

Municipal Heat pump use of 2 x water-to-water heat pump Model(s) WI 100TU

Application

Waste heat recovery for heating indoor and outdoor pools of the thermal bath

System location

- ARDESIA thermal baths, officially recognised mud bath in 07356 Bad Lobenstein
Thüringen
Germany

If you have any questions regarding the system or wish to arrange a viewing, please consult your contact person:

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It is possible to view the system.

System description

For the ARDESIA thermal baths in Bad Lobenstein, EON Thüringer Energie and Dimplex developed an individual and sustainable energy concept with heat recovery:

The two Dimplex heat pumps used work with the previously unused waste heat from existing heat sources. The heat pumps heat the indoor and outdoor pools at the baths with the backwash water of the filter system and the exhaust air from the ventilation unit. This enables energy to be saved effectively.

Regina Wittig, Managing director at the ARDESIA thermal baths:

"For us, the focus was on the increasing energy costs. The main aim was therefore to reduce costs - with a justifiable level of investment. Stability and reliability also played a significant role."

The modernisation with heat pumps in August 2010 resulted



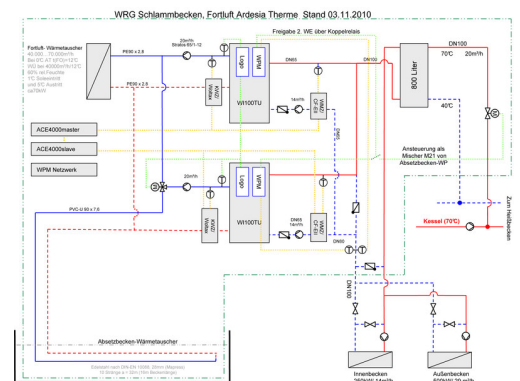
Entrance Ardesia Therme Bad Lobenstein



Front view of the two heat pumps



This pool in the Ardesia thermal baths is heated with the heat pumps



Hydraulic diagram Ardesia thermal baths with 2 water-to-water heat pumps

Dimplex heat pump reference system

in an energy saving of 1.5 million kWh per year. The CO₂ savings of around 150,000 kilograms per year achieved in this way is equivalent to the emissions generated by a VW Golf* over a journey of 1,119,403 kilometres. (* VW Golf, 1.2 TSI 105 HP, 134 g CO₂/km)

Building data

- Heat consumption: 3.5 million kWh per year



Absorber in the settling basin with lowered water level



Inlet and outlet of the HVAC system



One of two water-to-water heat pumps Dimplex model WI 100TU

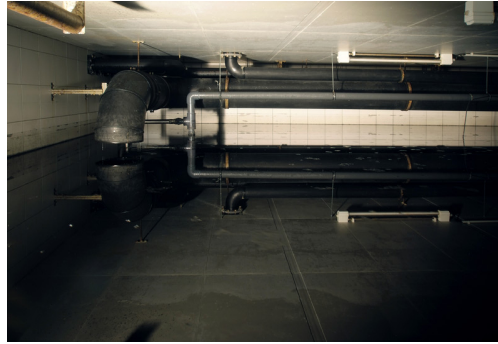


Transfer station for heating the indoor and outdoor pools

Additional pictures:



screwed plate heat exchanger



Settling tank, flooded