

COMMERCIAL BUILDINGS

School Building

Cooling capacity: 200 kW

Savings: 15 000 EUR / year

ROI: 2,6 years

Aim: Energy saving and peak performance management



Design parameters

Aim of HeatTank: Energy saving and peak performance management

Size: 5 000 m²

Cooling capacity: 200 kW

Cooling period: weekdays between 8:00-18:00

Cooling cost: 112 000 EUR/year

Location: Saudi Arabia

Electricity price: 0,05 EUR/kWh

Solution

7 pieces of HeatTank 50-1

Cover the needs for 1-2 hours alone

Cover the peak needs for 4-8 hours

Decrease the peak load by 30%

Total cost of the system: 110 000 EUR

Reduced cost of the system: 50 000 EUR

HeatTank

Type: HeatTank 50-1

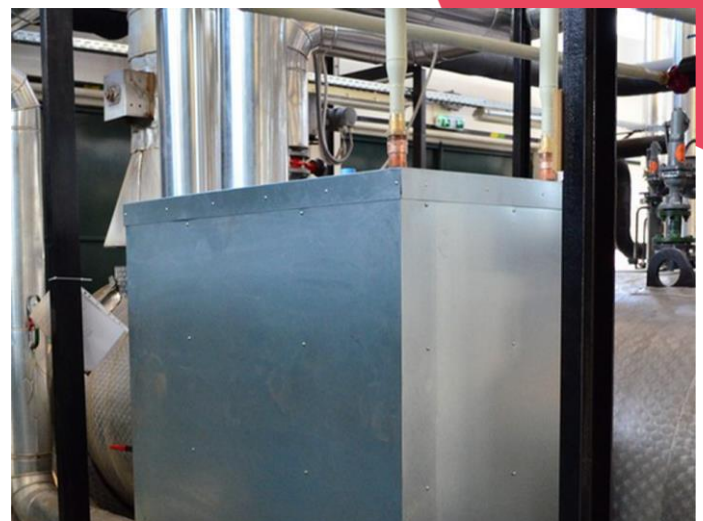
Capacity [kWh]: 50

Max. performance [kW]: 200

External Volume [m³]: 1,84

Connections [DN]: 42

Total weight [kg]: 1 516



Benefits



Electricity saving

Total savings: 13,2%
Total savings: 15 000 EUR/year



Remote control & Energy reports

Remote control and visualized energy reports on monthly base to follow the energy saving.



Higher certification

Higher certification due to higher comfort during summer and as innovative product was used.



Peak performance

30% size reduction in the cooling system, because the peaks are covered by HeatTank.
60 000 EUR initial cost reduction.

Additional savings, which are not calculated: close to flat electricity consumption per day means lower electricity price from the system operator. Also, demand response is possible (when you get paid by the system operator for helping in the electric system compensation).

During our calculations, we did not take into account the estimated high scale electricity price increase, we calculated with a 10% increase in every year, which is a very optimistic scenario, due to the lately huge increases in electricity price.

15 000 EUR / year total savings
2,6 years total ROI