

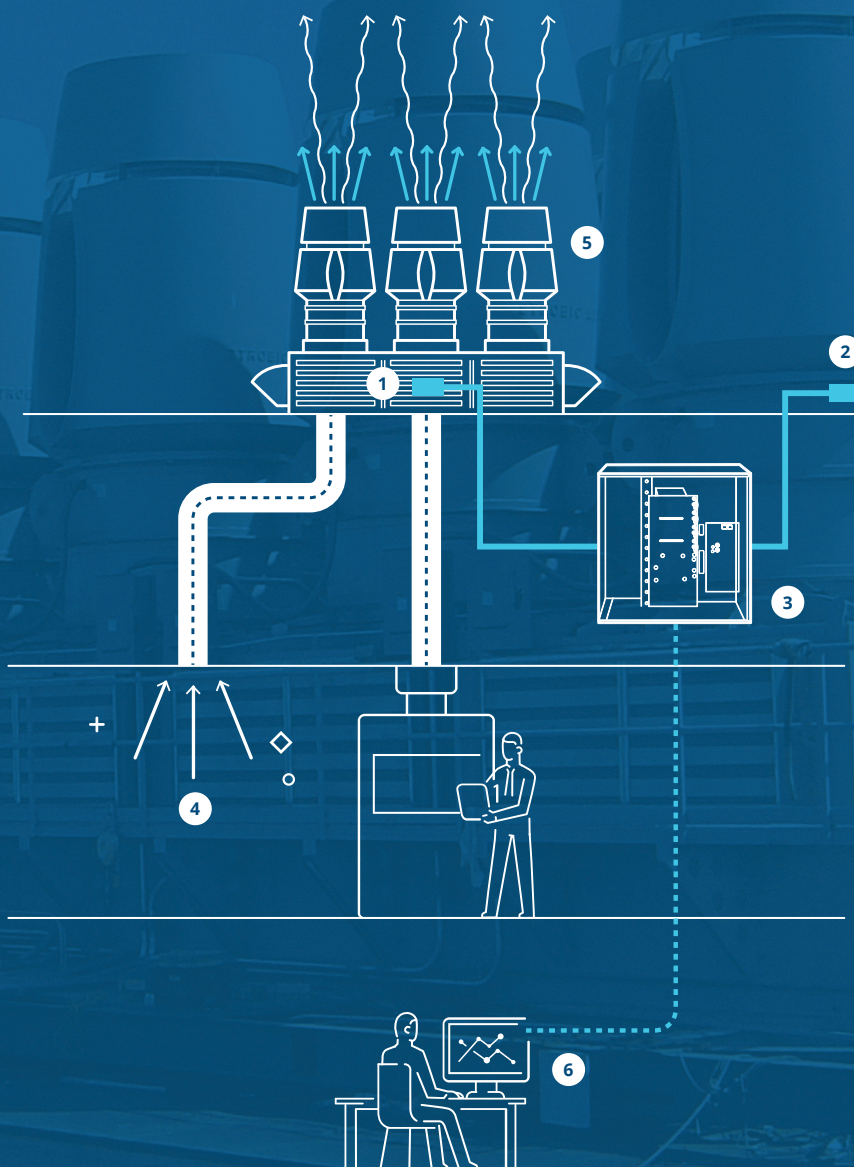


# Demand Based Control of Exhaust Fans

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.

## How it Works

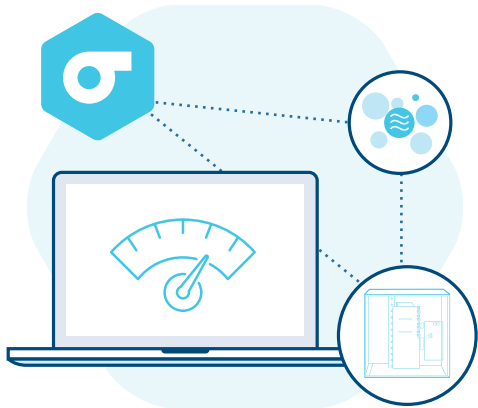
- 1**  
Air is sampled at exhaust fan inlet
- 2**  
Clean supply air location is sampled for differential measurement
- 3**  
Both samples are sent to Aircuity's Sensor Suite for analysis
- 4**  
Measurement is compared against containment threshold
- 5**  
Stack velocity is lowered when measured VOCs 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

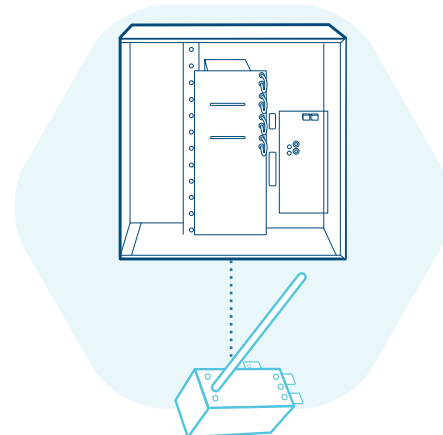
With over two decades as the leader in demand control ventilation applications, Aircuity has carefully designed its patented exhaust fan application for occupant safety and system accuracy.



Sensor **drift is canceled** through use of one sensor for differential measurement



Many projects are completed in conjunction with a **wind tunnel study** per ANSI Z9.5



Ruggedized sensors along with a **backup TVOC sensor** are used

## Client Project

### BUILDING

Lab building currently saving \$800k/year through Aircuity's critical space DCV

### FANS

4  
Triplexes

### REDUCING HP

Wind tunnel study approved beginning HP reduction from 480HP to 100HP

### TOTAL SAVINGS

**\$1,000,000**  
Annual Savings

### LEARN MORE

[www.aircuity.com](http://www.aircuity.com)  
[info@aircuity.com](mailto:info@aircuity.com)

