

case study

Galston Aquatic Centre HVAC & BMS System Upgrade



case study

Smarter, Cleaner & Greener

In 2022 Dallas Mechanical was selected to install a packaged heat pump, air handling unit with integrated heat recovery specific to indoor pool applications. The project was conducted in collaboration with Knox Advanced Engineering Pty Ltd.

Objectives

Maintain Energy Efficiency

Improve energy efficiency by combining the heat recovery system with precise control

Reduce Condensation

Protect the building fabric from the damaging corrosive effects of condensation.

Improve Indoor Air Quality

Reduce airborne chloramines from the space, reducing skin & eye irritation and the risk to susceptible asthma sufferers.

Solution

Install Air Change ACPP8000 Poolpac Plus

- Integrated air-to-air heat recovery extracting up to up to 75% of exhaust to heat pool water and outside air
- Integrated Heat Pump
- Outside air supply and exhausting of moisture and chloramine laden air
- Resilient components and surface treatments for longevity

Design & Install BMS System

- Distech Controls - Open vendor, fully integrated
- Multi site performance monitoring and management

Results

Improved Air Quality

Enhanced ventilation and IAQ with the reduction of chloramines, coupled with precise air and water temperature control.

Reduced Condensation

Superior control of relative humidity, reducing the corrosive effects of condensation on the building fabric.

Energy Efficiency

Reduced heating costs and the addition of global monitoring and performance management capabilities of the BMS System.



Conclusion

The application specific, integrated heat recovery system, coupled with precise control, provides the benefits of reduced cost and superior indoor air quality for pool users and staff whilst protecting the building fabric. The BMS Head End now provides Hornsby Council with global monitoring and performance management capabilities.



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