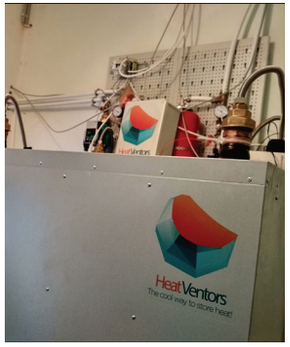
Case Study Telecommunication

By using HeatTank instead of water storage, the **storage size can be reduced by 90%** and thanks to the optimal storage temperature and higher performance, **energy efficiency is 20-50% higher**. HeatTank can highly increase the energy efficiency of DCS because cooling systems should produce cooling energy only when it is the most efficient, the cheapest or completely free. Additionally, HeatTanks can be placed not just close to the central chiller unit but in separated branches of the system as well. By doing this, it is possible to turn off some branches from the DCS in case of partial needs, also reduce the heat loss through the pipes and the pumping energy. Large central storages can work in virtual power plant function as well and be part of demand response.



- 20-50% more efficiency
- Reduced maintence
- Higher certification
- Small
- Backup cooling
- Remote control

The 25 kWh HeatTank system was installed at 2019 January in the telecommunication base station of MVM Net. We could save **51% energy** on the existing system, by using the cooling system, when it is more efficient and using free-cooling.

HeatVentors
The cool way to store heat!

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The revolution of storing thermal energy

HeatTank can help your business decrease its energy costs by 20-50%.

Challenge

Storing energy is a great challenge for engineers. Spotlight is usually put on storing electricity, however thermal energy storage, i.e. storing heat or cold, is also a key issue for effective energy management. It is estimated, that 20 billion euros or 250 million metric tons of CO2 equivalent green-house gases could be saved only in Europe with optimal thermal energy storages.

Solution

The HeatTank is aiming to balance the efficiency of the cooling/heating system. It also provides an extra layer of operational safety in case of equipment failure. As its name suggests, HeatTank serves as an energy buffer with independent control logic.

Our unfair competitive advantage is to use Phase Change Materials instead of water. By using this materials by melting and solidifying we can store the energy in a more concentrated way to save space, energy and money in an environmentally friendly way.

How it works

1

Charging phase

When more thermal energy is available or it can be generated with high efficiency we store a part of the generated thermal energy. When we store the cooling energy the Phase Change Material solidifies and when we store the heating energy the Phase Change Material melts.

2

Store energy

HeatTank stores the thermal energy which was produced in the charging phase.

3

Unloading phase

When you need the thermal energy you can use the pre-stored energy. When we unload the cooling energy the Phase Change Material melts and when we unload the heating energy the Phase Change Material solidifies.

We offer solutions for

Data centers and telecommunication site cooling

Office buildings thermal energy management (heating and cooling)

Industrial heating and cooling solutions and heat recovery

Advantages

- Compared to the water storage HeatTank is **90% smaller in size**
- Compared to the water storage HeatTank is useable for cooling as well, thanks to the different storage temperatures
- It makes the existing energy systems **20-50% more efficient**
- At the optimal size, the average **ROI is 3-5 years**
- Patented structure for the highest efficiency
- Customised solutions
- Standardized products
- Modularly scalable
- High performance (0,1 - 2 MW)