



PROJECT PROFILE

Commercial Plaza

At a Glance

Location	Area Served
Columbus, OH	Building 1 1,104,228 sqft Building 2 742,708 sqft

Situation
Upgrade the outdated Joy fans with ECM fan array systems to prevent the continued disruption and high costs of fan failure.

Solution
47 array systems of various designs to be installed to meet the unique challenges and locations of each array using Q-PAC's flexibility.

Q-PAC's innovative design delivered a simple solution with redundancy and considerable energy /maintenance savings

Challenges

Existing Joy vane axial fans required significant demo planning due to their suspended location. Reinstalling AC motor fans was impossible and VFDs were out of the question due to limited space and control requirements. Each AHU was unique and required design flexibility to meet the customer's performance and redundancy requirements.

Actions

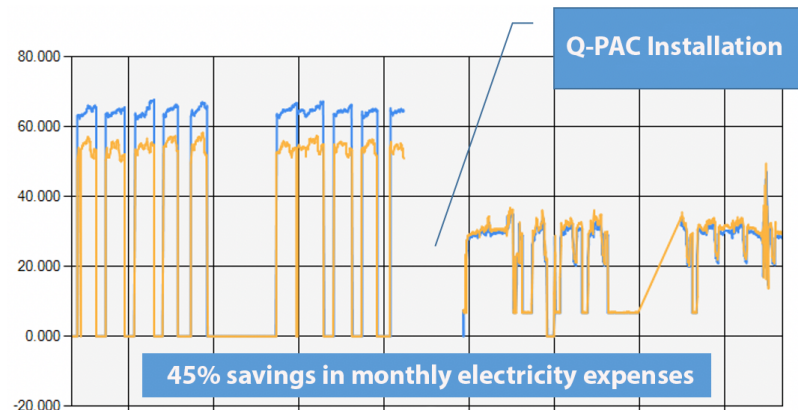
The Q-PAC team worked closely with ElitAire, Speer Mechanical, and Prater Engineering in Columbus, OH to:

1. Design 47 ECM fan arrays tailored to the physical layout and requirements of each building's ventilation system
2. Fabricate modular fan array solution for special handling and easy on-site installation given building access challenges
3. Supply pre-assembled wire harnesses and Quick Connect control box for Plug and Play start up and operation
4. Provide Q-PAC on-site installation and individual system start-up support to reduce down time and resources

Results

Q-PAC delivered high impact solutions that uniquely met each building's design requirements with modular components that allowed for easy installation. The design flexibility allowed the Q-PAC systems to be installed in existing housings where there were no fans originally and minimal space. The ECM fan array systems delivered operational redundancy, a 45% reduction in monthly electricity expenses, and \$80,000 in annual maintenance savings.

Three Week Electricity Consumption



Notable Highlights

- ◆ Eliminated Joy fan failure / disruption
- ◆ Design flexibility allows for future growth
- ◆ Quieter system operation
- ◆ Significant energy / maintenance savings
- ◆ 28% + return on investment