

Frequently Asked Questions



FREQUENTLY ASKED QUESTIONS

Can we apply the technology in new or existing buildings?

Yes, both. Enerdrape panels are modular, thin, and flexible, making them a versatile choice, whether they are integrated during building renovations or for new construction projects.

Does my building need to be equipped with a heat pump before the installation of Enerdrape geothermal panels?

Not necessarily. If needed, a dedicated heat pump will be installed. It can then be connected to any existing heating system, whether it is powered by gas or oil.

Is there a risk that this geothermal panel system will cool down my underground space?

No, the Enerdrape system mainly draws its energy from the ground. This does not affect the comfort of the users of the underground space.

Is the Enerdrape solution suitable for an urban environment?

Yes, it is particularly advantageous in urban environments. The geothermal panels, as well as the geothermal heat pumps used, are compact and quiet, making their adoption easier in compliance with local regulations.

Is it possible to produce electricity?

No, the panels produce thermal energy, either heating or cooling. The liquid circulating inside the panels gains a temperature differential that is transferred to a heat pump system, which then supplies the building with heating and potentially cooling.

In fact, did you know that heating and cooling needs represent, on average, 80% of a building's energy demands?

Electricity accounts for only 7% of these needs.

What happens if a panel is damaged by a car

The panels are positioned in such a way as to minimize the risk of impact with cars. The panels are covered with another protective panel, allowing them to withstand usual impacts encountered in a parking lot (such as door bumps), thus maintaining the operation of the geothermal panel. In the event of a severe impact, the modularity of the system allows the damaged panel to be quickly and easily isolated for replacement.

What space requirements should be planned for the installation of the panels?

Once installed, the panels have minimal space requirements. They take up less than 3 cm in thickness (including the mounting) and have no footprint on the ground.

What work/technical elements should be planned?

The panels are mounted on surfaces in contact with the ground, and a network of pipes completes the system to bring fluids back to the technical room. In the technical room, the hydraulic network, a circulation pump, valves, and other typical heating system accessories should be planned. The network can be directly connected to the existing system. If necessary, a heat pump can be added. Light work may be required in the case of an existing infrastructure.

What is the lifespan of the panels?

The panels are considered to have a lifespan of at least 50 years.

Is it possible to integrate a finish or advertising on the panels?

Yes, the panels can be customized upon request

What type of heat pump is required?

The Enerdrape panel system connects to water-to-water or glycol-water-to-water heat pumps.

Is it possible to connect an air source heat pump?

The geothermal panel system connects to heat pumps that use water or glycolated water/brine as a source. These Enerdrape heat pumps can be coupled with existing air-source heat pumps for additional support.

What are the best environmental conditions for optimal efficiency?

The best environmental conditions for the installation of Enerdrape panels are as follows:

- A confined underground environment.
- A maximum surface of walls in contact with the ground, free of any installations (ventilation, piping) to accommodate the panels.

Does the ambient air inside the parking garage affect performance?

The ambient air temperature conditions can affect the thermal performance of the panels and are evaluated during the design phase.

Is there condensation on the panels?

Condensation can form on the surface of geothermal panels under certain humidity and temperature conditions. However, the panels are designed and treated to eliminate any risk of deterioration or damage related to condensation. The cosmetic protective panel that covers the geothermal element prevents users from seeing or coming into contact with water droplets.

What type of maintenance is required?

A visual inspection of the panel condition is required once a year. Regular maintenance for heat pumps and heating networks should also be planned. Temperature and pressure sensors allow monitoring of the overall system condition

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Does the thickness of the wall/structure and the type of material affect thermal performance?

Yes, the thickness and material of the foundation or structure have an impact, although limited. In the case of typical concrete or rock foundation walls, the thermal potential remains stable. It is important to pay attention to the presence of an insulation layer between the panels and the ground. Detailed studies and calculations must be carried out to estimate the average thermal potential of each site, based on the specific site conditions.

Do the soil type and geological conditions affect thermal performance?

Yes, the type of soil, its thermal conductivity, as well as the presence of water in the soil, influence thermal performance. Detailed studies and calculations are carried out to accurately assess the impact of these conditions on the long-term thermal potential and performance.



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