

Smart Store Application Development Center Fact Sheet

Size of area (Gross area: 2.719 m²)

Supermarket: 1.421m² – hereof 800m² sales area + Car wash: 211m²

ADC Ground floor: 527m² – 250m² technical room + ADC 1st floor: 226m² + 334m² outside test area



Standard CO₂ Refrigeration Pack

Standard pack that fits to 800m² sales area with 29 kW MT / 13 kW LT load.

Natural Refrigerants:

System is using using natural refrigerants – as CO₂ is the used refrigerant with GWP =1.0.

Solution includes Danfoss products:

Pack controller – AK-PC 782B
Compressors for MT – BOCK HGx34/110
Compressors for LT – BOCK HGx12e
High pressure valves – CCMT
Gas-by-pass valve - CCM
Drives – VLT refrigeration drive



CO₂ Energy Pack

Advanced pack that will be used for test and innovation.

Solution includes Danfoss products:

Pack controller – AK-PC 782B
Compressors for MT – BOCK HGX24/70 SP9 CO₂T + HGX24/55 SP7 CO₂T
Compressors for LT – BOCK HGX12E/20-4 S CO₂ LT + HGX24E/55-4 S CO₂ LT
Compressors for IT – BOCK HGX24/55 SP7 CO₂T + HGX24/55 SP7 CO₂T
Ejector – High Pressure and Liquid Ejector
High pressure valves – CCMT
Gas-by-pass valve – CCMT
3-way valve – CTR
Solenoid valve – EVT
Pressure switch – CKB
Temperature sensors – AKS 11 and AKS 21
Pressure transmitters – AKS 2050
Drives – VLT refrigeration drive



Heat Recovery Unit

DSA HRU - 2 tank solution with option to sell heat

Solution includes Danfoss products:

- Controller - ECL 310
- Energy meters – SonoMeter 40 and SonoSelect 10
- Heat exchangers – MPHE XB59
- Mixing valve – VRB3 and AMV 435
- Motorized combi valve – AH-QM and AMV 435
- Temperature Sensors – ESM, ESMU and ASK 21

Heating capacity: 338 kW
 Temperature program: 90-50/70-40

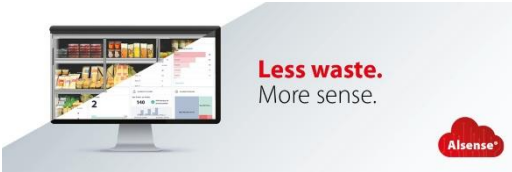


Evaporators

- 18 cabinets and 2 cold rooms
- Low temperature: 8 LT cabinets + 1 LT cold room
- Medium temperature: 10 MT cabinets + 1 MT cold room

Solution includes Danfoss products:

- Controller - AK-CC55 Single Coil
- Display – AK-UI55 Bluetooth
- Valve – AKVP
- Temperature sensors – AKS 11
- Pressure transmitter – AKS 2050

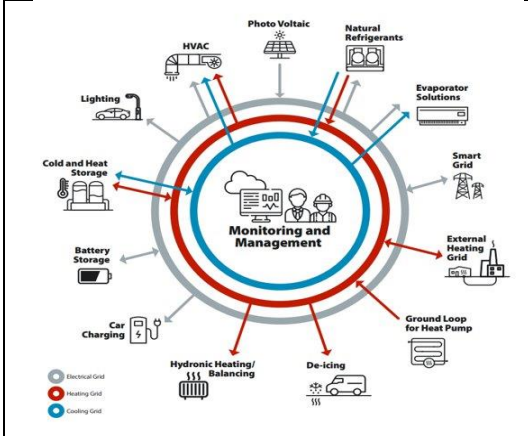


Digitalization:

Alsense Food Retail Services providing actionable insights — improving operational efficiency, asset performance and energy efficiency with intelligent data on an IoT cloud platform, preventing food loss and energy waste.

Energy as a Service:

Danfoss has partnered with ANEO Retail to develop a unique service model, "Energy as a service (EaaS)", providing retailers with a highly flexible solution for accessing highly energy efficient equipment faster without larger up-front investments.



Additional Facts:

- Gas leak detection: 7 Danfoss Gas Sensors
- Comfort cooling with glycol – 20kW + 20kW (Chiller + Advanced pack)
- 100KW solar panels -> 100.000 KWH / Year
- Extra load for heat recovery – 1.036 m ground loop equivalent to 20kW
- Pre-Certifications – DGNB Gold / LEED Platinum
- Biodiversity - Green roof and water collection.