

PARTNERS

UNICO Contractor

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The Unico System is designed to fit. It's ideal for heating or cooling buildings with:

- Electric Heat
- Hot Water Heat
- Chilled Water Loops
- Steam Heat
- Radiant Floor Heat
- Inadequate or No Ductwork
- Limited Space
- Inadequate Cooling on Upper Levels
- Baseboard Heat
- Radiator Heat



Overview

The Teton Ranch is a log cabin secluded in the picturesque setting of Driggs, Idaho, with spectacular views of the Teton Mountain Range. The home presented significant design challenges requiring a simplistic and flexible heating and cooling system.

The massive cabin, over 20,000 square feet, posed a unique challenge for engineers and contractors. The homeowners wanted to maintain the integrity of the exposed wood and did not want outlets or ducting to be visible. Also, a house this size has the problem of varying cooling loads throughout the day. With the exterior design of the house being extremely important to the homeowners, the outdoor HVAC component could not be visible.

Log homes are particularly difficult for HVAC design and installation. Because emphasis in log homes is placed on the aesthetic of exposed wood, installing outlets and ductwork can be especially difficult while maintaining the integrity of the design. Pond's Plumbing & Heating and US Air Conditioning Inc., recommended the Unico System and the UniChiller RC for the home's HVAC needs.

Strategy

The UniChiller RC is a reverse cycle, completely self-contained outdoor chiller. The UniChiller uses water to heat and cool as opposed to refrigerant and connects seamlessly to an indoor air handler. Using water makes the system environmentally friendly because there is no risk of a refrigerant leak and it is more energy efficient. The unique features of this system enabled the contractors to meet the specific needs of the client.

The interior beauty of the house was a high priority. The Unico System has a small and flexible duct, one-fourth the size of most HVAC ductwork. This enabled ducts to fit into hollowed-out beams and other tight places to remain hidden from view. The ducts are made from sound dampening supply tubes making an exceptionally quiet air delivery solution. The air level never rises

above a whisper. Additionally, Unico outlets are customizable circular or flat pieces that come in varying materials or wood finishes. The outlets were stained to match the wood from the logs and were hidden in inconspicuous areas.

Another challenge the UniChiller solved within the home was different cooling loads throughout the day. Most HVAC units would need additional outdoor condensing units to compensate for the large area. The UniChiller has the capability to establish zoned cooling areas. The UniChiller RC generates chilled or heated water only to the extent of satisfying the zones of comfort calling for either heating or cooling. There is no waste of energy with the UniChiller. Individual zones can turn on and off as needed as opposed to the entire system running at full force all day.

In order to hide the UniChiller, the outdoor unit was placed 275 feet away from the structure in a remote area enclosed in a custom-built housing unit. The piping from the UniChiller location to the indoor air handlers ran underground resulting in an uncompromised exterior view. The UniChiller connects seamlessly to the indoor air-handler through insulated PVC copper or PEX tubing.

Results

Because the log home presented such a unique situation, the compact, self-contained features of the UniChiller offered the most flexibility and met the homeowners' requests to the fullest potential. Without compromising the ambience of the rustic log home both inside and out, the UniChiller RC enabled superior HVAC results without damaging the aesthetics of the home.

