Aquazone™ GeoThermal Systems for Every Site

Aquazone geothermal technology can be configured to accommodate diverse site and cost considerations. The actual number, spacing and depth of geothermal loops — and number, model and configuration of Aquazone water source heat pumps — varies from building to building, according to the requirements of the individual property.

Below are three common types of geothermal systems. For more detailed information about the system best suited to your building's site and demands, please contact your Carrier representative.

Horizontal Ground Loop Systems
In Horizontal Ground Loop Geothermal systems, the geothermal pipe loop is buried in trenches below the frost line. Each trench may hold from one to several loops of pipe. The ground loop configuration offers lower excavation costs than a vertical loop system, and works well on sites with open land such as playing fields or park space.

Pond/Lake Loop Systems
Water Loop Geothermal systems use existing water features such as a lake to house the geothermal spool type piping loop. The natural temperature stability of the water provides the same benefits as an earth-buried system with no excavation costs.

Hybrid Boiler and Cooling Tower Systems
In instances where a property owner wants the efficiency of geothermal conditioning with lower first costs, a hybrid system may be used. Hybrid systems incorporate a boiler or cooling tower along with a smaller geothermal ground loop field, gaining much of the efficiency of a pure geothermal system while reducing the excavation and materials cost of loop installation.

Benefits at a Glance
For Building Owners and Managers
- Delivers greater occupant comfort
- Quiet operation
- Low life cycle costs
- Reliable operation
- Supports LEED® certification

For Consulting Engineers
- ASHRAE 90.1 compliant
- Quiet operation
- Reduced energy consumption
- High efficiency
- Plug-and-play design

For Contractors
- Extensive factory-installed options
- 100 percent run-tested
- Easy to start up and operate
- Easy to service
- Proactive diagnostics

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Manufacturer reserves the right to discontinue, or change at any time, specifications or designs, without notice and without incurring obligations.
Aquazone™ Water Source Heat Pump GeoThermal Systems offer property owners the opportunity to give new or existing facilities the energy edge, from the immediate benefit of dramatically lower heating and cooling costs to the long-term value of a property with a low-maintenance, state-of-the-art conditioning system. Backed by the Carrier commitment to energy efficiency and industry-leading innovation, property owners can move confidently into a sustainable future where the rising cost of fossil fuels has minimal impact on operating budgets.

Aquazone GeoThermal Systems use the earth’s natural reservoir of stable temperatures below the frost line to move heat into conditioned spaces during the cool weather months, and to reject the summer heat from the facility into the ground. Using geothermal heat pumps and an underground polyethylene pipe loop filled with a water/non-toxic anti-freeze mixture, the Aquazone GeoThermal System provides comfortable, highly efficient heating and cooling, no matter what the climate, location or soil type of the facility. Aquazone GeoThermal Systems typically provide comfortable conditioned spaces at energy costs 25-50 percent lower than a conventional heating and cooling system.

Quiet, zero-emissions Aquazone GeoThermal Systems are an ideal heating and cooling technology for new buildings that seek LEED® (Leadership in Energy and Environmental Design) certification. Since geothermal systems conserve energy and lower CO2 emissions, they contribute to a favorable LEED rating. Aquazone is also an excellent choice to retrofit facilities where preservation of historic character is a priority. Since the Aquazone GeoThermal System has no exterior components, it does not compromise rooflines, and also saves interior space, as it does not require a large equipment room.

With its 20+ year lifecycle, low maintenance costs and ongoing energy savings, the Aquazone GeoThermal System is a fiscally prudent investment for any property owner seeking to maximize property value and buffer against the uncertain fuel costs of the future. Furthermore, federal, state and local “clean energy” incentives make Aquazone an even more prudent investment for any commercial or educational property.

**Aquazone™ Water Source Heat Pump GeoThermal Systems**

**Delivering High Efficiency Space Conditioning from the Ground Up**

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