



De-stratification is recommended
by The Carbon Trust*

AIRIUS IN AVIATION

Save 20-50% on heating & cooling
costs with Airius - **The world leaders
in De-stratification technology**



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Aviation Buildings

Whether it be a private or commercial aircraft hangar, maintenance hangar or even airport terminal, Airius destratification fans balance internal temperatures to significantly improve occupant comfort and reduce heating and cooling costs by up to 40%.

By equalising temperatures and recirculating rising heat back to the floor, Airius fans reduce turnaround times, speed up daily processes and reduce maintenance downtime. Most importantly, your employees and visitors will be consistently comfortable all year-round.



Features & Benefits

- **Vastly improved comfort levels all year round**
- **40%+ reduction in heating costs**
- **20%+ reduction in cooling costs**
- **40%+ reduction in carbon emissions**
- **Rapid ROI - Usually 12 - 24 months**
- **Works alongside ALL types of HVAC systems**
- **Minimal running costs (from £6/pa)**
- **Applicable for hangars up to 40m high**
- **Significantly reduced HVAC maintenance costs**
- **Recycles process heat, lighting and solar gain**
- **Reduces or eliminates condensation & wet floors**
- **Significantly reduces heat loss through roof**
- **Reduces hangar heat up time**
- **Continuous airflow deters birds and insects**



We all know heat rises and the higher the ceiling the more heat is wasted, filling the unoccupied space above occupant's heads. Hangar and terminal HVAC systems try to overcome this by constantly pumping warm or cool air into the space to in an attempt to achieve thermostat setpoints at floor level.

In aircraft hangars, terminals and aviation buildings, which can reach 40+ metres high, this heating of the void can represent tens, if not hundreds of thousands of pounds in heating costs.

Airius destratification fans resolve this problem by slowly recirculating rising warm air back down to the floor in a slow moving, invisible column of air without creating drafts. This continuous air recirculation creates a uniform and even temperature throughout the space from floor to ceiling. This enables thermostat setpoint to remain the same, but heating and cooling system do not have to work as hard to maintain it, significantly reducing both running costs and energy consumption.

Installation Images



Client Testimonials



“ The Airius fans made an immediate and significant improvement! ”

"Following severe temperature problems being experienced in a British Airways maintenance hangar at Heathrow, we (Gratte Brothers) were awarded the contract to upgrade the heating and ventilation system along with other M&E works.

The temperatures problems were severe with staff threatening to walk out. After exhaustive research it was decided to install the Airius system 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, so much so that 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."

J Forge – Contract Manager (Gratte Brothers Group Ltd)

“ Airius has been an effective solution for Gama Aviation achieving those [sustainability] goals ”



"Gama Aviation are always looking for new initiatives and technologies to help reduce their energy consumption. Not only to reduce costs but also to adhere to new legislation and contribute towards creating a sustainable future for all, and **the Airius system has been an effective solution towards helping Gama Aviation achieve those goals.**"

Sean Hull - Engineering Operations Manager



“ We have installed Airius fans into hangers at both our Airport sites with great success ”

"We have installed Airius destratification fans into hangers at both our Blackbushe Airport, Surrey and Oxford Airport sites with great success. **At both facilities Airius fans units have made the working area much warmer for our aircraft technicians and the heaters are switching off a lot more often which has never happened before.**"

Paul Morrison - Facilities Manager

“ I would have no hesitation in recommending [Airius] to operators of similar facilities ”



"Having recently installed the Airius destratification fans into our aircraft maintenance hangar facility at Biggin Hill Airport, Kent, UK **the increase in temperature to the working area on the hangar floor area was noticed immediately.**"

The units were simple to install and the team at Airius were supportive throughout. I would have no hesitation in recommending their system to operators of similar facilities."

Chris Glancy - General Manager

Selected Client List



Gama Aviation

- Farnborough Airport

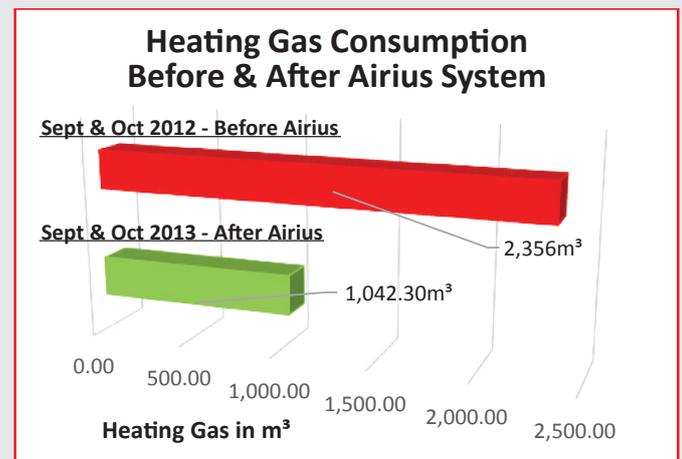
Gama Aviation 

Gama Aviation approached Airius to help reduce the energy consumption in their main engineering hangar at Farnborough Airport, which resulted in a **saving of over 48% on their heating costs** after installation of the Airius system.



Key Points:

- 48.22% saving on heating costs.
- 1,136m³ natural gas reduction.
- System - 14 Model 45/PS-4 Units
- Savings calculated for worst case scenario and accounts for weather inconsistencies.
- Following installation of the Airius system only one of the two heating units was required to achieve and maintain desired conditions.



“Gama Aviation are always looking for new initiatives and technologies to help reduce their energy consumption. Not only to reduce costs but also to adhere to new legislations and contribute towards creating a sustainable future for all, and the Airius system has been an effective solution towards helping Gama Aviation achieve those goals.”

Sean Hull (Engineering Operations Manager)

Consumption, Weather Adjustments & Conclusion

Gama Aviation Ltd have two large heating units in their main engineering hangar at Farnborough Airport, which would run continuously throughout the day but 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 maintain the desired conditions with only the one remaining heating unit running intermittently.

In September and October of 2012 (PRE AIRIUS) the heating gas consumption was 2,356m³. In September and October of 2013 (POST AIRIUS) the heating gas consumption was 1,042.3m³. If the weather was consistent each year then this would have shown a 55.76% saving. In reality the mean average temperatures based on figures provided by the MET Office can be seen below.

This shows that in 2012 the temperature was 0.5°C lower in September and 2.6°C lower in October. A temperature change of 1°C can affect a building's heating requirement by between 6-11% depending on the efficiency of the building.

	2012	2013
September	13.4°C	13.9°C
October	10.1°C	12.7°C

If we take the worst case scenario and increase the heating gas consumption in 2013 by 5.5% for September and 28.6% for October, this gives a total increase of 17.05%, taking 2013 heating gas consumption from 1,042.3m³ up to 1,220m³.

This gives new comparable consumptions with degree days taken into account of 2,356m³ of heating gas in September and October 2012 and 1,220m³ of heating gas in September and October 2013.

This gives a true saving of 48.22%.



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