

Large Size Data Center

Cooling capacity: 2 500 kW
Savings: 408 820 EUR / year
ROI: 3,05 years
Aim: Peak performance management



Design parameters

Aim of HeatTank: Peak performance management
Cooling capacity: 2 500 kW
Cooling cost: 1 322 000 EUR/year
Free-cooling: YES
Desired inner temperature: 22-24°C
Cooling temperature level: 7/12°C
Location: Budapest, Hungary
Electricity price: 0,1 EUR/kWh

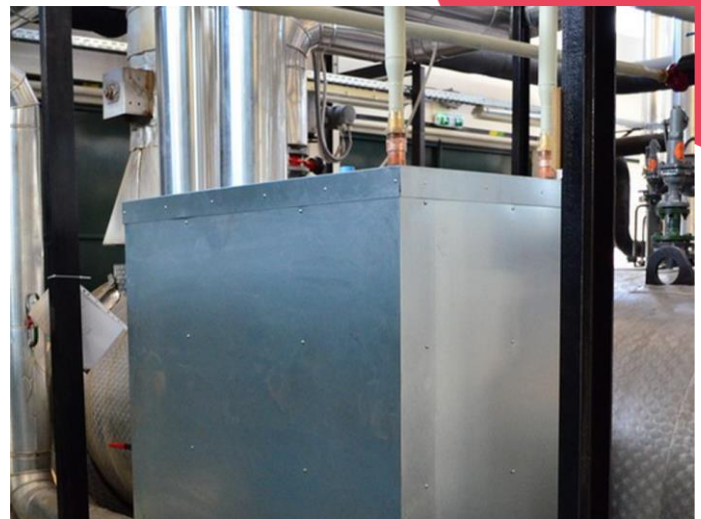
Solution

58 pieces of HeatTank 50-1
Cover the needs for 1-2,5 hours alone
Cover the peak needs for 4-6 hours
Total cost of the system: 1 260 000 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

Free-cooling: 0%
Free-cooling at night: 14%
Chiller optimization: 8%
Total savings: 22%
Total savings: 290 480 EUR/year



Less maintenance

The cooling system gets more stable, requiring less maintenance and reduced operation costs.
Savings: 17 980 EUR/year



Higher certification

Higher Tier certification may be targeted through increased operation measures.
With higher certification the data center could earn more on leasing: 100 000 EUR/year



Backup cooling

Backup cooling available to bridge restart downtime in case of blackouts.
(The restart of the newest cooling systems take min 5 minutes, which could be critical.)



Remote control

Visualized energy reports on monthly base to follow the energy saving.

During our calculation we did not take into account the estimated high scale electricity price increase. In Slovakia the electricity price was doubled in 2019 and this tendency is expected in the other European countries.

408 820 EUR / year total savings

3,05 years ROI (2,6 years with increasing electricity price)