

BLUEPRINT

POST FALLS PERIODONTICS POST FALLS, ID

PROJECT INFORMATION

Building Type: Healthcare

Owner:

Dr. Giardino Periodontics
Post Falls, ID

Consulting Engineer:

L & S Engineers
Spokane, WA

Contractor:

TYKO Mechanical LLC
Hayden, ID

Manufacturers Representative:

VEMCO Inc.
Spokane, WA



When the Post Falls Specialty Dental Building decided to lease the 3,400-square-foot basement floor, Daikin's intelligent heating and cooling systems offered a high efficiency and comfortable solution for the new tenants.

Winters in the Idaho Panhandle can get downright frigid. In fact, the average mean temperature from December to March is about 32°F, and daily day-night temperatures during those months swing an average of 18°F.

So when the owners of Post Falls Periodontics wanted to turn the bottom level of their three story office building into a new office space, they needed a HVAC system that would allow their staff and patients to be completely comfortable at all times.

The 25,000-square-foot building, located in Post Falls, Idaho, was originally built in 2005. In early 2007, Post Falls Specialty Dental Building decided to lease the 3,400-square-foot basement floor, which is partly underground with ground level windows on one side, to Dr. Giardino with Post Falls Periodontics. Dr. Giardino's tenant improvement project would include multiple exam rooms, a reception area, offices, and designated exhaust systems to handle practice-related odors. Polin & Young Construction Inc., of Coeur d'Alene, Idaho, was hired as the general contractor to "design-build" the project. They turned

the HVAC aspect of the design over to TYKO Mechanical LLC, of nearby Hayden, Idaho.

With the rest of the building's mechanical, electrical, plumbing, (MEP) and medical gas lines previously established and limited space outside the building, TYKO and the other team members had their work cut out for them.

CONSIDERING ALL THE OPTIONS

Wayne Kovash, owner/president of TYKO, explained that a tight budget and the existing constraints of the building forced the team to consider all available options. "The challenge was how to condition the space with limited ceiling heights and the existing MEP roughed in already, creating a nightmare to install any kind of ducted HVAC system. Simply put, there was no room for a conventional HVAC ducted system," says Kovash.

The team also had to account for the fact that the tenant might need simultaneous heating and cooling in the space (for example, the exam room might need cooling, while the reception area needed heating). "It required a condenser to

Challenge:

A tight budget, building constraints, cold winters and the need for multiple zones contribute to a demanding HVAC renovation for an Idaho Periodontist.

The Solution:

Daikin's Heat Recovery VRV provides simultaneous heating and cooling, heating capacity, energy efficient zoning and fit perfectly into the limited space.

handle both heating and cooling at the same time, and a conventional system would have required multiple condensers, but there was only room for one condenser,” Kovash said. A built-up chiller or fan coil system would have worked for the application, but didn’t fit within the budget. TYKO and the project’s engineering team, L&S Engineers turned to local HVAC vendors for information about any product lines that would work in this situation. After careful consideration, the team selected Daikin and its local representative, the Spokane office of VEMCO.

EFFICIENCY, LOCAL HELP, AND A SMALL FOOTPRINT

Tyler Morton, Post Falls Specialty Dental, building manager, explained that energy efficiency and quiet operation were the top two system requirements. “With several tenants in the building, we didn’t want to have a system that caused problems. We also wanted a system that was quiet and very efficient.”

According to Kovash, there were a number of reasons Daikin was specified for the job. The Daikin Variable Refrigerant Volume system they selected, offered simultaneous heating and cooling and a heat recovery option for their condenser — a key component for energy efficiency. Kovash said the heat recovery outdoor unit allowed them to install three large fan coils all fed by the single condenser. “This was a very important aspect, because the project did not allow us room for more than one condenser onsite since there was very limited space outdoors.”

Three Branch Selector units and two REFNET piping fittings were also part of the design. The unique REFNET design increases system reliability and optimizes refrigerant flow. The entire Daikin system, which stands completely alone from the

rest of the building’s MEP systems, is controlled via Daikin remote sensors and individual controllers.

In addition to the energy efficiency and design features offered by Daikin, Kovash explained that the local representation being readily available to assist with design was another deciding factor.

Kevin Treend, outside salesman for VEMCO, explained that the Daikin system was an ideal fit for the job. While the heat recovery was a bit more expensive up front, the system’s payback was quickly achieved.

“I would recommend the Daikin system to anyone that needs a highly efficient system that installs very quickly, installs in very limited space requirements and performs as advertised.”

Wayne Kovash,
Owner/President,
TYKO Mechanical LLC

“The system is extremely energy efficient — it takes heat from where it’s not needed and puts it where it is, and the heat recovery unit is also very quiet,”

Treend said. “We could have gone with a standard household air conditioning unit or a single rooftop unit, but then your whole comfort is based on a single thermostat.”



“AS ADVERTISED”

TYKO, with the help of VEMCO, started the installation in late December 2007. The installation proceeded extremely smoothly. “Installing the refrigeration lines from the outdoor unit to the fan coils was very quick and easy, which was good because of the limited space we had to work with,”

Kovash said. He added: “And the system operates as advertised. We checked all pressures and air flow and had very little noise from the fan coils. The system operates perfectly.”

Since the building has only been operating a year, Morton said it’s tough to quantify the system’s energy savings. However, he added, “We haven’t had issues with dependability and we have been able to maintain a comfortable temperature during all types of weather extremes.

Since we are located in the basement, the operation is pretty quiet as well.”



The entire Daikin system, which stands completely alone from the rest of the building’s MEP systems, is controlled via Daikin remote sensors and 7-day programmable controllers.

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DAIKIN EQUIPMENT

- Outdoor Units
 - 1 VRVIII Heat Recovery REYMQ96MTJU
- Indoor Unit
 - 1 Concealed Slim Duct FXSQ24MVJ
 - 2 Concealed Ceiling Unit FXMQ48MVJU
- Programmable Control
 - 3 BRC1D71
- Branch Selector Boxes
 - 3 BSVQ36PVJU
- REFNET
 - 2 KHRP26A22T

FIND OUT MORE ABOUT DAIKIN VRV.

Contact your local dealer or manufacturer's representative.

Additional information

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

Actual savings and costs will vary. Cost and savings statements are applicable solely to the installation indicated. For additional information please contact the installing contractor, distributor or factory representatives.

DAIKIN

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