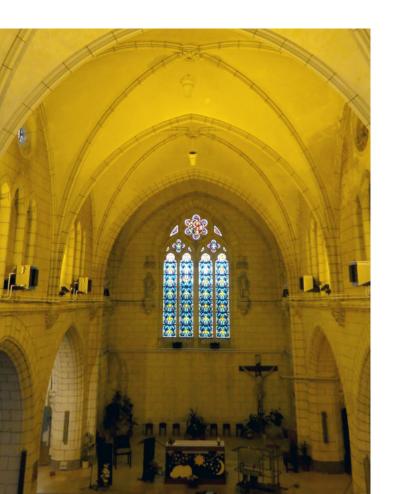
This difference occurs when hot air rises towards the ceiling or roof because it is lighter than the surrounding cool air.

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 25% 50% or more
- Reduces cooling costs by 20% 40% or more
- Reduces CO<sub>2</sub> emissions by 20% 50% or more
- 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 / CRC 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@airiusds.com.



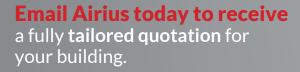
# Standard Series

Reducing energy costs since 2004, the Airius Standard Series of free hanging destratification fans are our most popular range selling to date over 300.000 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.



info@airiusds.com













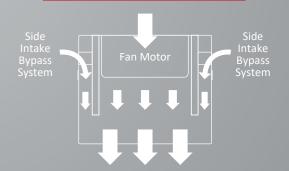
# Onyx Series



he Airius Onyx Series is the next evolution of our

Incorporating advanced fan engineering paired with

### Bypass Technology™







**Benefits Heating & Cooling** 



Advanced Airflow Technology



**PSC & EC Motor Options** 



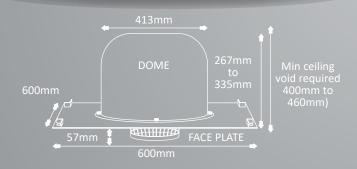
# Suspended Series





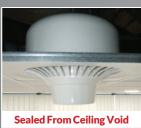
## Weight & dimensions

Unit	Nozzle Length	Weight	
		Mount	Fan
Model 10 (Short)	120mm	3.6kg	4.1kg
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











**Recirculates Air Below Ceiling** 





# **Designer Series**



he Airius Designer Series shares many similarities



### **All-inclusive features**









DESIGNER

# Retail Series

aintaining comfortable environments in retail



- 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 systemsSignificantly reduced HVAC maintenance costs



For Aisles & Open Spaces



**Dries Wet Floors Quickly** 



**Before Airius** 



**After Airius** 





## **Q** Series



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

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.

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

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

Airius fans incorporate motors from

### **EBM Papst**

who have been building fan motors since 1963 and are the world's leading fan motor manufacturer.











## **Pearl Series**

he 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.





**Fits Tight Spaces** 



**Suspended Series Compatible** 





# Sapphire Series



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 7-23 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.











## **Diamond Series**

o cater for the needs of high



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.











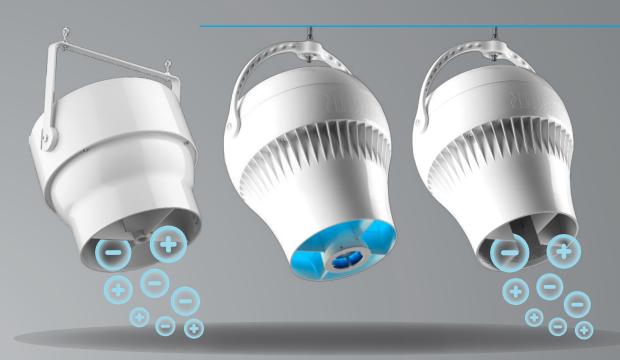
High Performance Cooling

**Out Performs HVLS Fans Aluminium Housing** 



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## **PureAir Series**



he Airius PureAir Series is the latest combination of air and surface purification technology, neutralising up to 99.99% of all known viruses, germs and bacteria (including COVID19), as well as VOCs (Volatile Organic Compounds), allergens, mould and odours significantly improving IAQ (Indoor Air Quality), integrated within the world's leading

### Benefits include

- Continuous air & surface purification
  Up to 99.9%+ inactivation of surface pathogens
  Up to 99.9%+ inactivation of airborne pathogens
  Up to 99.9%+ reduction of mould & odours
  Up to 99.9%+ reduction of gases, vapours & VOCs
  Makes sub-micron (<0.3µm) particles filterable, eliminating pet dander, pollen, dust etc.</li>
  Reduces staff absenteeism
- Reduces staff absenteeism
- Reduces Sick Building Syndrome
- Available with self-cleaning purification system
   Purifies the whole space at the same time
- No filters required
- Tested & certified technology (UL, FAA, Ozone)





PUREAIR erie

## **Titan Series**

or 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 whole 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

eiling 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 20 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**









Il Airius systems are designed to function on a operating units at varying output depending upon the

#### 1 Amp Controller The 1 Amp Controller suitable for:

- 14 x Airius Model 10's

- 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
  3 x Airius Model 50/PS-4's
  1 x Airius Model 60/PS-4's
  3 x Airius Model Onyx PS-4

- 14 x Airius Model S3's
- 11 x Airius Model S2's7 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 10's
  57 x Airius Model 15's
  35 x Airius Model 25's
  21 x Airius Model 45/PS-4's
  15 x Airius Model 50/PS-4's
  7 x Airius Model 60/PS-4's

- 15 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
  15 x Airius Model 50/PS-4's
  7 x Airius Model 60/PS-4's
  15 x Airius Model Onyx PS-4
  74 x Airius Model S3's
  57 x Airius Model S2's
  35 x Airius Model S1'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.

# Our product range

Explore the most versatile and efficient range of destratification fans available on the market to ensure all buildings are heated and cooled efficiently and economically.

#### **Standard Series**



Model 10 (Short)



Model 10



Model 15



Model 25



Model 45



Model 60



Model 100

### **Designer Series**



Model 10 (Short)



Model 10



Model 15



Model 25



Model 45



Model 60



Model 125

#### Pearl Series



Onyx Series









P1, P2 & P3 Model OX/EC Model 20 (Standard) Model 20 (Aisle)

#### Sapphire Diamond Series



Model G400



Model G560

## Q Series



Model 50

Model Pearl S3, S2, S1 & EC



**Suspended Series** 

Model 10, 15 & 25



Model 45



**Titan Series** 

Available in any Airius Series

#### **PureAir Series**



PHI Series



NPBI Series



Pearl Series



1 AMP Speed 5 AMP Speed Controller



Controller



EC Speed Controller



Smart Speed Controller



Airius Winch Range

**Controls** 

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## **Unit Dimensions & Weights**

STANDARD SERIES	Weight	Diameter	Height (To Rim)	Height (Total)	Shipping Weight	Shipping Height	Shipping Width	Shipping Length
Model 10 (Short)	3.20 KG	325 MM	311 MM	444 MM	4.75 KG	34 CM	34 CM	34 CM
Model 10	4.10 KG	325 MM	413 MM	546 MM	5.10 KG	45 CM	34 CM	34 CM
Model 15	4.10 KG	325 MM	413 MM	546 MM	5.10 KG	45 CM	34 CM	34 CM
Model 25	4.10 KG	325 MM	413 MM	546 MM	5.10 KG	45 CM	34 CM	34 CM
Model 25/EC	4.10 KG	325 MM	413 MM	546 MM	4.50 KG	45 CM	34 CM	34 CM
Model 45/PS-4	6.30 KG	375 MM	455 MM	605 MM	6.50 KG	49 CM	37 CM	37 CM
Model 45/EC	6.30 KG	375 MM	455 MM	605 MM	7.30 KG	49 CM	37 CM	37 CM
Model 60/PS-4	9.90 KG	498 MM	607 MM	823 MM	13.65 KG	75 CM	56 CM	56 CM
Model 60/EC	9.90 KG	498 MM	607 MM	823 MM	14.25 KG	75 CM	56 CM	56 CM
Model 100/EC	20.40 KG	495 MM	N/A	843 MM	23.50 KG	98 CM	57 CM	57 CM
DESIGNER SERIES								
Model 10 (Short)	5.40 KG	333 MM	299 MM	436 MM	6.45 KG	37 CM	37 CM	37 CM
Model 10	6.80 KG	333 MM	400 MM	538 MM	7.60 KG	49 CM	37 CM	37 CM
Model 15	6.80 KG	333 MM	400 MM	538 MM	7.60 KG	49 CM	37 CM	37 CM
Model 25	6.80 KG	333 MM	400 MM	538 MM	7.60 KG	49 CM	37 CM	37 CM
Model 25/EC	6.80 KG	333 MM	400 MM	538 MM	7.00 KG	49 CM	37 CM	37 CM
Model 45/PS-4	8.60 KG	373 MM	452 MM	610 MM	9.65 KG	57 CM	41 CM	41 CM
Model 60/PS-4	17.20 KG	492 MM	610 MM	838 MM	20.00 KG	74 CM	56 CM	56 CM
Model 60/EC	17.20 KG	492 MM	610 MM	838 MM	21.00 KG	74 CM	56 CM	56 CM
Model 125/EC	45.30 KG	690 MM	N/A	938 MM	75.00 KG	105 CM	81 CM	81 CM
ONYX SERIES								
Model PS-4	6.00 KG	368 MM	343 MM	445 MM	7.00 KG	38 CM	41 CM	41 CM
Model EC	6.00 KG	368 MM	343 MM	445 MM	7.00 KG	38 CM	41 CM	41 CM
RETAIL SERIES								
Model 20/EC-S	5.20 KG	366 MM	254 MM	406 MM	5.45 KG	31 CM	41 CM	41 CM
Model 20/EC-A	5.20 KG	366 MM	331 MM	480 MM	6.65 KG	38 CM	41 CM	41 CM
Model 20/EC-S-CON	5.20 KG	366 MM	254 MM	406 MM	5.75 KG	31 CM	41 CM	41 CM
Model 20/EC-A-CON	5.20 KG	366 MM	331 MM	480 MM	6.70 KG	38 CM	41 CM	41 CM
Q SERIES								
Model 50/PS-4	9.90 KG	387 MM	435 MM	584 MM	9.75 KG	57 CM	41 CM	41 CM
Model 50/EC	9.90 KG	387 MM	435 MM	584 MM	9.60 KG	57 CM	41 CM	41 CM
PEARL SERIES								
Model S1	3.00 KG	286 MM	229 MM	280 MM	3.55 KG	24 CM	29 CM	29 CM
Model S2	3.00 KG	286 MM	229 MM	280 MM	3.55 KG	24 CM	29 CM	29 CM
Model S3	3.00 KG	286 MM	229 MM	280 MM	3.55 KG	24 CM	29 CM	29 CM
Model EC	3.00 KG	286 MM	229 MM	280 MM	3.45 KG	28 CM	31 CM	30 CM
Model EC-CON	3.00 KG	286 MM	229 MM	280 MM	3.65 KG	28 CM	31 CM	30 CM
SAPPHIRE SERIES								
Model PS-4	12.40 KG	495 MM	N/A	330 MM	15.35 KG	45 CM	56 CM	57 CM
Model EC	13.20 KG	495 MM	N/A	330 MM	15.95 KG	45 CM	56 CM	57 CM
DIAMOND SERIES								
Model EC	27.20 KG	564 MM	N/A	546 KG	36.00 KG	65 CM	81 CM	81 CM
SUSPENDED SERIES	Weight	Width	Depth	Height				
Model 10, 15, 25, Pearl S1, S2, S3 & EC	Mount: 3.60 KG Fan: 4.10 KG	600 MM	600 MM	324 MM	4.70 KG	28 CM	63 CM	63 CM
Model 45	Mount: 4.00 KG Fan: 4.10 KG	600 MM	600 MM	412 MM	5.10 KG	34 CM	63 CM	63 CM
Model 10, 15, 25, Pearl S1, S2, S3 & EC	Mount: 3.60 KG Fan: 4.10 KG	600 MM	600 MM	600 MM	<b>14.90 KG</b> (3 p	er 60 CM	63 CM	63 CM
Model 45	Mount: 4.00 KG Fan: 4.10 KG	600 MM	600 MM	600 MM	11.70 KG (2 p	er 60 CM	63 CM	63 CM
	rall. 4.10 NG				50.	7		

## **Technical Data**

At the heart of every Airius destratification fan is a top of the range, highly efficient, AC or EC Motor. Independently tested by BSRIA they provide the most efficient destratification available.

hat makes Airius fans the most effective method of destratification available is the synergy between motor efficiency, the unique patented method of airflow distribution created by the 'Stator Vanes' and the way the units use the laws of thermodynamics to work in their favour.

There are a wide range of units available to suit almost any application. Refer to the data below for a guide to what unit/s you need in your building.

PRODUCT SERIES	Standard & Designer	Standard & Designer	Standard & Designer	Standard & Designer	Standard & Designer
Model	10	15	25	25/EC	45/PS-4
Heating - Ceiling Heights <sup>1</sup>	Up to 3.5m	Up to 5.5m	Up to 7.5m	Up to 9m	Up to 11m
Heating - Nozzle Heights <sup>1</sup>	Up to 3m	Up to 5m	Up to 6.5m	Up to 8m	Up to 10m
Heating - Floor Area <sup>1</sup>	Up to 46m²	Up to 74m²	Up to 111m <sup>2</sup>	Up to 111m <sup>2</sup>	Up to 111m²
Cooling - Ceiling Heights <sup>1</sup>	-	Up to 4m	Up to 6m	Up to 6m	Up to 8m
Cooling - Nozzle Heights <sup>1</sup>	-	Up to 3.5m	Up to 5m	Up to 5m	Up to 7m
Cooling - Floor Area <sup>1</sup>	-	Up to 36m²	Up to 59m²	Up to 59m²	Up to 88m²
Volts <sup>2</sup>	230	230	230	230	230
Watts <sup>2</sup>	13.5	17.4	28	30	45.7
RPM <sup>2</sup>	868	1154	1405	1700	1344
CFM <sup>2</sup>	213	269	342	421	505
m³/hr¹	361	457	581	715	858
AMPS <sup>2</sup>	0.06	0.07	0.12	0.26	0.20
IP Rating	IP55	IP55	IP55	IP55	IP44
Operating Temp <sup>2</sup>	-20°C - 70°C	-20°C - 70°C	-20°C - 70°C	-30°C - 50°C	-40°C - 70°C
Noise Level <sup>2</sup>	0 - 27.7 dB(A)	0 - 28.9 dB(A)	0 - 32.8 dB(A)	0 - 41.8 dB(A)	0 - 32.7 dB(A)

<sup>&</sup>lt;sup>1</sup>Motor data provided by motor manufacturer and is subject to change at any time. Data above is calculated at 50Hz.

<sup>&</sup>lt;sup>2</sup>Noise Levels calculated from nozzle of unit to head height when installed at maximum ceiling height. For additional noise level information contact Airius.



To avoid refurbishment and cleaning charges, all units returned must adhere to the returns criteria.

#### **Unit Coverages, Motor Data & Noise Levels**

Standard	Standard & Designer	Standard & Designer	Standard	Designer	Onyx	Onyx
45/EC	60/PS-4	60/EC	100/EC	125/EC	OX/PS-4	OX/EC
Up to 15m	Up to 17.5m	Up to 19.5m	Up to 32m	Up to 35m	Up to 13m	Up to 15m
Up to 14m	Up to 16m	Up to 18m	Up to 30.5m	Up to 33m	Up to 12m	Up to 14m
Up to 139m²	Up to 185m²	Up to 185m <sup>2</sup>	Up to 232m <sup>2</sup>	Up to 278m <sup>2</sup>	Up to 185m²	Up to 185m²
Up to 8m	Up to 13m	Up to 13m	Up to 22m	Up to 26m	Up to 9m	Up to 9.5m
Up to 7m	Up to 11.5m	Up to 11.5m	Up to 20.5m	Up to 24m	Up to 8m	Up to 8.5m
Up to 88m²	Up to 111m <sup>2</sup>	Up to 111m <sup>2</sup>	Up to 148m <sup>2</sup>	Up to 185m²	Up to 111m²	Up to 111m <sup>2</sup>
230	230	230	230	200-277	230	230
175	126.2	170	390	364	65.6	98
3050	1346	1630	1690	1006	1371	1600
951	1218	1342	1722	4109	1089	1422
1615	2069	2280	2925	6981	1850	2416
1.40	0.58	1.30	2.50	1.80	0.30	0.80
IP44	IP44	IP44	IP54	IP54	IP44	IP54
-25°C - 60°C	-25°C - 75°C	-25°C - 60°C	-25°C - 60°C	-25°C - 60°C	-25°C - 50°C	-25°C - 60°C
0 - 52.8 dB(A)	0 - 38.0 dB(A)	0 - 42.8 dB(A)	0 - 40.7 dB(A)	0 - 37.3 dB(A)	0 - 42.0 dB(A)	0 - 37.3 dB(A)

Each facility has unique fluid dynamics, please contact supplier to specify your system.





### **5 Star Support**

With each Airius system customers are supplied with an easy to follow unit positioning guide, technical specification documents and energy reduction estimate, making installations very simple.

Our Customer Support team is also on hand to offer advice and guidance to new and existing customers 5 days a week by phone, email or in person on site visits. We can also provide out of hours support on specified projects by request.

PRODUCT SERIES	<b>Retail</b> (Standard)	<b>Retail</b> (Aisle)	Quiet	Quiet	Pearl
Model	20/EC-S	20/EC-A	50/PS-4	50/EC	<b>S3</b>
Heating - Ceiling Heights <sup>1</sup>	Up to 8m	Up to 6m	Up to 16m	Up to 18m	Up to 3.5m
Heating - Nozzle Heights <sup>1</sup>	Up to 7.5m	Up to 5.5m	Up to 15m	Up to 17m	Up to 2.5m
Heating - Floor Area <sup>1</sup>	Up to 111m²	CONTACT AIRIUS	Up to 185m²	Up to 185m²	Up to 46m²
Cooling - Ceiling Heights <sup>1</sup>	Up to 6m	Up to 5m	Up to 12m	Up to 12.5m	-
Cooling - Nozzle Heights <sup>1</sup>	Up to 5.5m	Up to 4.5m	Up to 11m	Up to 11.5m	-
Cooling - Floor Area <sup>1</sup>	Up to 59m²	CONTACT AIRIUS	Up to 111m²	Up to 111m²	-
Volts <sup>2</sup>	230	230	230	230	230
Watts <sup>2</sup>	30	30	65.4	98	13.5
RPM <sup>2</sup>	1700	1700	1375	1660	868
CFM <sup>2</sup>	620	620	969	1243	213
m³/hr¹	1053	1053	1646	2111	361
AMPS <sup>2</sup>	0.26	0.26	0.29	0.80	0.06
IP Rating	IP55	IP55	IP44	IP54	IP55
Operating Temp <sup>2</sup>	-30°C - 50°C	-30°C - 50°C	-25°C - 50°C	-25°C - 60°C	-20°C - 70°C
Noise Level <sup>2</sup>	0 - 35.5 dB(A)	0 - 39.0 dB(A)	0 - 32.6 dB(A)	0 - 39.1 dB(A)	0 - 31.3 dB(A)

<sup>&</sup>lt;sup>1</sup>Motor data provided by motor manufacturer and is subject to change at any time. Data above is calculated at 50Hz.

<sup>&</sup>lt;sup>2</sup>Noise Levels calculated from nozzle of unit to head height when installed at maximum ceiling height. For additional noise level information contact Airius.

### **Fan Maintenance**

Airius Destratification Fans require very little maintenance. The type of environment dictates the frequency of maintenance required but to maintain optimum performance we advise that units are:

- Cleaned periodically
- Checked every 3 years for damage or corrosion to: fan unit, hanging bail, safety cable & anchor (where fitted), hanging cable/chain etc, all fixings & ceiling/roof structure
- Inspected every 3 years to review condition of power supply, connections & electrical components



#### **Unit Coverages, Motor Data & Noise Levels**

Pearl	Pearl	Pearl	Sapphire	Sapphire	Diamond
S2	<b>S1</b>	EC	G400/PS-4	G400/EC	G560/EC
Up to 4.5m	Up to 6.5m	Up to 7.5m	Up to 20m	Up to 23m	Up to 25m
Up to 3.5m	Up to 5.5m	Up to 6.5m	Up to 19m	Up to 22m	Up to 24m
Up to 74m²	Up to 111m <sup>2</sup>	Up to 111m²	Up to 232m <sup>2</sup>	Up to 232m²	Up to 300m²
Up to 4m	Up to 5.5m	Up to 6m	Up to 14m	Up to 15m	Up to 20m
Up to 3m	Up to 4.5m	Up to 5m	Up to 13m	Up to 14m	Up to 19m
Up to 36m²	Up to 59m²	Up to 88m²	Up to 140m²	Up to 140m²	Up to 185m²
230	230	230	230	230	230
17.4	28.4	30	192	400	328
1154	1400	1700	1400	1546	1009
269	349	499	2043	2343	4927
457	593	847	3471	3980	8371
0.07	0.13	0.26	0.85	2.60	1.45
IP55	IP55	IP55	IP44	IP54	IP54
-20°C - 70°C	-20°C - 70°C	-30°C - 50°C	-25°C - 40°C	-25°C - 60°C	-25°C - 60°C
0 - 33.7 dB(A)	0 - 36.1 dB(A)	0 - 37.1 dB(A)	0 - 46.3 dB(A)	0 - 45.9 dB(A)	0 - 40.5 dB(A)

Each facility has unique fluid dynamics, please contact supplier to specify your system.

























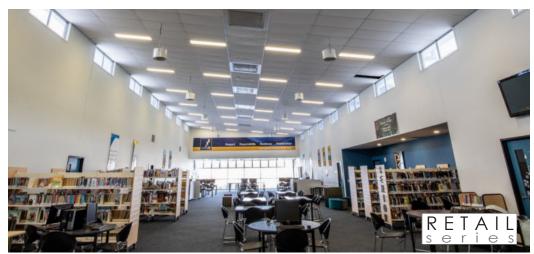


























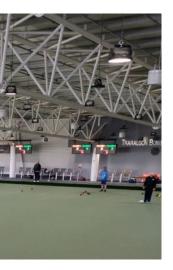






























# **Assured quality**

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%."



# **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 **Key points:** 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.

- 45.07% overall savings
- £62,351 first winter savings
- £21,268 full system & installation cost
- 3,000m<sup>2</sup> 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
- 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



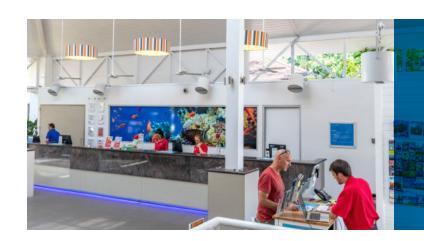
## Ramada Inn

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.

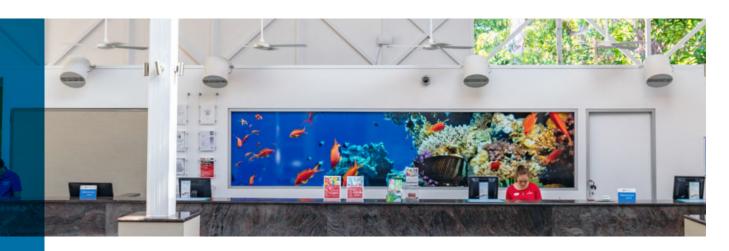


#### **Key Points:**

- 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 much fresher and more comfortable environment with adaptable airflow cooling focused to where it is needed most, but all at a fraction of the cost of an Air Conditioning system.

# **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.

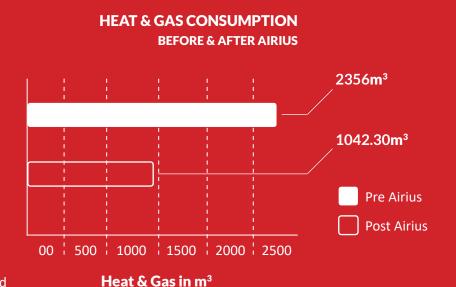
Once at the temperature set point, the Airius system would then continue to maintain the desired conditions with only the one remaining heating unit running intermittently.

In September and October prior to installation of Airius fans the heating gas consumption was 2,356m<sup>3</sup>. In the September and October after installation the heating gas consumption was 1,042.3m<sup>3</sup>.

#### **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.

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## **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.

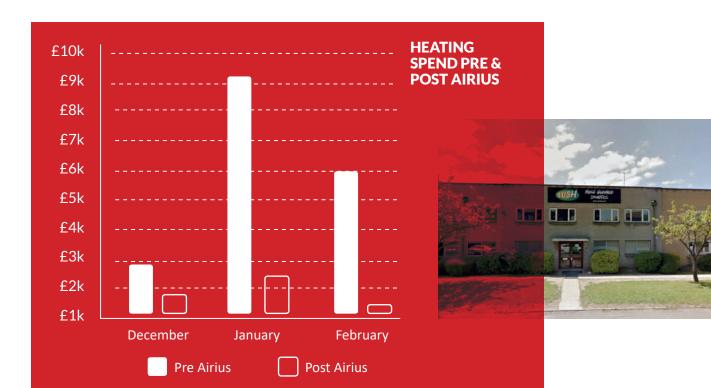
Net Save post Airius = £19,302.45

#### **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<sub>2</sub> targets

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Now rolled out across their network of facilities



#### **CASE STUDY**



## **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. 1,000m<sup>2</sup> in size and the floor to ceiling height was 6.5 - 7 metres.

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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 schools 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:
  - $Area = 1,000 m^2$
  - 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!"

# 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.

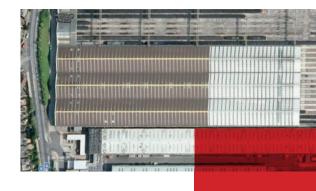
The graph below shows the temperature differentials in the Acton rail maintenance shed at Ground Level and Cant Rail Level both before and after installation of Airius fans.

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 between only 0.5°C.

#### TEMPERATURE READINGS JAN - FEB

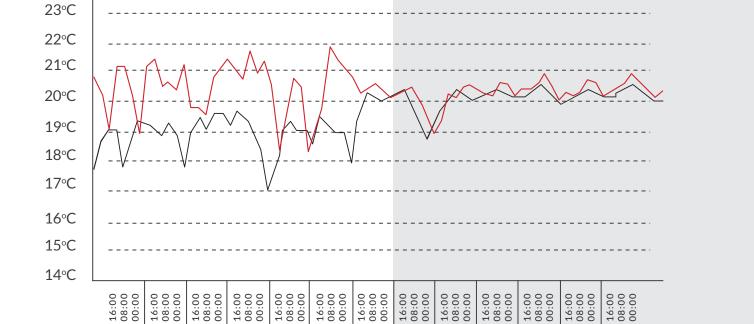
Airius off

Airius on



#### **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<sub>2</sub> reduction



Ground level Cant Rail level

# **Beacon Hospital**

Leading Private Hospital, Dublin

### Located in South Dublin, the Beacon Hospital is

one of the most technologically advanced private hospital's in Europe, with 180 inpatients beds, 1,400 healthcare professionals and 300 consultants.

As one of the leading Hospitals not only in Ireland but also across the wider continent of Europe, the Beacon Hospital set out to source an air and surface purification solution that would not only provide the highest level of protection for patients and staff, but one that also incorporated the latest in cutting edge technology, reinforcing its title of a leading, advanced healthcare provider.



### **Key points:**

- Continuous 24/7 protection
- Airborne & surface purification
- 99.9% effective at neutralising COVID19
- Vastly safer environment for vulnerable people
- Significantly improved ventilation
- All problem odours removed
- VOCs and chemical vapours neutralised
- Improved comfort and reduction in heating bills



After carrying out extensive research on the array of purification systems available, the Beacon Hospital selected the Airius PureAir system to be installed within its clinics and workshop facilities. Installation was carried out by their own contractor and was completed with minimal disruption to the Hospital.

Both patients and staff at Beacon Hospital feel reassured and protected against communicable diseases, including COVID19. The PureAir System is now a core component of the Hospital's Infection Prevention Control strategy, with additional units now installed throughout the facility.

"WE HAVE INSTALLED AIRIUS PUREAIR FANS IN CLINICS AND WORKSHOPS AND HAVE FOUND THE AIR TO BE FRESHER, MORE COMFORTABLE AND ALL ODOURS AND SMELLS HAVE BEEN ERADICATED.

IT HAS PROVIDED CONFIDENCE AMONG **STAFF AND PATIENTS** THAT THEY ARE BEING PROTECTED. WE HAVE ALSO NOTICED A **REDUCTION IN HEATING SETTINGS WITH THE** BENEFIT OF SAVINGS ON ENERGY COSTS."

Sean Penston (Director of Facilities)

## Installation

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

he Airius installation division (Airius Electrical) was launched in 2015. This division offers a full turn-key solution, ensuring our customers get the best results, highest level of service and aftercare at a competitive price.



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 them time and money.

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

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

# Airius Electrical Contractors

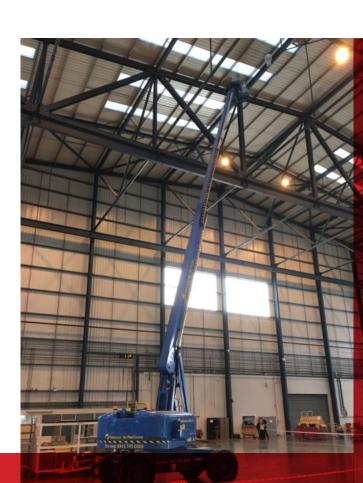
In addition to installing destratification fans we are also fully qualified General Electrical Contractors. Managed through our team at Airius Electrical, we are fully NICEIC accredited under the Approved contractor scheme.











## **FAQs**

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

## hat 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 30 – 50%. With over 300,000 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

Email: paul@airiusds.com



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	<b>4</b> 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!**

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

## info@airiusds.com







## Honeywell









AIRFRANCE /





mitie





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RENAULT

































7/ COBHAM







































































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