SuperSmart-Rack

Energy-efficient and environmentally friendly integrated CO_2 vapour compression units for supermarkets

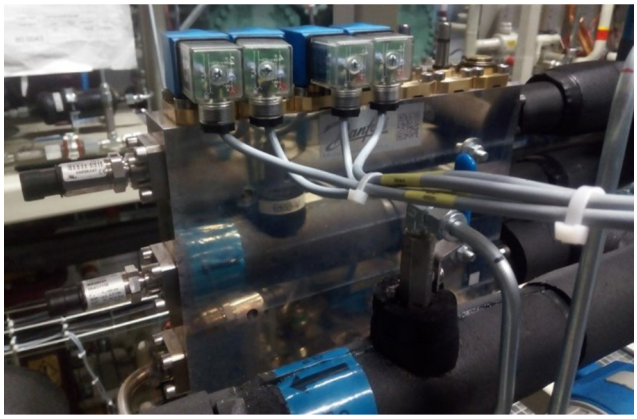
SuperSmart-Rack project was a KPN Project sponsored by The Research Council of Norway and the resulting experimental setup is now part of HighEFFLab. The main objective of the project was to develop the next generation of CO_2 refrigeration systems for supermarkets, which should have the following characteristics:

- Efficient
- Cost competitive
- Standardised
- Reliable
- Integrated

SuperSmart-Rack experimental setup, available in NTNU/SINTEF laboratory in Trondheim (Norway).

Innovative solutions that can be tested in SuperSmart-Rack:

- Ejector supported air conditioning
- Flooded operation of evaporators with liquid ejectors
- Compressors with pivoting suction
- Control of the discharge in LT compressors
- Special configuration for cold ambient conditions



Top left, AC multiejector block (provided by Danfoss AS). Bottom left, compressor pack as delivered by Advansor AS. Above, glycol-heated evaporators to emulate the load profile of a medium size supermarket.

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