



ELITIS
HOUSE



A GREEN PROJECT

From solar panels to heating systems based on geothermic, Elitis House meets the best criteria with regards to eco-sustainability and environmental protection.

Elitis House is designed to be a green and innovative project; it takes advantage of the sustainable energy sources available in nature, such as solar energy, hydro energy and geothermal energy, to limit the planet's energy pollution by as much as possible.

The technological innovation and complexity of the plants built are perfectly integrated with the urban landscape, adding value to the territory and the environmental well-being.

Thanks to the absence of fossil energy sources, there are no cO2 emissions and the use of natural elements also allows for the self-production of more than 50% of the daily energy requirement.

Just like the plants, the materials used in the construction of the building also meet the best features of eco-design: the materials that cover the structure absorb noise pollution and energy losses.

Shown below are the key factors upon which Elitis House bases its eco-sustainable nature on.



KEY POINTS

Groundwater geothermal system

Elitis house's system is made of two groundwater heat pumps, an energy tank capable of retaining the temperature during the summer phase of cooling and in the winter phase of heating.

The release and absorption of heat takes place via a geothermal heat pump. The first pump is useful for the functioning of the heating and cooling system, while the second pump is used for the production of domestic hot water (DHW).

In the open-cycle geothermal system in question, the groundwater is extracted from a well located 70m deep and is then sent to a heat exchanger that allows for the geothermal energy to be transferred from the aquifer to the heat pump.

The water collected is subsequently re-introduced into the aquifer through the second well, which is 40m deep.

The temperature of the water in the aquifers is around 10°-15°C, meaning that the system's performances are very high and constant, unlike the traditional gas boiler. In fact, both pumps operate using electricity, limiting Co2 emissions to zero.



Photovoltaic system

The south part and the roof of the whole building are entirely covered with photovoltaic panels, which use solar energy to produce electricity.

Aeration system

Elitis House's rooms are subject to Co2 monitoring with air regulation and supervision through a controlled mechanical ventilation system.

In each meeting room of the hotel, thanks to the system's calculation sensors, clean air is emitted in proportion to the number of users in the room. This means that the greater the number of people in the different rooms, the greater the amount of air emitted by the machine to always provide a clean and comfortable environment. This technology is particularly useful for the prevention of Covid-19.

Domotics

Particular attention has been paid to the containment of electricity consumption for the illumination system, by choosing low consumption lamps and a home-automation system that regulates the times and the use of the illumination.







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