



# PROJECT CAP-SUPERMARKET



Cooling and heating system

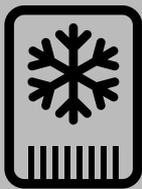
## TASK POSITION

- Refrigeration supply of the supermarket for the normal and deep-freeze area
- Use of natural refrigerants with low GWP values
- Normal refrigeration R290 GWP = 3, Deep-freeze R 744 GWP = 0
- System design as indirect cascade NK cold brine -8/ -3 °C, TK - DX -20 °C
- Combination of the refrigeration system with the on-site photovoltaic system
- Integration of a PCM storage system to store excess PV energy

## Storage tank

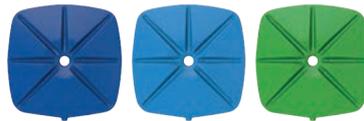
### SOURCE

#### Cooling unit



- Air-cooled liquid cooler for outdoor installation with two cooling circuits, FU controlled
- Heat recovery system integrated as desuperheater, Water temperatures +40 / +50 °C
- Refrigerant R290, Cooling capacity: Normal cooling 48 kW, Heat recovery capacity 15 kW °C

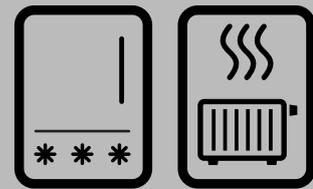
#### heatSel XL - 10 °C



- Latent storage tank 6,500 liters
- Storage capacity 300 kWh
- Water equivalent 20,000 liters
- Spread 15 K
- Increasing the storage capacity by a factor of 3

heatStixx  
inside

### CONSUMER



- 11 refrigeration points, supplied by cold brine, 2 deep-freeze rooms, direct evaporation
- Cold supply at night from the PCM storage
- System monitoring, temperature recording and remote maintenance on MOD BUS RTU basis



Increase the storage capacity



CO<sub>2</sub> saving



Save investment

## PARTNER

**POLARIS.RLAUDE**  
KÄLTE KLIMA KÜHLMÖBEL

Refrigeration, air conditioning and refrigeration units

- Comprehensive range for retail, organic food stores and supermarkets
- Refrigerated cabinets and combined systems through to complete refrigeration equipment for food markets
- Project development, planning and project management
- Service network Germany with 20 specialist refrigeration companies

## CONTACT

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