



# IMPROVE THERMAL COMFORT, SAVE ENERGY, REDUCE CARBON

Save 10-50% on cooling  
and heating costs with  
Airius Air Circulation  
and Destratification

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TOYOTA



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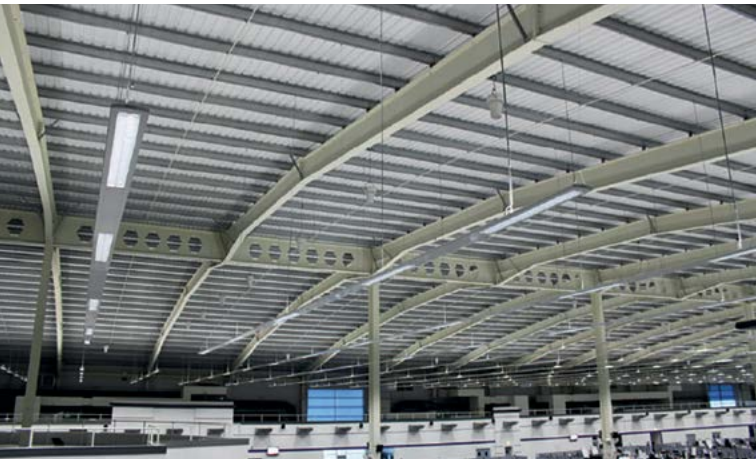
MORRISONS



**Airius has helped thousands of businesses,** from SMEs to major Blue Chip companies improve thermal comfort and make real reductions in their energy usage and carbon emissions.

# TRUST IN AIRIUS

Formed in 2004, Airius is an ethical, professional design, engineering and plastics manufacturing company. We have revolutionised the industry with our market leading air circulation and thermal destratification systems, which have provided cooling, reduced heating use and improved thermal comfort, while balancing internal temperatures in public and commercial buildings all across the world. As testament to the efficiency of the Airius system, we have quickly built up an extensive and prestigious client base including well-known brands like Coles, CSIRO, Kmart, DHL, TYCO, Woolworths, Toyota, SCEGGS, Baker Hughes, Bridge Climb, IGA, Startrack and many more.



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# How will I benefit?

Airius' unique air turbines offer many benefits in both cooling and heating environments. All our units are completely designed, engineered and manufactured in-house at our large Longmont, Colorado, USA, facility.

**The engineered and patented design of the Airius units, enables them to move large amounts of air, over long distances, vertically or horizontally, using very low amounts of energy, inside a space.**

The circular or elongated air flow pattern means the air direction and placement is controllable by the user. This is what makes the units so different to any other type of air movement device.

This air movement can make the building inhabitant feel up to 7 Degrees C. cooler on a 35 Degree C day with 75% humidity! (R Aynsley, 2005)

Alternatively, our units can be used to push air or smoke in or out of a building, improving naturally ventilated building designs or expelling hot air, acting as a carpark exhaust system, (without expensive ductwork) removing humidity from inside a room or simply exchanging outdoor with indoor air.

Our Airius units will significantly reduce the run time and workload of any air conditioning or heating system.

In air conditioned cooling environments, the cold air ceiling discharge is optimised, rapidly circulating the chilled air to the floor, satisfying the thermostat faster. Heavier cold air, caught up in the room corners and dead zones, is circulated efficiently, while the return air temperature back to the chiller is now cooler after travelling through the colder return air path at ceiling level. Short circuiting is negated too.

Overall efficiency of the system is optimised.

In heating environments, the air stratifies as the warm air rises upwards and the cooler air sits at the floor. The Airius units capture the stratified hot air at ceiling level, and pushing through the thermal layers with their unique air flow pattern, effectively and efficiently bring the heated air back to the floor where you need it. Thermal comfort is markedly improved and energy savings are significant. No more over delivering heating to the space, wasting energy.

After installing Airius Air Pears you will notice the difference immediately.

Thermal comfort will be significantly improved in your conditioned or non conditioned spaces as will the efficiency of your air conditioning or heating systems, therefore maximising energy savings and reducing your carbon emissions.

Airius have a wide range of products in a large assortment of shapes and sizes, to suit any application in buildings from 2.5 to 39 metres high.

**Contact us to find out more information or receive a free design and quotation.**

**Contact details:**

**[www.airius.com.au](http://www.airius.com.au)**

**[info@airius.com.au](mailto:info@airius.com.au)**

**+61 (0) 401 848 888**

## Installation process

All of our unique Airius fans can be installed into new or existing facilities and have been installed in new, refurbished and heritage buildings for numerous clients.

The installation process is very simple and can be installed by any licenced electrician, in a short space of time. The difference will be instantly noticeable and will improve the comfort levels in your building while also saving energy.



# Patented Stator Technology

With any fan, the spinning blades induce a rotational component into the air stream causing turbulence and reduced throw distance.

Airius' patented multi-vane stator technology transfers this rotational energy to create an invisible column of air (columnar laminar flow), increasing throw distance and enabling the air to push through the thermal layers. This is a standard feature on all Airius models.

The greater the stratification, the harder it is to push the air through to the floor, hence the value of our Air Pears.

Additionally, the Airius Air Pears have an engineered Venturi throat outlet, accelerating the air speed out of the nozzle, ensuring the air flow shape is able to travel long distance and through the thermal layers.

With the Airius systems' patented multi-vane stator technology, temperatures are balanced to within 1°C - 2°C.



## Axial Fan

Airius' patented multi-vane stator transfers the inefficient rotational energy from an axial fan to create columnar laminar flow, increasing throw distance and maximising energy efficiency/output per watt in all our fan products.

## Main Benefits

- Reduces heating costs by 30% - 50%
- Reduces cooling costs by 5% - 20%
- Extremely low energy consumption
- World market leader
- Significantly improves summer and winter comfort
- Very simple to install
- Maintains optimum working / retail environment
- Reduces CO<sub>2</sub> emissions by 20% - 50%
- Rapid ROI - usually between 12 -24 months
- 5 + 5 years warranty
- Unique, established, patented and proven technology
- Increases lighting lifespan
- Minimal maintenance required
- Minimal running costs (from \$15/PA)
- Recycles heat from machinery, lighting, solar gain etc
- Reduces condensation
- Reduces wear on existing HVAC equipment
- Simple to install with no ducting required
- Small, versatile, unobtrusive units
- Stand alone, speed controlled, BMS or wireless control options
- Works alongside all types of HVAC systems



# Cooling

Air movement has been used for thousands of years to provide cooling in tropical, sub-tropical or hot and dry climates around the world.

**The use of all different types of air movement systems, from palm leaves used as manual fans by the Egyptians, to slow moving ceiling fans used for centuries in Asia, have provided air movement for cooling. The movement of air doesn't reduce air temperature though like an air conditioning system.**

The value of air movement is twofold:

- The movement of air across or around the skin, evaporates the perspiration on the skin, which contains latent heat, rapidly dropping the skin temperature, making the body quickly feel cooler, therefore improving inhabitant comfort;
- The expulsion of warm air from a building, removes the heat loads in that building, making it cooler and improving comfort for the building user;
- Or a combination of both can also provide the cooling impact so keenly sought in hot environments.

While not an achieving a fixed temperature across the year like an air conditioning system, the use of air movement and/or evacuation, will significantly improve personal cooling and thermal comfort in the space, without the capital expense, running costs, health issues and carbon emissions associated with air conditioning.

## When:

Air temperature	=	35°C
Mean radiant temperature	=	35°C
Air velocity	=	3 m/s
Relative humidity	=	70%
Metabolic rate	=	1.0met
Clothing insulation	=	0.22clo
SET*	=	29.3°C

The benefit of 3.0 m/s air velocity can be quantified by reducing air velocity to 0.15 m/s. A typical value used for assessing people engaged in light sedentary activity is 1.0 met.

## When:

Air temperature	=	35°C
Mean radiant temperature	=	35°C
Air velocity	=	0.15 m/s
Relative humidity	=	70%
Metabolic rate	=	1.0met
Clothing insulation	=	0.22clo
SET*	=	36.3°C

The cooling effect of increasing a uniform air speed from 0.15 m/s to 3.0 m/s can be seen to be 7.0°C.

R Aynsley, (2005)

The Airius units are a patented air turbine.

This unique engineered design allows them to be used either vertically or horizontally, controlling and directing the circulation of the air in the space, or pushing the air into or out of the space or both. Without large, exposed blades.

The ability to control the movement of air in any direction, using very low amounts of energy, in a narrow focused column, using the Airius patented air movement technology, is what sets Airius apart from any other type of air circulation product.

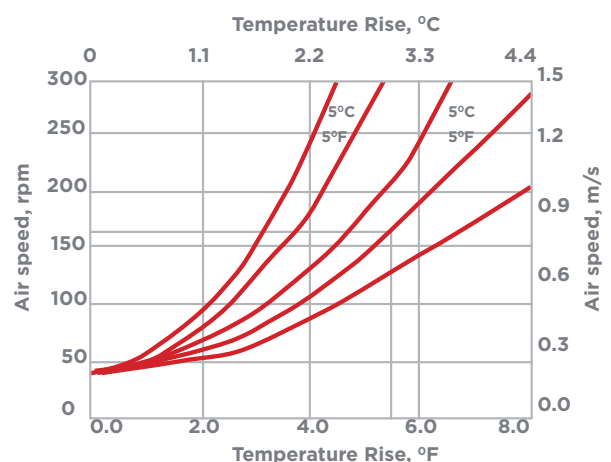
When the Airius units are installed in any type of building, they work together in unison, moving the air vertically or horizontally around or across or through the zone as required.

Additionally, the air movement creates a change in 'Dew Point' in the space, absorbing condensation or moisture off surfaces.

*Airius Engineers have detailed knowledge and experience on air movement and circulation and we can work with you to design the best engineered solution for your facility.*

See these charts below that highlight the efficacy of air movement and cooling.

## ASHRAE says - 'air speed helps improve comfort'



*Air speed required to offset increased temperature.*

- The human body reacts to air speed
- Sydney summer climate - 70% humidity
- 4 deg K offset @1m/s air speed
- For radiant and air temperature
- Air speed 0.4m/s will offset a 2.2 degree temp rise.



# Heating

In the heating environment where hot air continually rises to the ceiling of a room or facility, the waste in heating energy can be upwards of 50%.

**T**his rising heat sits under the ceiling resulting in 'stratification'- different levels of warm or cold air inside your facility. To compensate for this rising hot air, your heating system is continually over delivering heating so as you feel warm and comfortable at floor level.

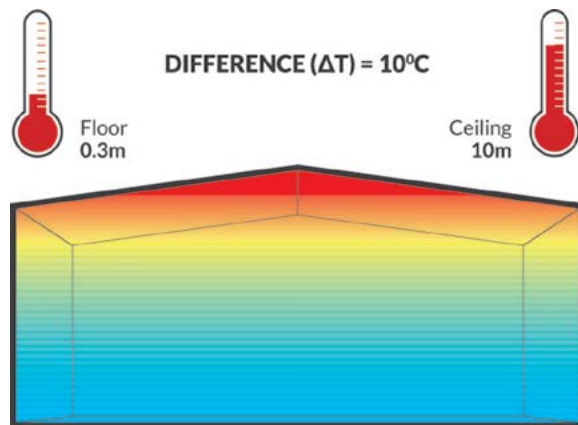
This is a waste of energy and increases energy costs and wear and tear on your heating equipment.

Additionally, the increased amount of hot air sitting up under your ceiling, accelerates the rate of heat loss through your roof to the lower outside air temperature, no matter how well insulated the building is.

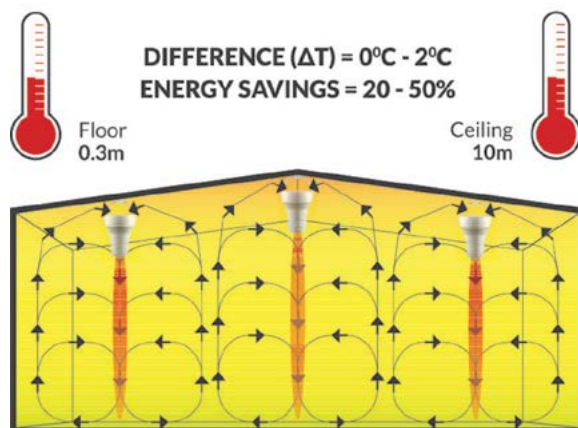
However, pushing the warm air back to the floor is very difficult without the unique air flow pattern and force created by the Airius Air turbine design.

Other fans will not be able to push the air through the thermal layers created by the stratification. The greater the temperature difference floor to ceiling, the more effective the Airius units become.

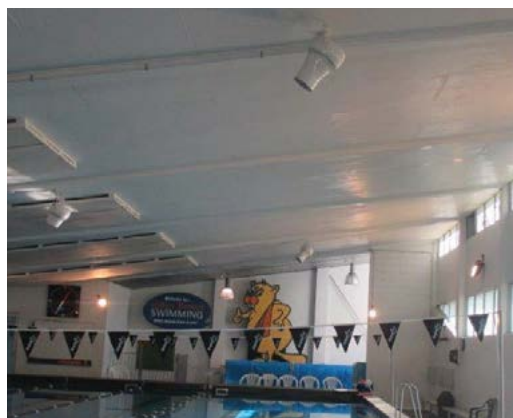
Worldwide, Airius has achieved heating energy savings of 20-50% in all types of buildings between 2.5-39 metres high. See some of our included testimonials on page 21.



BEFORE AIRIUS



AFTER AIRIUS



# Air Conditioning

## - Cooling Energy Savings

**The application of air circulation and destratification using Airius Air Pears as a simple, cost effective, energy saving solution for air conditioned buildings in the southern hemisphere, (where the climate is temperate or sub-tropical) has not been considered or understood until the last couple of years.**

However, the recent use of thermal equalisation in air conditioned buildings such as retail precincts, schools, manufacturing plants, cold stores, warehouses and offices using the Airius Air Pear Thermal Equalizer® fans in Sydney, Melbourne, Brisbane and Auckland, has provided some significant energy saving outcomes (E.G. Major Australasian big box retailer achieves 22% average energy saving in Melbourne during the very hot summer of 2012-2013).

An independent research study\* using specific software modelling undertaken by Dr Vahid Vakiloroya, a highly experienced Mechanical Engineer and air conditioning system designer, indicated some significant energy savings and short (<3 years) ROI can be achieved in air conditioned buildings across the broad Australian climate zones, using Airius Air Pears.

In addition, summer user comfort is significantly improved, due to the gentle air movement from Airius Air Pear units across the skin creating evaporative cooling. It is this gentle air movement capability in summer that can also facilitate the increase in cooling set point temperatures in air conditioned buildings, further increasing the energy savings possible.

Outcomes of the software Hourly Analysis Protocol (HAP) (HAP 4.8 software by Carrier) modelling in this report, in sub-tropical and temperate climates for a 2000 sq. metre 4-metre-high retail space, using a water cooled HVAC system, indicate cooling energy savings of a minimum of 6.3% (Darwin) across the year, for a 2 Deg. C Delta T between floor and ceiling, up to 26.4% cooling energy savings (Melbourne) where the Delta T is 6 Deg. C.

Heating energy savings of a minimum of 5.4% in Hobart for a 2 Deg C. Delta T, to a maximum of 29% in Sydney with 6 Deg C Delta T have been shown in this analysis.

In real world examples in Australia (and overseas) significantly greater heating energy savings have been achieved.

Returns on Investment as low as 15 months in summer cooling applications in Oceania are possible.

Research from BSRIA in the UK indicates that One Deg. C temperature increase per metre in height is common inside buildings. In Australia, temperature differences of 3 Deg. C every metre in height have been recorded in buildings, prior to Air Pear installations that have rectified that issue.

Further energy savings, greater than the predicted savings achieved in this software process, can be realised via the use of air circulation or thermal destratification not considered in the study.

These include;

- The use of Airius Air Pears to provide thermal comfort during load shedding opportunities in both cooling and heating environments, resulting in significant energy savings across a year.
- Accelerated reuse of the chilled air captured by thermal buoyancy up under the ceiling, post discharge.
- Increase or decrease of thermal set points as a result of destratification /air circulation and a range of other energy saving opportunities.
- Use of soft type low velocity ductwork in combination with Airius Air Pears resulting in reduced AHU sizing and energy consumption.

The outcomes of this analysis are as follows: -



## Cooling mode:

City	Energy Saving (%) for 2C	Energy Saving (%) for 4C	Energy Saving (%) for 6C
Sydney	8.8	15.6	21.5
Melbourne	14.2	20.2	26.4
Brisbane	9.7	13.0	19.8
Auckland	12.1	19.1	22.3
Adelaide	11.4	16.8	23.2
Canberra	9.4	17.9	22.8
Darwin	6.3	8.8	16.6
Hobart	12.9	24.5	29.8
Perth	6.4	13.7	23.8

## Heating mode:

City	Energy Saving (%) for 2C	Energy Saving (%) for 4C	Energy Saving (%) for 6C
Sydney	7.8	19.0	29.0
Melbourne	8.4	17.1	27.8
Brisbane	9.8	20.8	25.6
Adelaide	7.8	11.8	18.7
Canberra	11.2	17.0	21.2
Hobart	5.4	8.9	13.4
Perth	7.3	12.4	18.9
Hobart	12.9	24.5	29.8
Perth	6.4	13.7	23.8

Note: - The Degrees noted above in the red boxes represent the floor to ceiling 'Delta T'.

## Independent BSRIA Testing & CFD Study

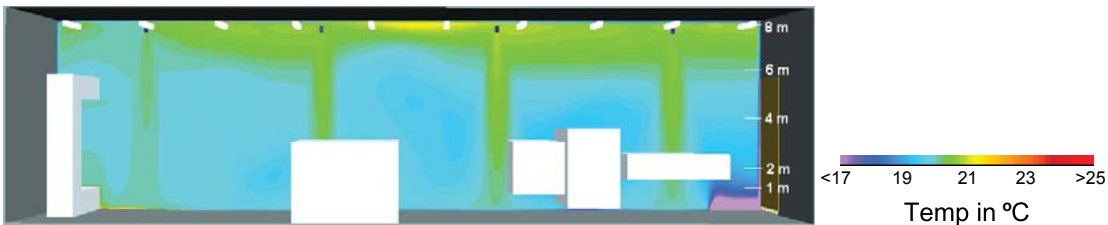
Figure 1

Room pre Airius installation



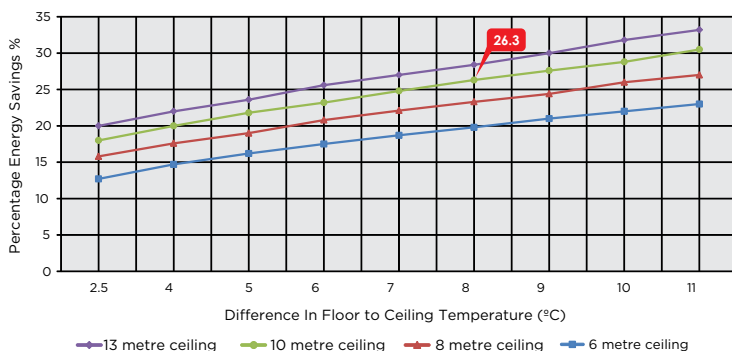
Figure 2

Room post Airius installation



Smoke machine used for air pattern visualization. Model 45-PSP4 mounted at 10 metres.

The energy efficient Airius destratification fans are designed to continuously move a column of air to the floor. A typical installation includes a series of units mounted just below the ceiling, evenly spaced throughout a facility, working in concert to improve comfort, reduce HVAC energy consumption and reduce carbon emissions.



**Example:** If you can reduce the temperature differential from 8°C in a 10 metre high space, energy savings of 26.3% can be achieved.

Source: Building Scientific Research Information Association, UK, 1997. CFD for a 30 mtr x 5 mtr x 9 mtr building with a 100kW gas heater at 3,600 cfm. Insulation and lighting remained constant.

# Our product range

Explore the most versatile and efficient circulation or destratification fans available, which improve thermal comfort, save cooling or heating energy and ensure heating and cooling are maintained efficiently throughout internal spaces.

## Standard Series



**Model 10 (short)**

Height: 444mm  
Rim height: 311mm  
Width: 325mm  
Weight: 3.2kg

**Model 15**

Height: 546mm  
Rim height: 413mm  
Width: 325mm  
Weight: 4.1kg

**Model 25**

Height: 546mm  
Rim Height: 413mm  
Width: 325mm  
Weight: 4.1kg

**Model 45**

Height: 605mm  
Rim height: 455mm  
Width: 375mm  
Weight: 6.3kg

**Model 60**

Height: 823mm  
Rim height: 607mm  
Width: 498mm  
Weight: 9.9kg

**Model 100**

Height: 843mm  
Width: 495mm  
Weight: 20.4kg

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TECH SPECS	Model 10	Model 15	Model 25	Model 45/PS-4	Model 45/PS-2	Model 60	Model 100
Ceiling Heights - Cooling	2.5m - 3m	3m - 5m	4m - 7m	5m - 7m	6m - 11m	7m - 15m	10m - 25m
Floor Area Coverage - Cooling <sup>1</sup>	20m <sup>2</sup> - 50m <sup>2</sup>	25m <sup>2</sup> - 80m <sup>2</sup>	30m <sup>2</sup> - 100m <sup>2</sup>	35m <sup>2</sup> - 100m <sup>2</sup>	60m <sup>2</sup> - 125m <sup>2</sup>	100m <sup>2</sup> - 220m <sup>2</sup>	150m <sup>2</sup> - 350m <sup>2</sup>
Ceiling Heights - Heating	2.5m - 3.5m	4m - 5.5m	6m - 8m	8.5m - 14m	8.5m - 14m	15m - 20m	20m - 33m
Floor Area Coverage - Heating	48m <sup>2</sup> - 72m <sup>2</sup>	60m <sup>2</sup> - 90m <sup>2</sup>	89m <sup>2</sup> - 133m <sup>2</sup>	89m <sup>2</sup> - 133m <sup>2</sup>	100m <sup>2</sup> - 150m <sup>2</sup>	148m <sup>2</sup> - 222m <sup>2</sup>	186m <sup>2</sup> - 279m <sup>2</sup>
Dia. Coverage - Heating	8m - 10m	9m - 11m	11m - 13m	11m - 13m	11m - 14m	14m - 17m	15m - 19m
Volts <sup>1</sup>	230	230	230	230	230	230	230
Watts @ 50 Hz <sup>1</sup>	12	15	31	42	125	120	390
RPM @ 50 Hz <sup>1</sup>	980	1230	1450	1450	2450	1390	1690
L/S @ 50 Hz <sup>1</sup>	150	191	216	280	505	786	1584
m <sup>3</sup> /hr <sup>1</sup>	540	690	780	1010	1821	2832	5705
AMPS @ 50 Hz <sup>1</sup>	0.06	0.06	0.14	0.19	0.54	0.57	1.60
Noise Level <sup>2</sup>	0 - 21dB(A)	0 - 21dB(A)	0 - 31dB(A)	0 - 31dB(A)	0 - 44dB(A)	0 - 38dB(A)	0 - 34dB(A)

Note:- These charts are indicative only as every project is different. Please contact Airius for detailed design assistance.

Airius units are available as free hanging fans applicable for ceiling heights from 2.5m to 39m, or can be installed into suspended ceilings up to 15m high with our 600mm x 600mm Suspended Series kit (see page 14). **Please note:** All models except model 100 and 125 are available in a short version. EC /EL Motor types are available in Model 25, 45, 60, 100, and 125 Models in both Standard and Designer Series.

# Series warranty

All Airius fans come with a 5 year Replacement warranty, and a 5 year (half new price) refurbishment programme. Simply return defective units to Airius, carriage paid and upon receipt Airius will dispatch a new unit by return carriage fully paid.

In regards to our refund policy, to avoid refurbishment and cleaning charges, all units returned must adhere to the returns criteria found on our web site.

For specific info visit:  
[www.airius.com.au/airius-warranty-terms-conditions](http://www.airius.com.au/airius-warranty-terms-conditions)

## Designer Series



**Model 125**  
 Height: 938mm  
 Width: 690mm  
 Weight: 45kg



**Model 60**  
 Height: 838mm  
 Rim height: 610mm  
 Width: 492mm  
 Weight: 17.2kg



**Model 45**  
 Height: 610mm  
 Rim Height: 452mm  
 Width: 373mm  
 Weight: 8.6kg



**Model 25**  
 Height: 538mm  
 Rim height: 400mm  
 Width: 333mm  
 Weight: 6.8kg



**Model 15**  
 Height: 538mm  
 Rim height: 400mm  
 Width: 333mm  
 Weight: 6.8kg



**Model 10**  
 Height: 436mm  
 Rim height: 299mm  
 Width: 333mm  
 Weight: 5.4kg

TECH SPECS	Model 125	Model 60/EC	Model 45/EC	Model 25	Model 15	Model 10
Ceiling Heights - Cooling	15m - 35m	8m - 18m	6m - 10m	4m - 7m	3m - 5m	2.5m - 3m
Floor Area Coverage - Cooling <sup>1</sup>	200m <sup>2</sup> - 400m <sup>2</sup>	140m <sup>2</sup> - 240m <sup>2</sup>	35m <sup>2</sup> - 100m <sup>2</sup>	30m <sup>2</sup> - 100m <sup>2</sup>	25m <sup>2</sup> - 80m <sup>2</sup>	20m <sup>2</sup> - 50m <sup>2</sup>
Ceiling Heights - Heating	20m - 40m	17m - 22m	13m - 16m	6m - 8m	4m - 5.5m	2.5m - 3.5m
Floor Area Coverage - Heating	223m <sup>2</sup> - 334m <sup>2</sup>	155m <sup>2</sup> - 232m <sup>2</sup>	111m <sup>2</sup> - 167m <sup>2</sup>	89m <sup>2</sup> - 133m <sup>2</sup>	60m <sup>2</sup> - 90m <sup>2</sup>	48m <sup>2</sup> - 72m <sup>2</sup>
Dia. Coverage - Heating	17m - 21m	14m - 17m	12m - 15m	11m - 13m	9m - 11m	8m - 10m
Volts <sup>1</sup>	200 - 277	230	230	230	230	230
Watts @ 50 Hz <sup>1</sup>	400	170	175	31	15	12
RPM @ 50 Hz <sup>1</sup>	1000	1630	3050	1450	1230	980
L/S @ 50 Hz <sup>1</sup>	2454	835	613	216	191	150
m <sup>3</sup> /hr <sup>1</sup>	8835	3007	2192	780	690	540
AMPS @ 50 Hz <sup>1</sup>	1.80	1.30	1.40	0.14	0.06	0.06
Noise Level <sup>2</sup>	0 - 31dB(A)	0 - 38dB(A)	0 - 49dB(A)	0 - 31dB(A)	0 - 21dB(A)	0 - 21dB(A)

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

<sup>1</sup>Cooling information is indicative only and varies depending on building type, ceiling height, application and local climate.

<sup>2</sup>Noise Levels recorded at floor level from units installed at manufacturer's maximum recommended ceiling height. Accurate as of September 2015. Each facility has unique fluid dynamics, please contact supplier to specify your system. Contact Airius Oceania to gain a copy of our complete independent acoustic testing report.



# Standard Series

Since its first release in 2004, the Airius Standard Series has been the go-to free hanging fan, used to provide air circulation or combat thermal stratification in buildings across the world.

**F**irst released in 2004, The Airius Standard Series is the original free hanging air circulation and destratification fan used to circulate air for cooling or combat thermal stratification in buildings throughout the world.

The Airius Standard Series is available in several models, with various motor and control options available to accommodate your building's unique circulation, cooling or destratification needs.

All models in the Standard Series range feature a standalone circulation and destratification fan (axial turbine) powered by highly energy efficient EBM Papst motors, which are suspended just below ceiling height in your building or mounted horizontally on walls or below the roof. This series is suitable for buildings with a ceiling height of 2.5 metres, right up to 33 metres.

From the short Model 10 to the Model 100, the Standard Series Range is capable of equalising between 48 and 350 square metres of cooling or destratifying floor area per fan.

All products in the Standard Series are supplied in an off-white colour. However, if requested we have the facilities to custom paint your air circulation and destratification fans to match any RAL colour code.

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

**+61 (0) 401 848 888**

**Or email: [info@airius.com.au](mailto:info@airius.com.au)**

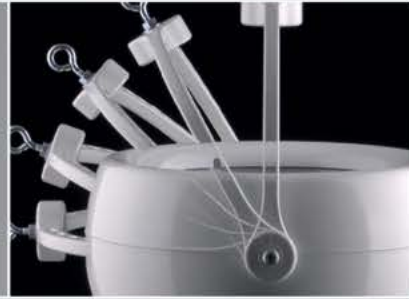


## All-inclusive features

Below you will discover information about all the unique, deluxe features as standard with all destratification fans and accessories supplied by Airius. Our units work as a complete stand alone solution, or alongside all new and existing cooling and heating systems systems, offering seamless integration.

### Adaptability

Adaptable bail and eye bolts allow easy installation. Airflow can be angled 90° vertically and 360° horizontally (see website for guides).



### Cord length

1.5 metre cord length as standard, which can be wired onto a circuit or powered standalone by attaching a 3 pin plug (not supplied).



### Leash anchor

The leash anchor point is another standard feature on all Airius units acting as an additional safety point when fully installed.



### Ultra quiet

All Airius fans are ultra-quiet and can be specified for environments such as offices, retail stores, theatres, museums and libraries.



# Designer Series

Improve thermal comfort and save energy in style, by specifying the Airius Designer Series, which is enclosed in an aluminium cylindrical housing and can be tailored to any custom colour.

**T**he Airius Designer Series shares many similarities to our Standard Series and will provide your building with all of the same benefits and functions.

However, models from the Designer Series are enclosed in a powder coated aluminium cylindrical housing and are perfectly suited to architecturally sensitive installations.

All models in the Designer Series operate in exactly the same manner as models from the Standard Series. We can customise the Designer Series with motor and control options to suit your air circulation and destratification requirements, as well as custom paint or finish the units to match any RAL colour code or interior finish such as timber veneer.

The Designer Series is suitable for installation in properties with ceiling heights ranging from 2.5 metres, right up to 39 metres high.

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Contact our team today for a personalised quotation.

[www.airius.com.au](http://www.airius.com.au)

[info@airius.com.au](mailto:info@airius.com.au)

+61 (0) 401 848 888

## The discreet solution

The Airius Designer Series provides you with a solution to suit any building, simply blending in with your decor without taking on the appearance of a typical fan.







**Log on to the Airius website**  
**www.airius.com.au**  
and discover **more benefits**  
for your business.

## System Speed Controls

All Airius systems are designed to operate on a 24/7 basis for maximum efficiency and come 'plug and play' as standard. However, there may be installations where this is not applicable or more control is required. For these applications we provide a range of wall mounted, variable on/off speed controllers.

**All Airius Air Pear and Designer Series units can be controlled by Speed controller or BMS via our EC motor types.**

Our speed controllers feature a speed control dial that is easy to operate and install in a variety of applications. Please note that Airius Speed Controllers can only be installed onto circuits of the same Airius model.

Airius supplies the following types of speed controllers:

### 1 Amp Controller

The 1 Amp Controller suitable for:

- 16 x Airius Model 10's
- 13 x Airius Model 15's
- 6 x Airius Model 25's
- 4 x Airius Model 45/PS-4's
- 1 x Airius Model 45/PS-2
- 1 x Airius Model 60/PS-4

### 5 Amp Controller

The 5 Amp Controller suitable for:

- 83 x Airius Model 10's
- 66 x Airius Model 15's
- 32 x Airius Model 25's
- 23 x Airius Model 45/PS-4's
- 8 x Airius Model 45/PS-2's
- 8 x Airius Model 60/PS-4's

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## EC Controller

The EC controller is suitable for Airius EC models only. The EC potentiometer speed controller offers a continuous 0-100% speed control capability. See unit data sheets for motor information.

## Wireless EL Controller

Airius offers a unique Zigbee wireless control capability for any EC motor with the EL wireless adapter fitted. Designed in conjunction with Autani, one of America's largest controls companies, the unique Airius Fan Management System enables all units to have their own IP address, addressable over an internal interface. Units can be programmed to undertake a large range of functions including reversing time and speeds for self-cleaning, programmable on/off and assorted other control or operational functions.

Excellent for hard to access places such as hotel atriums or active warehouses etc.

**Please contact Airius to find out more.**

**DESIGNER**  
series

# Suspended Series

For installations into suspended, dropped or false ceilings Airius supply a suspended ceiling kit, which is sized to fit standard Metric ceiling tile dimensions.

**T**he Airius Suspended Series is suitable for buildings with dropped, false or suspended ceilings or where an unobtrusive and discreet installation is required.

The Airius Suspended Series will ensure that there is a constant recirculation and movement of air throughout your building, improving comfort or saving heating or cooling energy by up to 50%.

The Airius Suspended Series is an additional piece of engineered equipment that houses an Airius Standard Series circulation or destratification fan and is designed to circulate the air in the space for cooling, or capture the wasted heat, sitting just below the ceiling, while mounted professionally and aesthetically, so it can be utilised to reduce your heating bills. Suitable for buildings with a ceiling height of 2.5 metres up to 15 metres, the Suspended Series is simple to install, meeting standard European ceiling grid dimensions (600mm x 600mm) and is easily adaptable to changing floor plans.

All models in the Suspended Series are available in off-white or can also be custom painted to match any RAL colour code.

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**Email Airius today**

complete with your details & site reference for a 24hr reply.

**info@airius.com.au**

**Or call: +61 (0) 401 848 888**

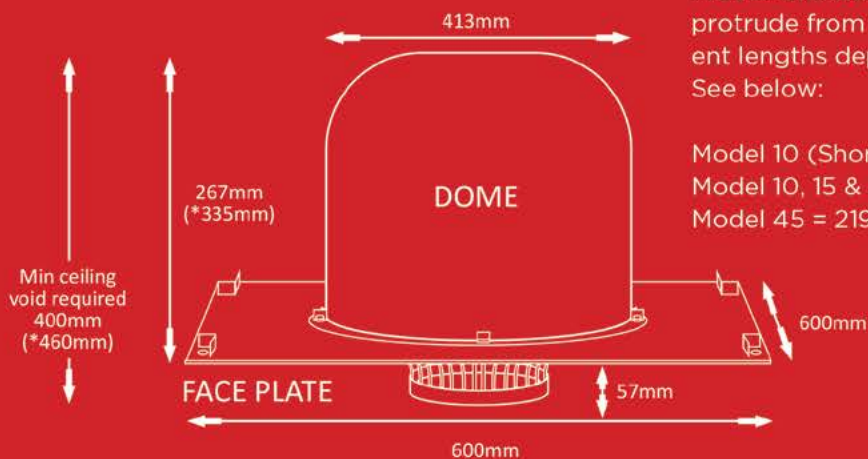


# Suspended ceiling integration

To accommodate the Suspended Series and to allow working space for installation we recommend a minimum ceiling void of 400mm (460mm for Model 45 Suspended Series), however customers have been able to install the Suspended Series into a void as little as 300mm.



## Weight & dimensions



Note: Standard Series fan nozzles will protrude from the face plate to different lengths depending upon the model. See below:

Model 10 (Short) = 120mm  
 Model 10, 15 & 25 = 222mm  
 Model 45 = 219mm

Weight = 3.6kgs (\*4kgs) | Ceiling Height = 2.5m - 15m | Housing = Recycled PC/ABS Resin (5VA flame resistance rating) | Colour = Off White (Can be colour match painted to your specifications) \*Applies to Model 45 (8.5m - 16m) Suspended Series Kit



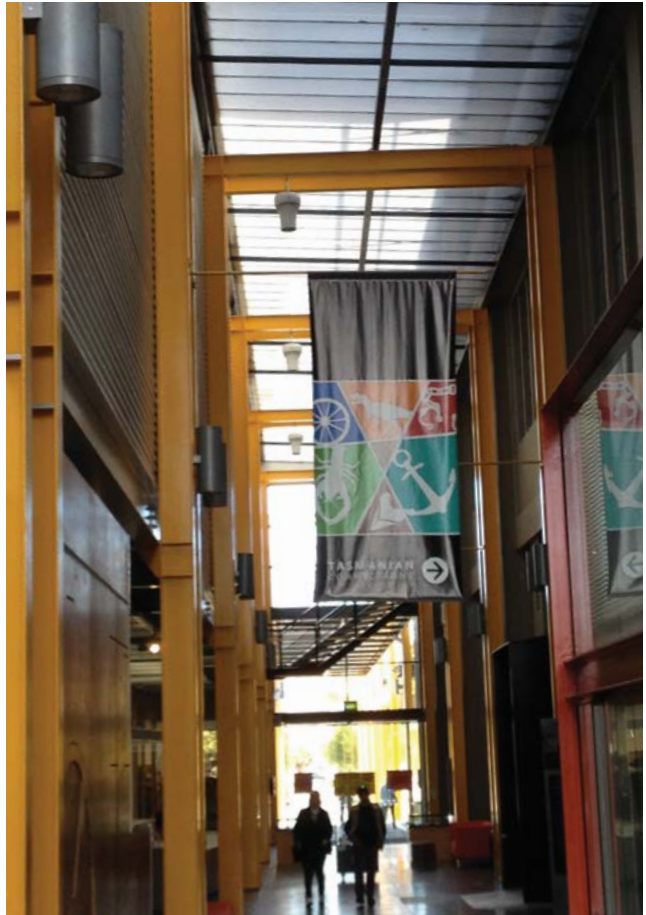
# Installations



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# New Products

Airius is constantly developing and researching new product options, designed to suit some of our more specific markets, and to offer bespoke solutions for certain facility types.

All our units are designed, developed and manufactured 'in house' at our Longmont, Colorado, manufacturing and research facility. Each product is the result of a multimillion dollar development programme including at least a year in research and redesign to ensure the best and most up to date product range is available for our thousands of worldwide customers. For 2016, there are new models available.

## Q50

The new, exciting Q50, is a completely redesigned Airius air circulation and destratification unit.

A large amount of in-house engineering, design and production detailing has been expended to perfect this unit, which provides large air flow volumes at very low noise levels in a new architectural plastic case. The Q50 is designed for quieter zones such as chapels, theatres, museums, and other facilities requiring high air flow volumes but requiring exceptionally low noise.

The units are also applicable to sports halls, such as basketball and net ball courts, outdoor covered shopping or study areas, wineries etc.

The Q50 comes with two EBM Papst motor options- the Four Pole PS4 and the BMS controllable EC. In late 2016, a wireless EL control capability should also be available.



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## Narrow Aisle Unit (Duckbill)

The newly developed narrow Aisle units, known colloquially in the Airius family as the 'Duckbill', is designed as a testament to the popularity of Airius units in cold aisles in supermarkets. Airius leads the market worldwide in making cold aisles more comfortable without having any impact on the refrigeration cabinet's performance, a claim no other fan unit can make.

However, our customers, who have very narrow cold aisles, approached us to make a unit they can use in those unique applications, that maintains the Airius performance levels but in a narrow aisle configuration. Airius spent over 18 months designing, engineering and perfecting the airflow delivery system so that it propels the air flow to the floor in a narrow elongated footprint. This makes it perfect for applications where a narrow air flow outline is required, such as very narrow supermarket cold aisles, between desks in offices, classrooms etc.

The 'Duckbill' also comes in a new architectural shape, making it suitable for a large range of applications. It is fitted with an EBM Papst EC motor as standard, with adjustable two speed control capability or a full 0-100% speed control option.



## Eyeball Unit

The new Eyeball unit is designed to complement the Duckbill in its looks and air flow performance, enabling it to be used in conjunction with the narrow aisle units in standard aisles in supermarkets, or it can also be used as a standalone air circulation and destratification solution, for any building up to 7 metres high, that prefers the architectural look of the Eyeball. Small and compact, the new Eyeball is an outcome of the thorough development process utilised on all Airius products that results in an effective, engineered product. The new 'Eyeball' uses the same EBM Papst EC motor as the Duckbill, with a switchable two speed or full 0-100% speed control option.





# Testimonials

## COOLING - SCEGGS DARLINGHURST, NSW

"We installed 8 x 60PS4 Airius Air Pear fans to the ceiling of our Centenary Sports Hall.

The hall has a problem with very little cross ventilation. The installation of the fans was straight forward and took two days to fully install the air pear system with two controllers.

The Air Pear system has been in operation for six months now. We are more than happy with the results.

"We are extremely happy with the performance and comfort we receive since installing these Air Pear fans and would happily recommend them."

The space is a lot more usable in the hotter summer months. We have received great feedback from both the school PE department and also external hirers.

It is rare we turn the fans to 100% even though they are 8.5 metres off the playing surface."

**Keith Stevenson**  
Facilities Manager  
SCEGGS Darlinghurst



## COOLING - METHODIST LADIES COLLEGE INDOOR POOL, KEW, VICTORIA

"Five Air Pear Thermal Equalizer® Model 25 systems were used for cooling down the internal areas surrounding the MLC indoor swimming pool. Mark Winstanley (Manager; Property and Risk) said his feelings about the room before installation were not good, but after installing the Air Pear Thermal Equalizer® he felt much better.

He said his overall impression of the systems performance was 8/10! Mark's feelings about the Air Pear Thermal Equalizer® changed significantly, from having no opinion to now thinking that the Air Pears are very good."

**Mark Winstanley**  
Manager; Property and Risk



## CONDENSATION REMOVAL - PACIFIC PINES POOL & SPA SERVICES

"Hi John. Spoke to the operators last week & they have said the general air conditions around the pool have improved & that the condensation has improved greatly especially around the front office & counter areas..."  
Kind Regards

**Jeff Feltham**  
Principal Owner  
PACIFIC PINES POOL & SPA SERVICES

## CONDENSATION REMOVAL - HILTON BROWN SWIMMING

"We initially installed one Model 15 Air Pear unit into the male changing room in our Albany swim school facility. We had a problem with high humidity causing condensation on the walls and floor in this space.

Within hours we noticed a difference and two days later the entire space was a lot drier, with less damp

odour. Although we had previously spent vast amounts of money installing mechanical air handling units and ducting systems in this space, there were still areas around the pool where instructors and customers found it very humid. The Model 60 Air Pear not only alleviated this issue but helped dry out an end wall that was

often wet with condensation. We have since installed other units in more of our facilities."

**Howard Gumbley**  
General Manager  
Hilton Brown Swimming

"These things are simple to install and very economical to run, but above all they deliver results."



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## HEATING - WATSON AND SON

"I just wanted to let you know that the Air Pears are in place and are working really well. We have been monitoring the temperature at floor; head; and ceiling height.

The temperature is actually warmest at floor level (-39 Celsius), and is even between head and ceiling height (-38 Celsius). We're very impressed.

Previously we would have around 30 Celsius at floor level and 40 - 42 Celsius at ceiling height."

Thanks!

**Jon Cottrell**  
Watson and Son | ManukaMed



"We're very impressed."

## HEATING - AXEMAN'S HALL OF FAME MUSEUM, LATROBE, TASMANIA

"Basically overnight the Australian Axeman's Hall of Fame's atmosphere had altered. The cost savings are overwhelming as all other heating has been largely reduced.

"We previously needed five units to heat the building and after the Air Pears we now only require two."

I would have no hesitation in recommending the Airius Air Pear units to anyone hoping to maintain a more controlled and even heat in a large building."

**Peter Maloney**  
Axemans Hall of Fame  
Bells Parade  
Latrobe



## HEATING AND COOLING - ST THOMAS AQUINAS SCHOOL, BOWRAL, NSW

"St. Thomas Aquinas School in Bowral has installed eight Airius Air Pear Thermal Equalizers® to serve a newly constructed school hall with a ceiling peak of 6.7m.

"The Air Pear Thermal Equalizers® are a great asset to the school hall," says Andrew Lowden, the project architect.

"The main benefits for the client include improved air circulation, a balance of temperature throughout the building, low running costs, silent operation and easy installation - all at a highly affordable price," he says.

"The hall's gas heating system warms the hall effectively within 15 minutes. However, to maintain

"I would highly recommend the Air Pear Thermal Equalizer® solution for my future projects."

this temperature for long periods of time would be cost prohibitive to the school. This is where Air Pear units come into play" says Mr Lowden."

**Andrew Lowden**  
Martin O'Toole Architects



# Case Studies



## Key Points

- 1,100 sq. metres high sports and exam centre in Eastern Sydney
- 8.5 metres high
- 8 x Airius Model 60 Air Pears installed under the ceiling
- 2 x SC-05 Speed controllers
- Optimised cooling in hot summers
- Quiet
- Reduced heating costs in winter

## COOLING IN BASKETBALL HALLS AND SPORTS CENTRES

### SCEGGS DARLINGHURST, NSW

SCEGGS Darlinghurst, a leading private girl's school in Sydney, had a significant summer overheating problem in their Basketball hall. Two large bladed fans had been specified as a cooling option and SCEGGS approached Airius Oceania to see if they could provide a more aesthetic and cost effective solution to cooling via air movement in the hall. Airius could satisfy the customer on both counts.

SCEGGS facility manager Keith Stevenson approached Airius Oceania P/L to provide a proposal to supply Airius Air Pears in lieu of large bladed fans.

The basketball courts were in an older building 8.5 metres high x 1,100 sq. metres with a concrete roof containing tennis courts above which led to overheating. The building structure combined low levels of insulation with limited and small window openings at high level only. Overheating in summer, especially during assemblies in the hall, or when active sports such as basketball occurred, was of major concern to the school.

Airius supplied 8 x Model 60 Airius Air Pear units with two five amp SC-05 speed controllers for an installed cost, measurably cheaper, with greater floor coverage than the alternative large bladed fans.

## SUPERMARKET COLD AISLES FOODLAND (IGA) FREWVILLE, ADELAIDE

Optimum Control Technologies (Optimum) approached Airius Oceania to do a trial in the cold aisles of the Foodland Frewville store in Adelaide in 2014. The trial was hugely successful and there are now IGA, Coles and Foodland stores using the Airius Air Pear technology to improve thermal comfort in their cold aisles in Australia.



Supermarket operators have long had numerous issues with thermal comfort in cold aisles and their air conditioning, refrigeration and energy management consultants have tried to resolve the issue for many years with no success. Redesigned and expensive air conditioning ducting and distribution layouts, cabinet and door heaters or heat recovery systems have been tried with little or no success.

Optimum approached Airius Oceania in 2014 to carry out a trial at an IGA Foodland Supermarket in Frewville in Adelaide for one of their customers after hearing about our worldwide success solving this cold aisle issue in thousands of supermarkets.

The improvement in comfort in cold aisles means customers are more comfortable and therefore happier to spend more time and more money there. As an added bonus 'fogging' on fridge doors or any condensation on the floors is removed via the gentle air movement created by the Air Pears. Additionally, the common issue of temperature imbalances across a store caused by refrigeration and air conditioning competing against each other is rectified.

## Key Points

- 2015 National Winner of the Retailer of the Year Award, IGA
- Ceiling height 3.5 metres
- Ten x Airius Model 15 Air Pears and ceiling kits installed into two cold aisles = one every 5 metres
- 2 x SC-01 Speed controllers
- Client extremely happy
- 2 more client's stores now using Air Pears with more to come

# Case Studies



## Key Points

- Heating use reduced by 60% within two days
- Building constructed 20 years ago
- Previously always uncomfortable
- 400 sq metres space
- 8 metres high
- 4 x Airius Model 25 Air Pears installed
- 1 X SC-01 Speed controller
- Remarkable improvement in comfort

## HEATING ENERGY SAVINGS IN AUSTRALIAN COMMERCIAL BUILDINGS

### THE AXEMAN'S HALL OF FAME MUSEUM, LATROBE, TAS

The Axeman's Hall of Fame Museum in Latrobe, Tasmania had been uncomfortably cold in winter for many years despite increasing the heating capacity. Airius was approached by DMS Energy to trial Air Pears to improve the comfort for the building's users and reduce heating costs.

The installation of 4 x Model 25 Airius Air Pears at the Museum proved a resounding success with heating use reduced by 60% in two days and customers thrilled with the new level of comfort in the space.

**Within two days of operation the manager had to turn off 60% of their heating. Otherwise it was too warm in the space!**

The manager, who didn't expect the Airius Air Pears could be so effective so quickly, was astounded at the outcome. Regular customers who had complained about the cold environment for many years were now amazed at how comfortable the Museum had become.

## INDOOR POOLS - REMOVAL OF CONDENSATION PACIFIC PINES POOL & SPA SERVICES AND HILTON BROWN POOLS

Jeff Feltham from 'PacPines Pool and Spa' in QLD and Howard Gumbley from 'Hilton Brown Pools' (NZ) both approached Airius to find a solution to the condensation inside their indoor pools using their unique Air Pear® Air Turbines.

Both installations proved very successful and more indoor pool operators in both Australia and New Zealand are using the unique Airius Air Pear Air Turbine technology to reduce condensation and improve the amenity of the pool enclosure.

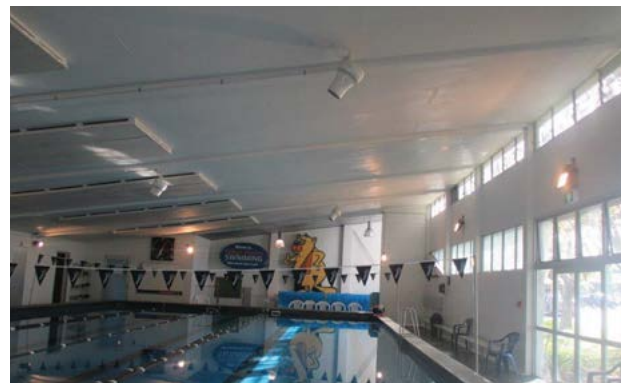
## Examples

**1)** Jeff Feltham from Pacific Pines Pool and Spa Services on the Gold Coast approached Airius Oceania about removing the terrible condensation problem inside one of his client's pools at the Gold Coast in Queensland.

The pool enclosure dimension was 29 metres long by 10 metres wide. The roof had a high point of 9 metres and one wall of the enclosure was 2.5 metres high and the other wall was 5 metres high.

Airius recommended the use of 5 x Model 15 Airius Air Pears and 3 x Model 45 PS 4 Air Pears to be spaced around the pool at specific locations.

The almost silent Air Pears work by circulating the air around the space offering air movement that increases the



'dew point' which draws the moisture from the surfaces into the air. A simple and inexpensive solution to a typical indoor pool issue.

The trial has been very successful and the condensation was largely eliminated and the amenity in the pool has been greatly improved. The response from our customer was very good as can be seen by their testimonial.

**2)** Hilton Brown Pools in New Zealand has five pools around the North Island and has used Airius Air Pears in two of those with more pools to come.

In one pool in Albany, NZ, they had issues with condensation in their changing rooms and their main pool area and have used a range of Air Pears from a single model 15 in a change room to a model 60 in the main pool area. In all cases the condensation has been removed and pool thermal comfort and amenity significantly improved.

In another pool at Havelock North, 24 x 14 metres in size with 4.8 ceiling height they achieved excellent results again using a Model 15 (Short) Air Pear and two Model 25 Air Pear which removed the condensation, improved the internal environment and achieved significant pool heating energy savings.



**For a free design and quotation contact us at:**

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