

Demand Based Control of Exhaust Fans

Exhaust systems account for more than 20% of a lab facility's HVAC cost. Yet high exhaust stack velocities are typically maintained in excess of what is necessary. After achieving energy savings through a lab DCV project, Aircuity's exhaust fan application is the final step to ensuring your lab facilities are as efficient and healthy as possible.

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How it Works

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Air is sampled at exhaust fan inlet

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Clean supply air location is sampled for differential measurement

3

Both samples are sent to Aircuity's Sensor Suite for analysis

4

Measurement is compared against containment threshold

5

Stack velocity is lowered when measured VOCs are below a defined trigger level, and fan speeds are increased when the limit is exceeded

6

Data available on equipment performance and environmental parameters





Important Aspects

With over two decades as the leader in demand control ventilation applications, Aircuity has carefully designed its patented exhaust fan application for occupant safety and system accuracy.



Sensor **drift is canceled** through use of one sensor for differential measurement All projects are completed in conjunction in a **wind tunnel study** per ANSI Z9.5 Ruggedized sensors along with a **backup TVOC sensor** are used

Client Project

BUILDING	FANS	REDUCING HP	TOTAL SAVINGS
Lab building currently saving \$800k/year through Aircuity's critical space DCV	4 Triplexes	Wind tunnel study approved beginning HP reduction from 480HP to 100HP	\$1,000,000 Annual Savings

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