



Uuesalu - a place where a green residential area lives with green technology

“We found the Uuesalu Kodu development project on the internet by accident and looking at the pictures of the houses – we were immediately smitten! Impressed by not only the architecture and the choice of materials, but the geothermal heating, stone roofs, wooden fence and tasteful decor” says Stanislav Kalov, whose family was the first client for the Uuesalu Kodu development.



Uuesalu means privacy and nature

Uuesalu, a residential area is located just 8 km from the city center of Tallinn. Domestic bliss, tranquility and friendly locals are only a few of the keywords conveying the atmosphere of the Uuesalu residential area. It is very popular among young people and families with children, as the area has private and spacious sized housing, plenty of greenery and a well thought out infrastructure.



Uuesalu residential area - single-family homes

Low carbon heating in a modern, energy efficient homes

Many of the buildings in the Uuesalu Village are semi-detached houses or terraced houses built within the last five years. The developer, in keeping with the surroundings decided on a 'Green build', for Uuesalu – all the homes, mostly one story, are wooden or stone lined. *"The choice of materials, durable and long-lasting, contribute to a healthy living space, allowing for excellent sound insulation"*, – says Janar Muttik, board member of Uuesalu Development Ltd.



Living room

'B Energy class buildings should not be higher than 120 kWh/m² per year. Uuesalu homes are B-class rated due to their thermal insulation, efficient heat recovery ventilation systems, and moreover, by the Thermia ground source heat pumps providing low cost energy efficient heating'

says Toomas Kibus head of renewable energy & heating department at Airwave.



Kitchen



Bathroom

The housing envelope and infrastructure has been planned with a green and nature-friendly bias. All the homes are well insulated, fitted with triple-glazing in plastic frames for low heat transfer. However, the “B” energy label the development proudly holds is also very much due to the ground source heat pumps that use geothermal energy, the modern floor heating and efficient ventilation with heat recovery capability.

The homes are all equipped with Thermia Diplomat or Thermia Diplomat G3 ground source heat pumps with integrated hot

water tanks. Renewable energy comes from a ground collector – a horizontal loop buried about 1,5 meter below the surface. All installation work has been done by Maaküte OÜ. *“All tenants will benefit from the renewable heating system”* – says Toomas Kibus, head of renewable energy & heating at Airwave, heating systems and adds, *“The Thermia heat pumps translates to lower bills, lower energy consumption, no chimney requirements and therefor no low-stack emissions. An excellent choice of heating system for homes surrounded by serene forest and nature”*

Fact Box

Type of building:
one family, semi-detached house

Location: Uuesalu near Tallinn, Estonia

Characteristics of the building

- Heated area: 129-173m² and up to 3 meter high ceilings
- Heating and hot water

Applied solution:

- Renewable heating
- Diplomat Optimum and Diplomat Optimum G3

Heat distribution system:

- underfloor heating 38/31 °C
- Heating and hot water demand 15158 kWh
- Energy consumed by heat pump 3485 kWh
- Green energy delivered by heat pump 11588 kWh
- SPF 4,25
- 60% of CO₂ savings* compared with natural gas / oil

Completion date: 12. 2016

Installing contractor: Maaküte OÜ

* CO₂ savings has been calculated on co2.myclimate.org for Estonia (1736 kg CO₂ emission at heat pump; 4240 kg CO₂ at natural gas and 4835 kg CO₂ at oil)



Thermia Diplomat Optimum 6 kW ground source heat pump



AIRWAVE

AIRWAVE OÜ – LEADING PARTNER IN HEATING AND RENEWABLE ENERGY IN THE BALTIC STATES REGION

Airwave LLC, in business since 1999 is one of the largest heating, ventilation and air conditioning systems suppliers in the Baltic States, whose wide product range includes: heat pumps, air conditioners, air handling units, humidifiers, dehumidifiers, water chillers, installation accessories and tools.

Airwave supplies goods to over 200 professional heating & plumbing contractors, refrigeration and HVAC installation companies in Baltics.



Maaküte OÜ is leading installation company with vast experience in geothermal energy that offers its customers a complete solution. Maaküte can provide and control over all phases of the project from design and installation of borehole as ground source, through heat distribution system, up to the commissioning of the whole heating and ventilation system. One company responsibility for the entire system is Maaküte strategy to guarantee efficient and reliable energy system for years to come.



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For the last 50 years, we have dedicated all our resources and knowledge to developing and endlessly refining one product: the heat pump. Our focus on geothermal energy has given us world leading knowledge in heat pump technology.



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Developing truly sustainable renewable energy solutions can only be achieved with passionate, dedicated, and uncompromising experts. Some of Europe's most highly qualified engineers can be found in our own R&D center.



Born in Sweden

All our products are designed, manufactured, and tested in Sweden using the latest technology and the highest quality components. We are proud to count world-leading industry specialist, Danfoss, among our technology partners.

