

Smart Store Application Development Center Fact Sheet



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 showcasing 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

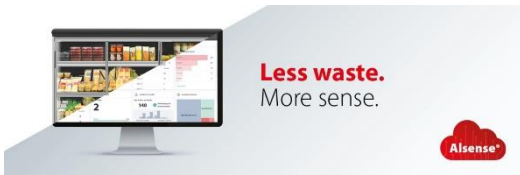


Evaporators

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

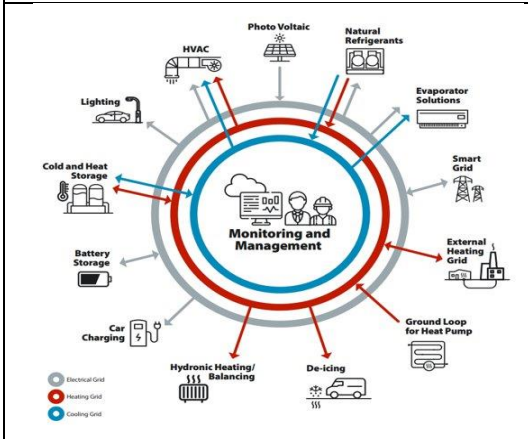


Digitalization:

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.



Store Facts:

Size of area (Gross area: 2.719 m²)
 Supermarket: 1.421m² – hereof 800m² sales area + Car Wash: 211m²
 ADC ground Floor: 527m² – hereof 250m² technical room + ADC 1. Floor: 226m² + 334m² outside test area

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.