



# Building Performance Equipment, Inc.®

Sustainable, Reliable, and Energy Efficient Ventilation Systems



## LOCATION

Wyckoff, NJ

## APPLICATION

Pain & Surgery  
Outpatient Medical and  
Operating Facility

## CHALLENGE

5,000 square foot building with sterile area including an operating room, prep and recovery areas, offices and exam rooms, which had serious IAQ (Indoor Air Quality) issues. Need to bring in the required amount of outside fresh air into the building while maintaining a relative humidity of <50%. Prior CO<sub>2</sub> levels were recorded above 1200 ppm during the early afternoon hours. This was in part due to closing required outside air intake louvers to avoid high humidity levels in the building.

## SOLUTION

The lack of fresh make-up air was solved by installing four BPE-XE-200 units, each with two 19 watt fans, providing fresh air and maintaining CO<sub>2</sub> levels at less than 600 ppm and typically <50% relative humidity with the existing HVAC system. The energy recovery units typically provide the hot summer air (100°F outdoor air) to the rooftop HVAC units at a pre-tempered 74°F, allowing the existing HVAC system to do more dehumidification with less energy consumption. The unit now exhausts odors from operations such as laser hair removal, bathroom exhaust, and moisture from the sterilization equipment while maintaining a relatively low air-conditioning and heating costs.

**Total cost under \$15,000 for equipment and installation.**



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## Installations On Site:



Two installation methods were used to solve the IAQ issues at this facility. The first application (above) combined a BPE-XE-MIR 200 Module with the existing RTU serving the operating room. Operating rooms require extremely high ventilation rates to remove pathogens, dust, and debris from the air.



The second type (above) was installed in the plenum of the building in several locations. These BPE modules recovery energy from bathroom exhausts and the soiled utility closet reducing the buildings ventilation load by more than 80%.



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