

PROJECT SUMMARY

LOCATION:

Indiana, USA

PROJECT TYPE:

Supplying heating, cooling and fresh air to assisted living facility spaces

BUILDING USAGE:

Healthcare

GOAL:

Ensure a comfortable, safe and healthy environment to senior residents and staff

FUNCTIONAL MANDATORIES:

Reliable performance, quiet operation, superior Indoor Air Quality (IAQ), and individually controlled units for each space

PROJECT LAUNCH:

2019

AIREDALE BY MODINE PRODUCT:

ClassMate® cooling and heat pump

UNITS INSTALLED:

15

Airedale's ClassMate® Units Help Keep Seniors Comfortable and Healthy

THE CHALLENGE

Silver Birch of Evansville is one of a growing family of premier assisted living communities in Indiana. The community provides affordable living for people 55 years or older. The community features 119 apartments, which include one-bedroom and studio options.

There were several challenges faced by project managers when selecting an HVAC system for the facility. Because the building features pitched roofs, it made installing a typical roof-mounted unit difficult. The facility designer also wanted to avoid installing units that would be visible from the street.

The facility required an HVAC system that could meet the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) ventilation standards for the amount of fresh air required for the square footage and planned occupancy of the space.



THE SOLUTION

During the construction of the facility, the mechanical contractor worked with CAS Air to find a more economical alternative to the HVAC units specified in the original plans. They selected the Modine ClassMate® as the best solution for the project, installing 15 units in the facility.

Although the ClassMate® unit ventilators are the quietest on the market, the architect still preferred they be installed within closets to keep them out of sight. This presented a challenge to the installers because while the closets had standard 7-foot doorframe, the Modine units are 7.5 feet tall. This required the closets to be built around the units.

The ClassMate® is engineered for efficiency, noise reduction and a small footprint, featuring modulating EC Motors and an improved EER.

Features include:

- High efficiency heat pump heating with high COP reduces heating costs and supports clean electrification
- Less refrigerant, lower energy costs
- Modine Controls System provides head pressure control with hot gas reheat selection for enhanced dehumidification
- Less refrigerant, lower energy costs
- Sound-deadening compressor acoustic wrap for even quieter operation
- Energy recovery wheel with up to 500 CFM of recovery
- BACnet compatible with the Modine Controls System
- Advanced electrically commutated motor (ECM) on fans and 2-stage compressor technologies for decreased sound and power output

The Modine Controls System integrated into the units allows facility managers to utilize a handheld unit to access real-time operating information about the units, aiding the maintenance staff in troubleshooting or repairing the units.



THE RESULTS

Each quiet and unobtrusive ClassMate® unit supplies a minimum of 20 percent outside air for ventilation, providing fresh, filtered and conditioned air that promotes a healthier environment for the residents of Silver Birch. The units also offer the ability to bring in 100 percent outside air to utilize free cooling.

Rather than run the compressor continuously, the units are programmed to open an economizer if the space temperature rises above the setpoint and the outside air temperature is below 55 degrees. This uses less energy than running the compressor.

Because of the reliability and efficiency of the units, project managers also utilized the ClassMate® in a second Silver Birch facility constructed in Indiana.