

P&H Wholesale Spotlight

Location: Sioux Falls, South Dakota

Main Benefit: Geo is expected to provide a cost savings of more than \$1 million over the first 25-year lifecycle

Product: 2 GeoStar Aston Series vertical heat pumps, 1 Aston Series XL horizontal heat pump and 3 Aston Series water-to-water heat pumps

P&H WHOLESALE REAPS MAJOR BENEFITS BY CHOOSING GEOTHERMAL HVAC IN NEW BRANCH

What happens when an HVAC expert explores heating and cooling options for their new 37,000-square-foot branch? They analyze multiple avenues and let the financial data and overall benefits of the system make the decision. Plumbing & Heating (P&H) Wholesale is an HVAC distributor with showrooms and supply centers scattered throughout Iowa, South Dakota and Nebraska. The new building, located in Sioux Falls, South Dakota, needed a system that could overcome a common challenge faced by many locations – fluctuating seasonal weather conditions. The summers are warm, but the winters can be frigid, snowy and windy. Luckily, P&H found a solution within their own product that offered a cost savings north of \$1 million, while keeping the temperature at peak comfort levels year-round.

BUCKING TRADITION

Originally, geothermal wasn't even part of the HVAC conversation. P&H first laid out plans for a conventional forced-air 16 SEER system. But P&H President Mike Plazier wasn't completely satisfied. He asked for a comparison of conventional and geothermal systems.

Enter Terry Thie, a 38-year HVAC veteran and the company's hydronic and geothermal specialist. Using GeoStar's design and costing software, he quickly laid out a geothermal equivalent to the conventional 16 SEER system. The numbers were dramatic.

"A 25-year lifecycle analysis compared the operations and equipment costs of each system side by side. The geo system saved an estimated \$1,126,664 over that time period – a massive amount of money that could be used for other parts of the business to benefit our customers. And that doesn't even count the future savings that we'll see over the lifespan of the geothermal loop, which commonly lasts up to 100 years. The decision was easy."

The move to geothermal also gives P&H a chance to practice what they preach. There's no better way to show reps that geothermal is the most efficient heating and cooling system on the planet than to install it in their own building. It also allows visiting residential contractors to experience geothermal every time they visit.

"Many HVAC contractors are so focused on the first cost of a project that they forget about the efficiencies of geothermal equipment," Thie says. "Geothermal heating and cooling can be up to four times more efficient than ordinary systems. There's no gas furnace or electric heat that's remotely close when it comes to efficiency."



P&H Wholesale is proving that geothermal heating and cooling is the clear, data-driven choice for long-term HVAC value and performance.

TOUGH TERRAIN SUCCESS

Sioux Falls building's footprint includes a 7,000-square-foot showroom and a 12,000-square-foot mezzanine with offices, as well as training and customer service areas. To condition those spaces, P&H installed two GeoStar Aston compact vertical dual capacity systems, as well as an Aston XL Series horizontal unit.

Sioux Falls sits on a bed of granite, a tough terrain that can make vertical drilling difficult. By choosing to bore horizontally, P&H and the drilling crew proved that it is not only possible to install a geothermal loop in this terrain, but surprisingly simple. At an average depth of 12 feet below ground level, just beyond the granite, 62 horizontal loops, roughly 205 feet in length each, were installed.

HEAT BENEATH THEIR FEET

While the offices and customer-facing showroom are climate controlled by the GeoStar water-to-air units, the warehouse team simply looks down to find their heat. P&H installed three 15-ton water-to-water systems to warm up the warehouse via radiant floor heating.

"When you open up six large overhead 16-foot doors in the warehouse, it tends to cool it down very quickly unless you have a big mass of concrete holding heat," Thie says. "With radiant heating, the concrete gets warm and stays warm, eliminating swings of warm and cold when those doors are open. The result is more consistent heating provided by highly efficient geothermal technology."

ASCENDING TECHNOLOGY

Working on P&H's new distribution center has only strengthened Thie's belief that geothermal will continue its ascent in the years to come.

"I've designed more than 50 commercial and residential jobs in my career, and it's crazy to believe that geo isn't considered more often," said Thie. "Just look at the lifecycle cost analysis. It makes all the sense in the world. And the GeoStar brand continues to deliver for us and our customers. Furthermore, the GeoStar Tech Support team is by far and above the best, not only in knowledge, but in response time. The wait time to hear back from them is typically less than five minutes. The competition commonly takes more than an hour or even makes you wait until the next day. The people at GeoStar are simply the best. Their partnership, combined with our customer-first approach, means we'll continue providing our customers with second-to-none support and viable efficiency-focused options for their future geothermal projects."

“Some contractors don't think you can install geo loops in an area like this. Truthfully though, we've found that geothermal can be installed just about anywhere and in just about any terrain.”

—Terry Thie,
P&H Wholesale,
Hydronic and Geothermal Specialist



Radiant Results: Inside the warehouse, GeoStar water-to-water systems power radiant floor heating, ensuring consistent warmth despite South Dakota's frigid winters.



GeoStar Aston heat pumps will deliver more than \$1 million in projected cost savings and year-round comfort for P&H Wholesale.