



D / Berlin
 Required cooling capacity 144 kW
 Project year: 2023

PROJECT BIO-COOLING SYSTEM

TASK POSITION



Cooling and heating system

- Refrigeration supply of a central warehouse of an organic supermarket chain for the distribution of goods to the respective sales outlets in the greater Berlin area
- Use of a natural refrigerant with low GWP values, normal cooling R290 GWP = 3
- System design cold brine system -6/-1 °C with PCM storage, room temperature +4 °C to +8 °C, prepared for the connection of a second construction phase
- Combination of the refrigeration system with the on-site photovoltaic system
- Integration of a PCM storage unit to store excess PV energy

SOURCE

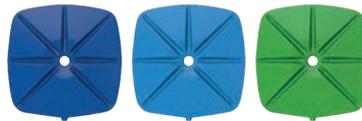
Cooling unit



- Air-cooled liquid cooler for outdoor installation with two cooling circuits, FU controlled
- Cooling capacity 144 kW at -6 °C cold brine, +35 °C ambient temperature
- Heat recovery system integrated as 35 kW desuperheater, water temperatures +40 / +50 °C

Storage tank

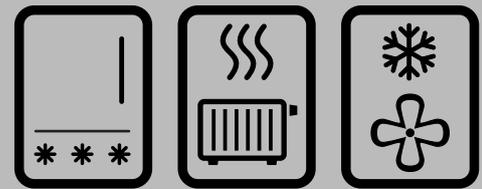
heatSel XL -6 °C



- Latent storage tank 6,500 liters
- Storage capacity 310 kWh
- Water equivalent 20,000 liters
- Spread 15 K
- Increasing the storage capacity by a factor of 3

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inside

CONSUMER



- 10 air coolers, output each 14 kW, supplied by cold brine
- Cooling supply at night from the PCM storage, capacity 6,500 liters, storage capacity 310 kWh
- System monitoring, temperature recording and remote maintenance on MOD BUS RTU basis



Increase the storage capacity



CO₂ saving



Save investment

PARTNER



Plant engineering & chillers

- for commercial and industrial refrigeration technology and heat pump systems
- Project development, planning and project management
- Inspection, maintenance and repair

CONTACT

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