

ENGINEERING  
TOMORROW

*Danfoss*

Case story

## Owing to the use of a **Danfoss heat pump**, the **Jensen family** have cut their heating bills in half

Ingrid and Poul Erik are saving money with their new heat pump, so much so, that now their neighbours want one too.

**50%**

**off your heating bill**

Exchange your old gas or oil boiler for a heat pump from Danfoss and you too could save up to 50% off your heating bill.





# Energy saving heating without hassle

When Ingrid and Poul Erik were to exchange their old gas boiler, high heating expenses as well as the wish to become independent of natural gas, made them look towards renewable energy sources. A heating engineer recommended an air source heat pump from Danfoss which proved to be an ideal heating solution for the family.



It was an easy decision to choose a Danfoss heat pump. Our heating engineer promised us it would deliver the best performance on the market – and it certainly has proved its worth so far! We are now saving half on our yearly heating expenses and we are quite amazed about how easy the installation was and how silent the pump runs

Ingrid Jensen



After 20 years using gas boilers, something new was to happen for the Jensen family. Like many other Danes, the couple had witnessed increasing energy prices, so began to look at the advantages of becoming independent of fossil fuels. When the Jensens were planning a minor renovation of their house in Tofterup, it was a perfect opportunity to consider an alternative to gas or oil, and switch to sustainable energy sources. "We were looking for a solution which would be beneficial for the environment and for our economy, at the same time a system that would not demand making drastic changes in our house, garden or lifestyle" explains Ingrid Jensen.

## The good advice made all the difference

"We had heard about ground source heat pumps and talked about geothermal heat before, but our garden was too small for the ground loops. Instead, our local heating engineer asked if we had thought about an air source heat pump, specifically the DHP-AQ heat pump from Danfoss."

Taking the engineers advice, the Jensens decided on this revolutionary technology for their home, but Ingrid was anxious about the scope of installation; from time scales to the disturbance would cause the family. "All works connected with the installation went unbelievably quick, and was simple to integrate into our existing plans. We were insulating the lofts and installing underfloor heating in parts

of the house, and the heat pump install caused no issues, not even integrating the indoor and outdoor units of the heat pump. We are extremely happy with our heat pump – hot water is supplied in an instant, the indoor climate is comfortable and it just feels good to use energy with a clear conscience; environmentally and economically."

## The sound of energy saving

DHP-AQ's sound levels is one of the lowest available on the market, therefore the heat pump can be placed practically anywhere around the outside of the home.

"We knew that some heat pumps could be rather noisy which was a concern of ours before buying, but ours is only barely audible even if you stand close to it in the garden! The

indoor unit is completely silent, so you can have it installed in your utility room or kitchen if you want" says Ingrid.

The Jensens chose to place the indoor unit where the old gas boiler was before, hidden behind a sliding door. "The installer suggested us to camouflage the outdoor part, but I liked the clean lines of the design, so I planted a small flower bed around it in order to integrate it into the garden" says Ingrid.

## The best in tests

The DHP-AQ was tested with 10 other air/water heat pumps available on the market, with Danfoss' solution proving to have one with the highest annual efficiencies, which translates to providing the highest possible savings on heating bills (the test was conducted by the Swedish Energy Agency in September 2011).



"The heat pump was installed in May 2011, and until the end of the year we used 2,257 kW for utility water and heating of our 135 square metre house. Compared to our old gas boiler, we are going to save half of the heating expenses on a yearly basis.

Ingrid Jensen



## Recommend the heat pump to neighbours and friends

The neighbours of the Tofterup couple followed the installation process with great interest. Now, when they hear how much Ingrid and Poul Erik are saving on heating, they find it difficult to believe.

"We recommend a Danfoss heat pump to all our family and friends, and if they are sceptical, we just show them our subsidiary meter (a separate electricity meter for the pump), which

indicates what we are going to save during the year, which is currently 50%. And then they want one like this, too", concludes Ingrid with a smile.

## This is the solution which the Jensen family chose

### DHP-AQ air source heat pump 9 kW + MAXI Indoor kit

The heat pump produces heat, hot water and cooling by means of absorbing energy from the air outside. The machine consists of two units: an outdoor unit, i.e. the heat pump itself, and an indoor unit with an integrated steering device and a 180 litre hot water tank made of stainless steel.



## This is the calculation of Ingrid and Poul Erik's heating expenses

### Earlier consumption:

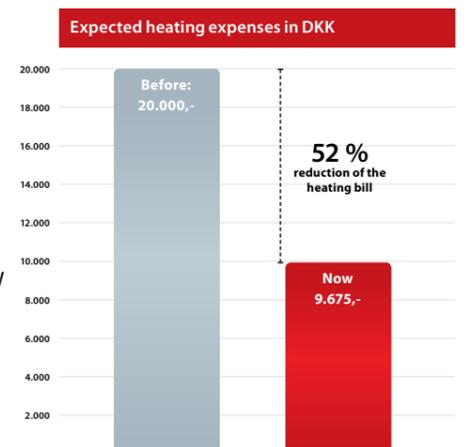
**Natural gas:**  
2,000 cubic metres pr. year  
= ca. DKK 20,000

### Present consumption:

**Heat pump:**  
Expected annual consumption: 4,500 kW  
Average price of DKK 0.215 pr. kWh  
= DKK 9,675

### Conclusion:

The household's heating bill is expected to be reduced by half.



# 3 good reasons to choose Danfoss

Danfoss offers intelligent and energy efficient heating solutions for your home. Our products enhance comfort, reduce heating expenses and make your heating system easier to handle. With almost 8 decades of experience, innovation and development, we provide you with the best heating solutions for an optimal indoor climate.



**1** Intelligent solutions which optimise indoor climate and comfort



**2** Reduce heating expenses and enjoy the advantages of an energy efficient home



**3** Intuitive and user-friendly products which are tailor made to suit your lifestyle

Find more Danfoss references and case stories at [heating.danfoss.com](http://heating.danfoss.com)

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