



Building Performance Equipment, Inc.®

Sustainable, Reliable, and Energy Efficient Ventilation Systems



Challenge

Bringing optimal outdoor air into a 200-year-old building becomes that much more difficult and crucial when your research involves the generation of hydrogen and carbon monoxide. In Manhattan's garment district, Aircela's innovative team needed ventilation when working on smaller-scale technology that allows Direct Air Capture (DAC) to pull CO₂ efficiently and cost-effectively from the air. The goal? Transform that CO₂ into a carbon-neutral replacement for fossil fuels using only air, water, and renewable electricity. [Aircela](#) machines produce fossil-free, motor-grade gasoline that works in any standard engine.

Aircela brings DAC technology systems down in scale to deploy where it is needed from private driveways and homes to remote areas and distribution networks.

So, as this team works to give the world new options for tackling the climate crisis, it's important that their indoor environment offers a cognitive-supportive atmosphere that aligns with their passion for renewable energy solutions.

LOCATION

aircela
Small-scale systems that make
carbon-neutral e-fuels from
carbon dioxide in the air.

Manhattan, NY



Image: Aircela

Solutions

Two side-by-side metal fume hoods and a [BPE-XE-MIR-2000](#) were set up to provide over six ACH (air changes per hour) for the 305 sq. ft. with a constant airflow of 500 cfm. Twelve-inch galvanized spiral ductwork is attached between the two existing chimney stacks on the roof.



BPE-XE-MIR-2000

Mounted hydrogen and carbon monoxide sensors in the enclosed area of the fume hoods are tied in with the dedicated outdoor air system to automatically trigger the system to ventilate at 2,200 cfm when the concentration of hydrogen reaches 10 ppm or VOC or carbon monoxide reaches 25 ppm. Additional exhaust and stack fans in series assist with the effort.

It is only fitting that a company focused on renewable energy would choose an HVAC product that works by recovering heat energy as efficiently as a BPE ERV (up to 90+% thermal efficiency). We are proud to have had what they needed to continue their vital and innovative work!