



## Slovenian tenants enjoy instant comfort from a Thermia air source heat pump from day one



Thermia Atec, air source heat pump slashes heating bills by up to 67 %

## How to reduce the costs?

Jesenice is a Slovenian town located in the north of the country, close to the Alps and bordering Austria. It has a population of 13 000 inhabitants and is renowned as the Slovenian home of mining and iron forging. Two housing associations from the Jesenice community committed themselves to reducing their heating bills. This is their story of how two independent residential buildings implemented the same solution for domestic hot water production.

In the first building, the installation of the heat pump produced such huge savings that the cost of investment paid for itself after only two years. During this time, the residents were not only impervious to the investment costs, but also noted a significant reduction in their energy bills. The residents of the second building, in which the Thermia Atec has been operating for half a year already, have made significant cost savings and now find themselves on the comfortable side of energy independence.

Using the two residential buildings in Jesenice and Koroška Bela as examples, the return on investment can be underscored by what the heat pump delivers in practice, what the results of its operation produce and the magnitude of the savings. In both cases, the same air source heat pumps were installed and provided comparable results.

### Success story No 1 - Apartments at Gustl Štravska in Jesenice

The chairman of the housing association, Branislav Zajović, who was paying inexplicably high bills every month came to the conclusion that something should be done in terms of energy management in the building. He proposed an idea to disconnect the unit from the district heating system and replace it with a heat pump, and promoted it so persistently that all the residents finally agreed to it. The residents collected different offers from various suppliers and a heat



Gustl Štravska 1, Jesenice



Thermia Atec 16



Old water heater



New hot water tanks

pump from Thermia was selected for its Swedish technology. The process of installation took only a couple of days, that was without the residents even noticing the switch to another heat source. During the assembly, access to hot water was interrupted for only one day.

In order to provide hot water for 60-65 residents in 23 apartments, the Thermia Atec air source heat pump was installed with a power of 16 kW. The heat pump operates efficiently when the outside temperature is as low as -20°C and ensures hot water of 50-55°C. Along with the heat pump, the equipment in the boiler room of the building was also updated: the old hot water tanks was replaced with new ones with a total capacity of 1 600 liters, new circulation pumps and other equipment modernized included accurate measurements via an online system with remote control access.

The cost of investment was almost entirely financed from the funds

collected in the renovation fund by the administrator of the building. As a result, the residents did not experience any increase in their bills, whereas the savings began from day one and within a month the energy bills dropped. The facility management company cooperated closely during the installation with the administrator of the building. Their professional approach contributed to the smooth implementation of the project.

The heat pump has run continuously from the first day without any 'start-up problems' and provides residents with a large amount of hot water at extremely low cost. Heat pump supplier, Atlas trading d.o.o. offers a 24-hour remote monitoring system, is ready to carry out any maintenance work, and provides a 5 year trouble-free warranty of the operating system. Disconnecting the water heater from the district heating network resulted in a decrease of the total connected load within the building, which in the words of Branislav Zajović, significantly reduced

the heating costs during the winter season, although the apartments are still heated with district heating.

## Success story No. 2 - Apartments at Cesta talcev 7 in Koroška Bela

Following the example of Branislav Zajović and the exceptional results he managed to achieve in his building, Aleš Jereb, chairman of the housing association of the building at Cesta talcev 7 in Koroška Bela, proposed the implementation of a similar investment. The residents quickly came to the conclusion that the installation of a heat pump was a sensible solution. Despite having received several offers with very low-cost systems, mainly from competition in the Far East, the residents decided to choose a proven solution, bearing in mind that the cheapest offer is not always the most attractive one.

Heating the home is a crucial element of all our lives, moreover when a multi-family residential building is to be heated where the smallest failure can cause many problems and inconvenience for the residents. Thanks to the spread of the cost between numerous apartments, the investment was not a burden on the residents' normal budgets, especially when the energy bills were seen to be

significantly reduced at the same time. As in Success story No 1, the investment in the building at Cesta talcev was also financed from the association reserve fund, so the residents did not feel the pinch while paying their monthly bills, but actually received lower energy bills –improving their already stretched house hold budget, and this is just one of the important goals of such an investment. It is also comforting to know that as an association you are using renewable energy sources while heating, and in-turn doing something good for the environment.

### Costs plummeted 70 % and a return was seen in just 3 years – Fact not Fiction!

In addition to cost reductions, the residents have also secured their independence from their former energy supplier, as the heat pump fully covers demand for domestic hot water without the need for additional hot water provided by the district heating network. The bills clearly show how much electricity was consumed by the heat pump each month, and the costs fell dramatically by 70 %.

The actual savings are so great that the investment cost of the heat pump installation pays for itself within a few years, whereas the estimated lifetime



Cesta talcev 7, Koroška Bela



Thermia Atec 16

of the system is at least 20 years, with minimal maintenance costs. The success stories of the two residential buildings in Jesenice prove that the installed heat pumps were a good investment for both, investor and the environment.

Energy and cost savings thanks to the Thermia Atec heat pump:	Building no. 1 Gustla Štravska 1, Jesenice	Building no. 2 Cesta talcev 7, Koroška Bela
Number of apartments and residents:	23 apartments, 63 residents	30 apartments, 82 residents
Installed devices	Thermia Atec 16, 2X water heater 800 L	Thermia Atec 16, 2X water heater 1 000 L
Comparative period:	25 months 09-08-2013 – 09-09-2015	6 months: 09-03 – 09-09-2015
Generated heat energy:	141 055 kWh	49 258 kWh
Consumed electricity	47 737 kWh	17 661 kWh
Energy savings – heat obtained from the air outside	93318 kWh (66 %)	31597 kWh (64 %)
<b>Average heat efficiency ratio of the system:</b>	<b>3.0</b>	<b>2.8</b>
Costs in the comparative period - old system	EUR 21 128	EUR 7 389
Costs in the comparative period – heat pump	EUR 6 683	EUR 2 472
<b>Cost savings in the comparative period:</b>	<b>EUR 14 475 (68 %)</b>	<b>EUR 4 916 (67 %)</b>
Gross cost of the investment in the turn-key system	EUR 14 503 Including subsidies from the Eko Fund	EUR 20 623 The subsidy was not available during the installation
<b>Return on investment period:</b>	<b>25 months</b>	<b>26-30 months (anticipated)</b>

# Atlas Trading – your experienced partner in renewable energy in Slovenia

Atlas Trading I.l.c. is a leading Slovenian company in the distribution and installation of energy efficient heating and cooling systems. A family company, it is known for its innovation and finding solutions outside the established frameworks.

*'A big advantage is the flexibility of our tailor-made solutions. Since our beginning, in the late 1980's, we have repeatedly launched onto the market innovative, high-quality and efficient products, which remain the reason why we are a pioneer in the industry of heating and cooling. and why we represent some of the most well-known brands for energy-efficient heating and cooling on the market today.'* – says Yasin Jodeh, technical manager at Atlas Trading d.o.o.

In order to optimize the final solution being carried out, we keep an eye for detail throughout the entire investment process. The needs and requirements of the investor are always understood from the beginning. Examining the existing situation, we recommend a systemic solution with correct sizing, a comprehensively prepared execution plan, a complete operational test run with all the work carefully supervised to bring the system into full operation. Each step requires experience and expertise, so with the aim of ensuring quality, we employ some of the best experts.



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## Thermia – heat pump manufacturer with 40 years of experience



With more than 90 years of history and experience in the energy sector, Thermia Heat Pumps offer renewable energy solutions for any climate, anywhere in the world. All Thermia heat pumps are designed, manufactured and rigorously tested in Sweden where one of the harshest European climates can be found.

Ever since the beginning, the driving force behind our business has been the philosophy of our founder, Per Anderson: "The products one releases must not only be the best of their time, but before their time, over time".

At Thermia we are driven by this philosophy and our passion to deliver. For us every day is a new opportunity to create, build and serve a bigger purpose, for a greener and healthier planet, not only for ourselves but for everybody around us. Every challenge is Thermia's opportunity to make life a little more comfortable for our customers.

**Thermia Heat Pumps**

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