



RELIGIOUS FACILITY PROJECT PROFILE

VALLEYPOINT CHURCH

- GLEN MILLS, PENNSYLVANIA

CHALLENGE

ValleyPoint Church, a just-completed new-build project, was conceptualized as a place of worship, learning and gathering for the Glen Mills, Pennsylvania community. With space for up to 400 people to assemble for weekly services and other activities, the leadership behind ValleyPoint Church looked to create an inviting and flexible modern facility that suited its many intended uses and its occupants. The 16,000-square-foot complex includes a small auditorium, large auditorium, two lobby areas, classrooms and a rehearsal space. With the building not being in constant use, the church wanted a solution that could keep the parishioners comfortable during peak capacity without having to oversize the system. The HVAC system also needed to deliver superior heating and cooling performance throughout any season, important in the northeast region of the country.



CRITERIA

ValleyPoint's management team established a list of defining characteristics and identified the two main criteria for the new HVAC system. First, the church was looking for a solution that could properly condition the varied spaces throughout the facility while adequately accounting for the changes in occupancy. The second requirement dictated that the new HVAC system needed to be cost-effective to install and operate.

SOLUTION

Originally, a traditional 29-ton split heat pump system was sized for the auditorium based on the space and its maximum capacity per the ASHRAE Standard 62.1 ventilation rate procedure. But since the church wanted a more cost-effective option, local Pennsylvania-based HVAC expert, Protech Mechanical, recommended an innovative solution using the LG Electronics variable refrigerant flow (VRF) system and LG Dynamic V8 air cleaners. By

drastically improving the indoor air quality (IAQ) with the V8 air cleaners, Protech could alternatively set the minimum ventilation air volume for the auditorium by using the ASHRAE IAQ procedure calculations. The result of this approach was a significant reduction in the required capacity for the auditorium from 29 to 21 tons, and when combined with the inherent efficiency of the LG VRF system, the overall system size needed for the project decreased from 70 tons down to 50 tons, which translated to substantial first-cost savings to ValleyPoint Church.

In addition to being able to reduce the size of the system needed, Protech punched up the performance by recommending a heat recovery system over a heat pump. Unlike a heat pump with only one mode (heat or cool) operating at a time, the heat recovery system allows for simultaneous heating and cooling. During the winter, the system could cool the main auditorium during services while redirecting the expelled heat to the

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perimeter and low occupancy areas to keep parishioners throughout the facility comfortable. And, with the LG VRF system,



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- GUS SAREYKA,
EXECUTIVE PASTOR,
VALLEYPPOINT CHURCH

Protech was able to use both ducted and duct-free indoor units to match the needs of each space. In the auditorium, large ducted units were used, while in the classrooms, 4-way cassettes blended into the drop ceiling. In the smaller rehearsal room, the stylish LG Art Cool Mirror™ indoor unit worked perfectly to match both the needs

and aesthetics of the space. In this way, the LG system could effectively condition the spaces while accounting for the fluctuations in occupancy.

With its industry-leading efficiency and design flexibility, the Multi V™ 5 series addressed ValleyPoint's comfort requirements while delivering a cost-effective system. Boasting a multitude of features, the LG solution is a dominant, all-weather VRF system with advanced technology that keeps the building cool and dehumidified on hot summer days and operates in ambient conditions down to -13° Fahrenheit, making it ideally suited for Pennsylvanian winters.

RESULTS

Following the installation of the LG Multi V 5 heat recovery systems, ValleyPoint Church has significantly elevated the guest experience for parishoners and staff.

“The simultaneous heating and cooling system from LG has created an environment

that's not only comfortable for parishoners, but also where relationships can thrive and we can continue to build community,” explained Gus Sareyka, ValleyPoint Church's Executive Pastor. “We chose the heat recovery unit to provide simultaneous air conditioning needs as occupied and unoccupied areas reverse their roles once services begin, and the LG system enables us to match these needs.”

Sareyka added, “The HVAC system we chose to go with at ValleyPoint has gone above and beyond our needs. The solution gives us great control with various settings and allows us to achieve optimal comfort for our many guests. The LG solution was the right choice since it's a really reliable, high-performing system that allows us to save money on our energy bills, too.”

For more information on the complete portfolio of LG's air conditioning technologies visit lghvac.com.