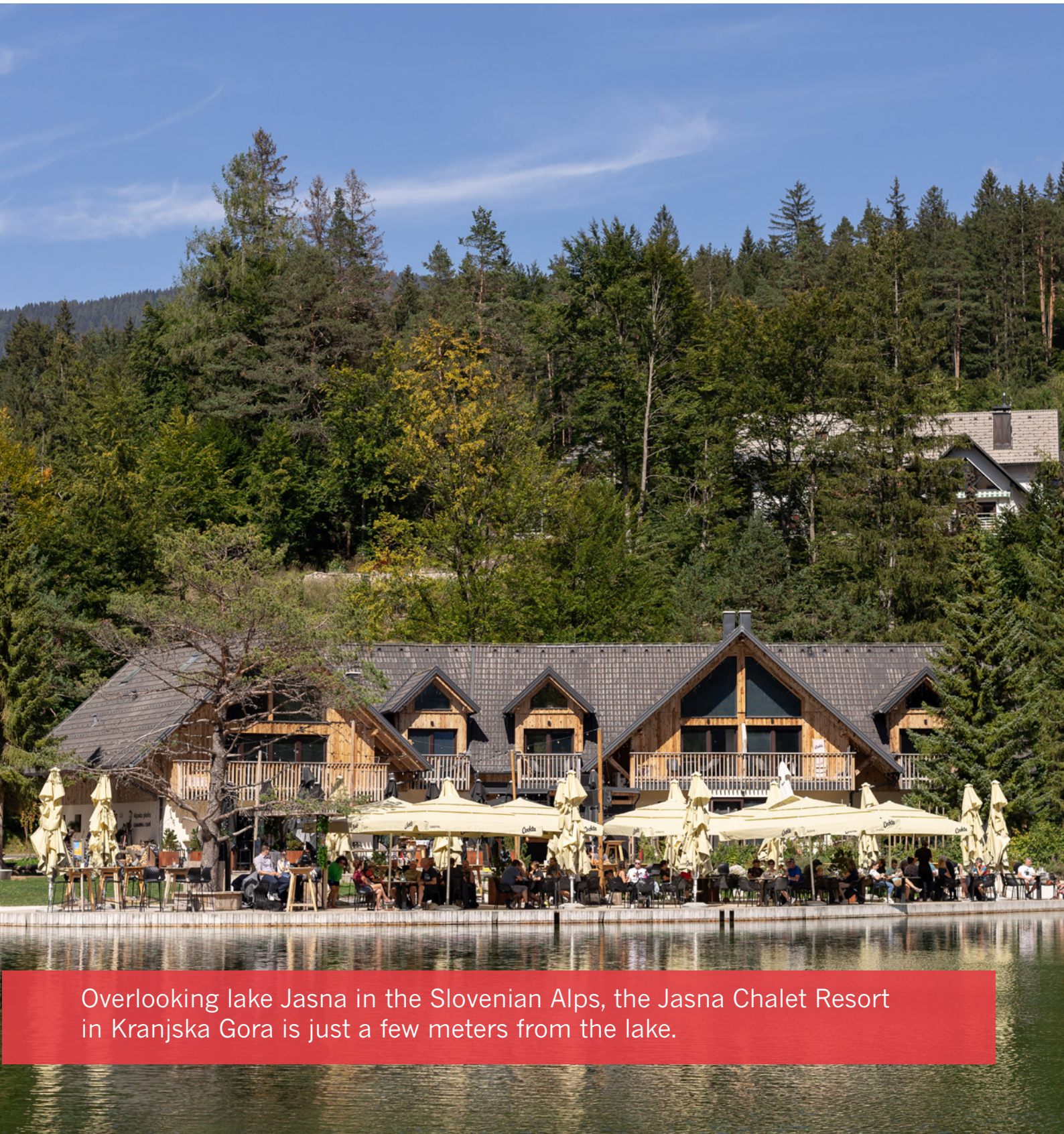
Thermia harnesses natural resources to create a unique energy system for the Jasna Chalet Resort



Overlooking lake Jasna in the Slovenian Alps, the Jasna Chalet Resort in Kranjska Gora is just a few meters from the lake.

Chalet Jasna - view from the lake side in summer

This luxurious resort has eight beachfront apartments, a restaurant and a sauna. Each apartment features a balcony, a terrace and an outside seating area, whilst the accommodation part has a fully furnished kitchen with an oven, a cooktop, cutlery, crockery and glassware, a lounge area with lovely sofas and a writing desk, as well complimentary Wi-Fi and a multi-channel television.

Guests can also make use of the communal sundeck, outdoor fireplace and the picnic area, with wonderful views of the mountain and lake. There is also a golf course and the opportunity to participate in sports activities such as hiking, cycling, and skiing.

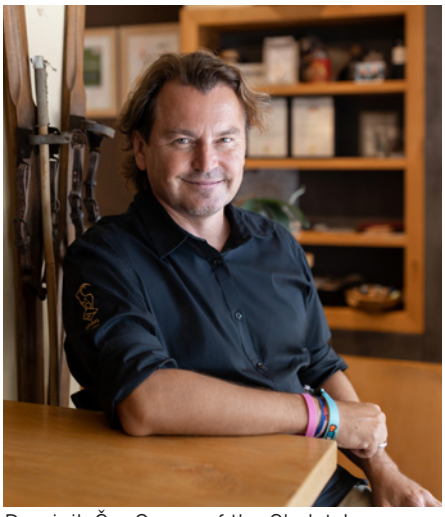
Really good heating was essential

Given how cold the winters get, with outside temperatures often below -15 °C, when the investor set out to renovate a tourist building in this unique location by Lake Jasna in Kranjska Gora, they knew they needed the best possible and most reliable heating system with a plentiful supply of sanitary hot water for the apartments, the restaurant and all other parts of the chalet resort.

The building is positioned in a picturesque, peaceful natural environment, where noise was an important factor, which meant that air source heat pumps were out of the question.

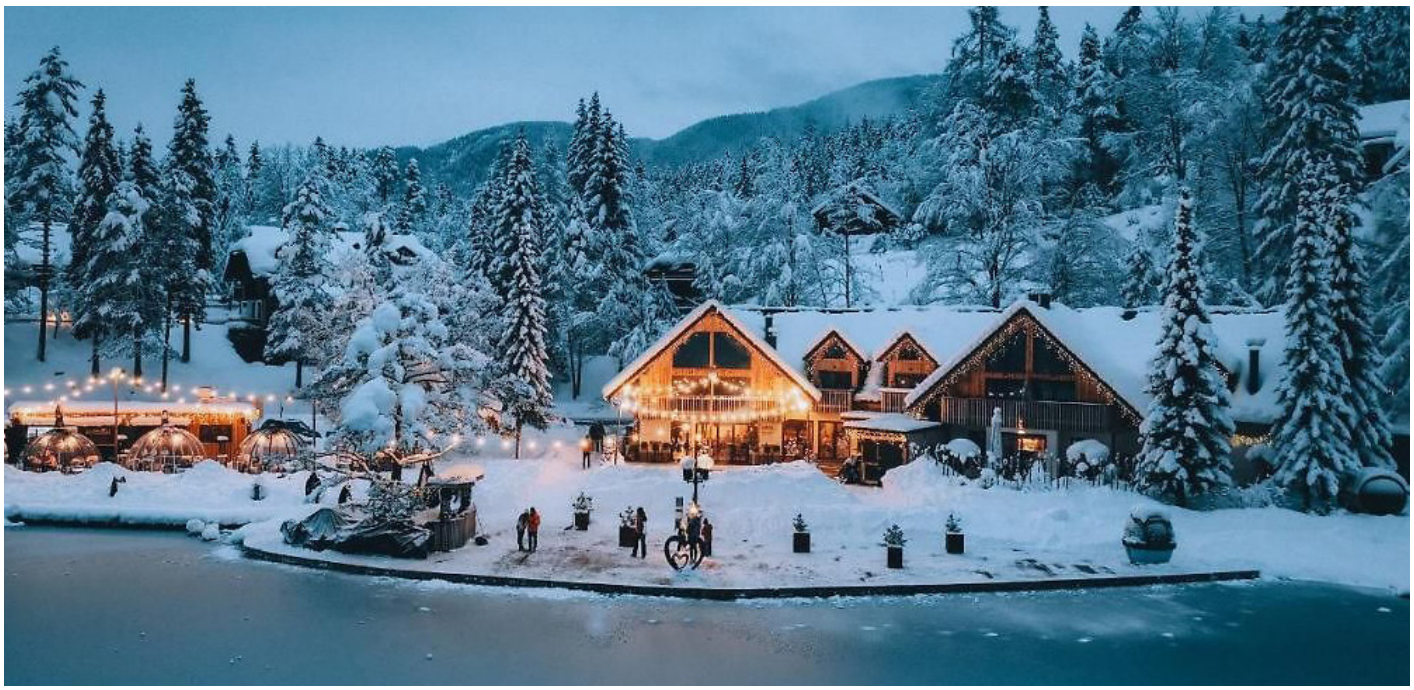
The solution was energy from groundwater

It seemed that underground water could provide the energy required. This led us to plan a water-to-water system of adequate capacity to cover all heating and domestic hot water needs. The investor immediately liked this approach, so he introduced us to an installation engineer, with whom we discussed all the details of the planned system. We suggested that wells were drilled as quickly as possible to confirm the availability of sufficient groundwater.
A permit was obtained to drill an exploratory well, which confirmed that there was enough groundwater.

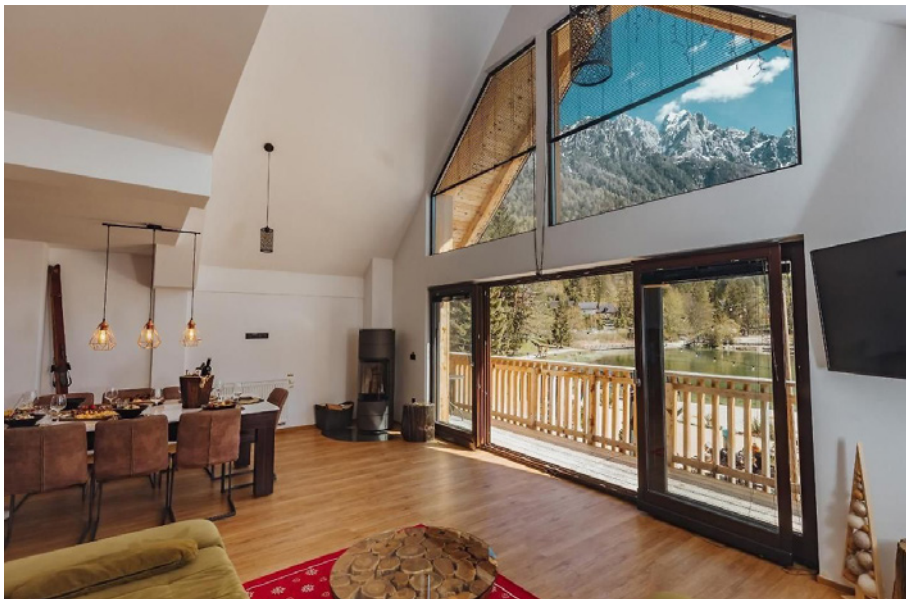


Dominik Č. - Owner of the Chalet Jasna

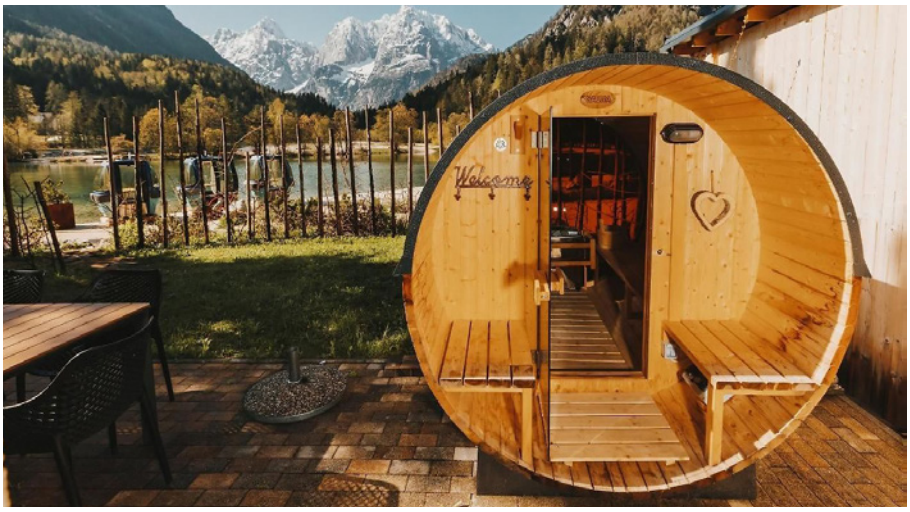
Heat pumps are an innovative and creative way of taking action to protect the environment and will contribute positively to reducing CO_2 emissions in the years to come.



Chalet Jasna - view from the lake side in winter



The apartment

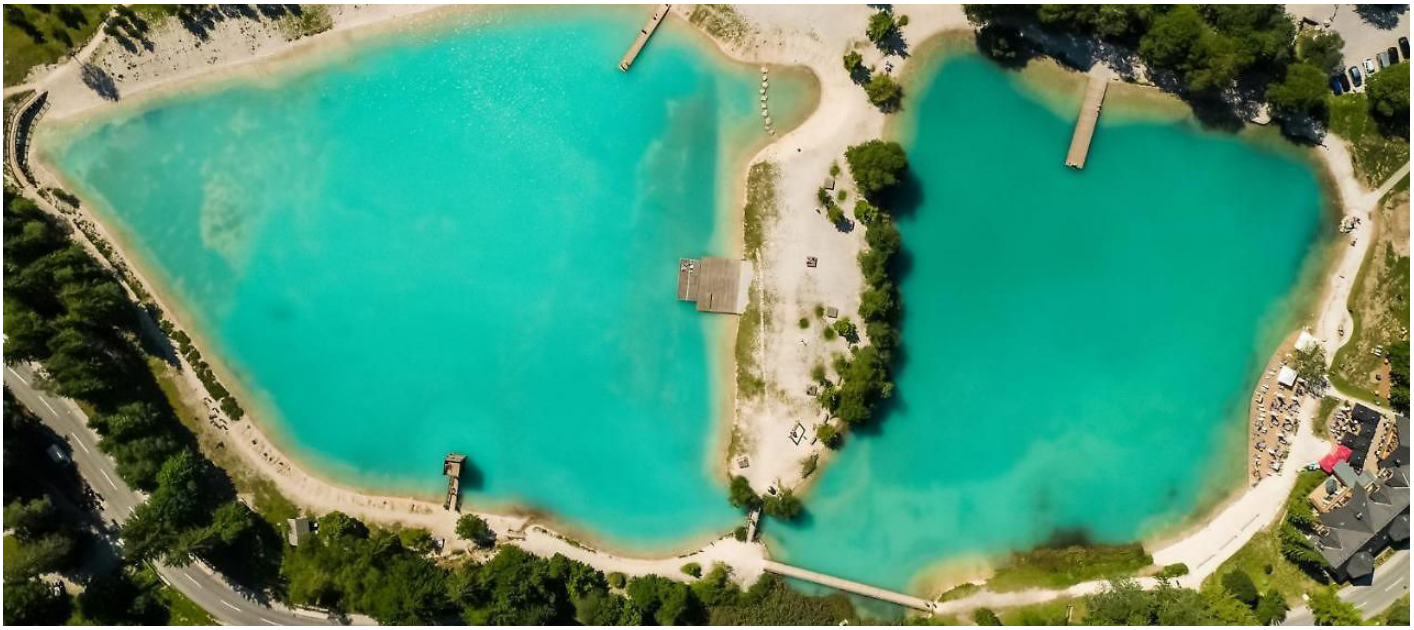


The sauna

This led to the construction of a well that ensured a sufficient flow of water for the needs of the planned system. Based on the water level in the well and the required flow rate, we calculated the necessary size and power for a submersible pump, which we delivered for installation by the mechanical installer.

The Thermia Mega 5 – efficient, green and clean

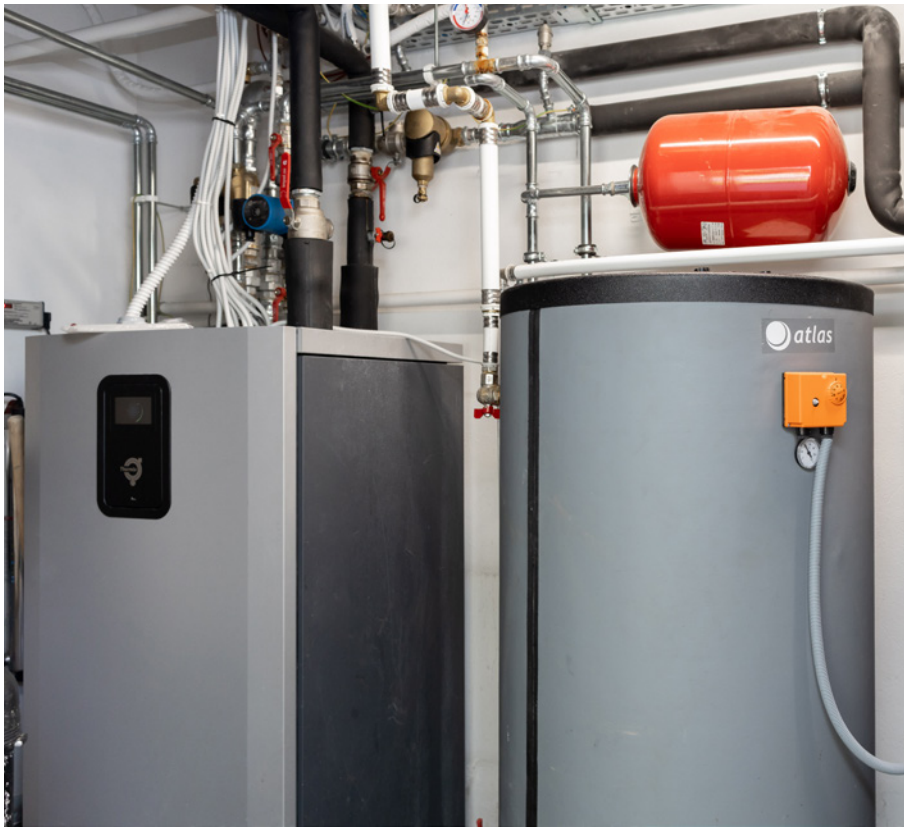
Based on the heating requirements for the resort, we designed a water-to-water system with a Thermia Mega S ground source heat pump with inverter technology and a modulated power capacity of 14-42 kW. The investor was pleased with the recommendation, and together with his installation engineer, we finalised the details of the design and prepared for implementation. As per the specification, the engineer installed the heat pump, buffer tank and hot water tanks, made the connection to the groundwater supply and return,



Chalet Jasna - view from the lake side in summer

and arranged the electrical wiring in the machine room. An additional advantage of installing a heat pump is the ability to use the heat of hot gas technology. The hot gas technology is used to raise the temperature of the domestic hot water even above 70°C, which provides a huge amount of hot water for the needs of the guests, the restaurant's kitchen and other areas of the resort. When the installation is completed, all that is required to commission the system is to check all the details and set the parameters on which the system will work, and the heating will run without any intervention.

We briefed the investor and his staff on the heat pump, the settings and what to do in case of any problem. In the first winter, there were very minor problems due to some electric fuses being too small. This was immediately remedied by increasing the size of the relevant fuses.



Thermia Mega S (14-42 kW) in the machinery room

Fact Box

Name: Jasna Chalet Resort

Location: Kranjska Gora in Slovenia

Characteristics of the building

- Property: tourist building
- Building size: 900 m^2
- Building insulation: 10 cm styrofoam, adapted building joinery and roof insulation

Applied solution:

- Completion date: 2018
- Type of heat pumps: Thermia Mega S (14-42 kW)
- Source of energy: ground water / well
- Heat distribution system:
  - underfloor heating
  - radiators

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"A big advantage is the flexibility of our tailor-made solutions. Since the company was founded in the late 1980s, we have repeatedly launched onto the market innovative, high-quality and efficient products. This remains the reason why we are a pioneer in the heating and cooling industry and why we represent some of the most well-known brands for energy efficient heating and cooling on the market today", explained

Yasin Jodeh, Managing Director at Atlas Trading d.o.o.

Examining the existing situation, Atlas Trading recommends a system solution with correct sizing, a comprehensively prepared execution plan and a complete operational test run, with all the work carefully supervised to bring the system into full operation.

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