



CASE STUDY

Phillipsburg High School—
Lopatcong Twp., New Jersey

Issue: Efficient and reliable HVAC system needed for a 330,000 ft² state-of-the-art school

Solution: 15 Daikin RPS packaged rooftop units with integral energy recovery for optimal efficiency

Conditioning State-of-the-Art Learning Environment

D&B Engineering Provides HVAC Equipment for Largest New Jersey High School

Students and teachers alike will attest to the fact that a comfortable classroom climate is one key to successful learning. Therefore, The HVAC installation is crucial in the construction process of a school. In August 2016, the \$128 million construction project for the new Phillipsburg High School in Lopatcong Twp., New Jersey was completed. The new high school is more than double the size of the original facility, expanding to an astounding 330,021 ft² and earning the title of the largest high school in New Jersey.

The school accommodates close to 2,000 students, faculty and staff, with varying HVAC demands. D&B provided 15 Daikin RPS packaged rooftop units, many of which have integral energy recovery wheels to increase occupant comfort and avoid over-cooling. The HVAC system will heat and cool 50 general classrooms, 6 special education classrooms, 12 small group instruction rooms, 3 health teaching spaces, 12 science classrooms and labs, 6 computer and business labs, music rooms, a media center, a 1,000-seat auditorium, cafeteria, and gym with room for 2,500 spectators. The Warren County school is also building its learning programs with the newly acquired space: agriculture, electronics and textiles are just some of the fields now being taught in this state-of-the-art educational facility.

D&B supplied the HVAC systems, working alongside DIGroup of New Brunswick, NJ and Epic Management of Piscataway, NJ. D&B Engineering has extensive experience in HVAC system design for many educational institutions, including Princeton University, Rutgers University, NJIT and several other higher education and K-12 locations in NJ.

Jeffrey D. Venezia, Project Architect with DIGroup, worked on the Phillipsburg High School rebuild from its inception in 2001. Venezia describes Phillipsburg High School as a “small city,” nestled between the Lehigh Valley and the Delaware Water Gap.

The artistic brick patterns that adorn the walls of Phillipsburg High School are not the only area where creative design played a part. D&B’s HVAC design and engineering needed to be carefully crafted for such an enormous educational facility and the large number of occupants it supports daily.

“Daikin RPS was selected to provide high efficiency Variable Air Volume refrigeration units with high turndown modulating gas heat and excellent indoor air quality,” explained Eric Burger, D&B Sales Engineer. Daikin RoofPak Applied Rooftop Systems were also chosen for their reduced ductwork requirements and unique modular design. These units are typically used for a variety of large applications such as airports, malls, casinos and condominiums, making them ideal for the largest high school in NJ.

Daikin’s RoofPak Applied Packaged Rooftop Systems combine the lower installation costs and interior space savings of a roof-mounted system with the operating and maintenance efficiencies of central heating and cooling systems. The RPS units arrive at the jobsite as a complete package, as well.

Energy efficiency was a priority due to the size of the building. The Daikin systems provided by D&B Engineering have obtained some of the highest energy efficiency ratings in the industry, lowering energy bills while

increasing reliability. In addition, the energy recovery wheels recover roughly 75% of both sensible and latent energy from the exhaust air to mitigate energy consumption.



D&B Engineering is proud to have been able to enhance the learning environment for those at Phillipsburg High School. The highly anticipated opening of PHS was worth the wait for the students and staff who will enjoy this state-of-the-art building for many years to come.

For more information on D&B Engineering and Daikin RPS Packaged Rooftop Systems, please visit www.dbnj.com.