CASE STUDY - SPORTS HALL COOLING

Trinity Grammar - Sports Hall Cooling





Trinity Grammar is a leading private boys school located at Ashfield in western Sydney. Their Sports Hall, built in 1989, suffered from severe overheating in summer. The hall also had an unusual roof structure, limiting the options for cooling solutions, especially large bladed fans.

Trinity approached Airius to design a solution that offered cooling air movement in both the large sports hall as well as the upper level bleachers. Airius provided a successful solution for both applications.

Key Points:

- Sports Hall:
 - $Area = 1,000m^{2}$
 - Ceiling Height = 9.5m
- Severe Summer Overheating Problems
- Air-Con Expensive To Install & Run
- HVLS Fans Unsuitable & Expensive
- Airius Standard & Retail Series Specified
- Cooling Effects Felt Immediately
- Cooling Improved From Floor To Full Height Of Bleachers
- Cost Effective To Run & Install
- 0-100% Speed Controllable



Trinity Grammar in Sydney wanted to fix the overheating in their sport hall across the summer period. Viewing crowds and players suffered from overheating in the thirty-year-old hall.

The hall contains two basketball courts and as well as rows of upper level bleachers.

Trinity had considered air conditioning but the extremely high purchase and running cost was out of reach. Then they considered large bladed fans but found them too imposing and also very expensive. The layout of the roof structure also meant that large bladed HVLS fans would have to project significantly down into the playing area, creating a range of other issues.

After hearing about the efficiency and simplicity of the Airius fan solution, the school's Facility Manager, Ben Morrisey, contacted Airius to provide a simple cooling solution.

He advised that 'the heat in the gym was very unbearable in summer for students PE, volleyball, basketball and the other indoor sports we play.' They really wanted air movement and the cooling effect that will bring.





"The Airius fans are a great cheap option in regard to energy and price. The biggest issue we had was the lack of air movement. The difference the Airius fans have made has been incredible. The boys are now more productive in their sports and participation rates have increased in PE because it isn't extremely hot in the hall."

- Ben Morrissey - Facilities Manager

The building is approximately 9.5 metres high and is around 1,000 sq. metres in size. On the upper floor five rows of bleachers are located to look down upon the courts. The school received regular complaints from the viewers seated on the bleachers, that is was also overly warm and uncomfortable up there too.

The School installed 8 x Airius model 60 EC fans in the sports hall, suspended off the roof, (controlled by two Airius potentiometer speed controllers) hidden away above the roof beams and 5 x Airius 20EC Standard Retail Series fans (controlled by one Airius potentiometer speed controller) laterally located above the bleachers to push the air along the seating zone.

This install took place in June 2018 and right across the extremely hot 2018-19 summer period, the school found the Airius Fans very effective in providing air movement and the related cooling impact that brings.

Ben advised after the install he found 'the Airius fans are small and compact and made a massive difference to their boys in their play in these hot conditions.'



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