



ATMO sphere





CO₂ FTE transcritical technology performance vs previous solutions in real store conditions

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Location:

Sonneberg: (100km to the north of Nürnberg)

Sales area: 4100m²

Epta Products Turn Key:

- Cabinets: Low-Temperature, Medium-Temperature, Plug-Inn, Serve-Over
- Cooling pack with various efficiency tools
- Monitoring system
- After sales and maintenance contract



Store opened in November 2016



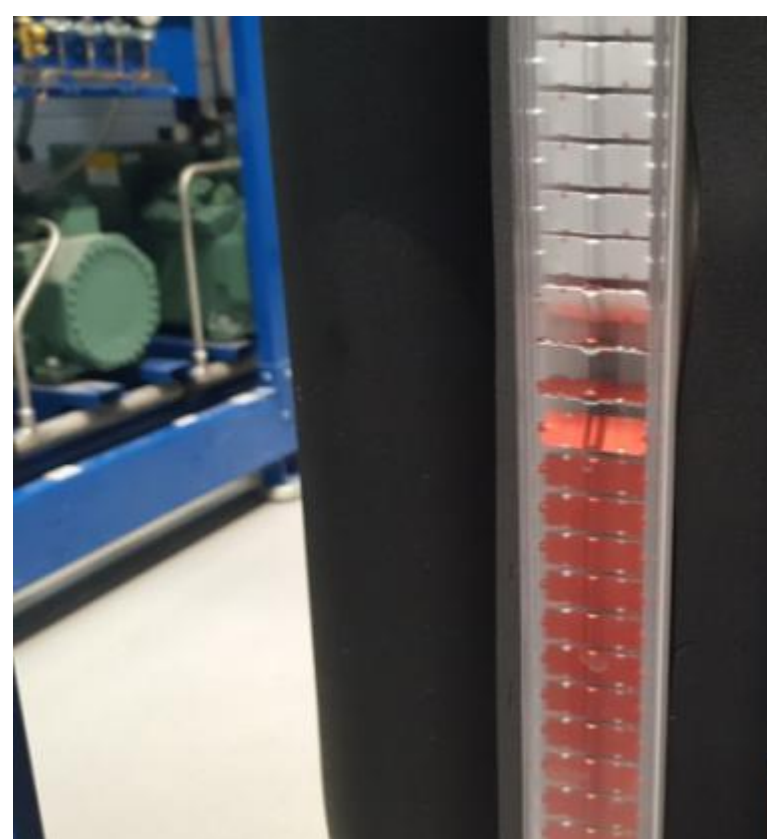


Pack size:

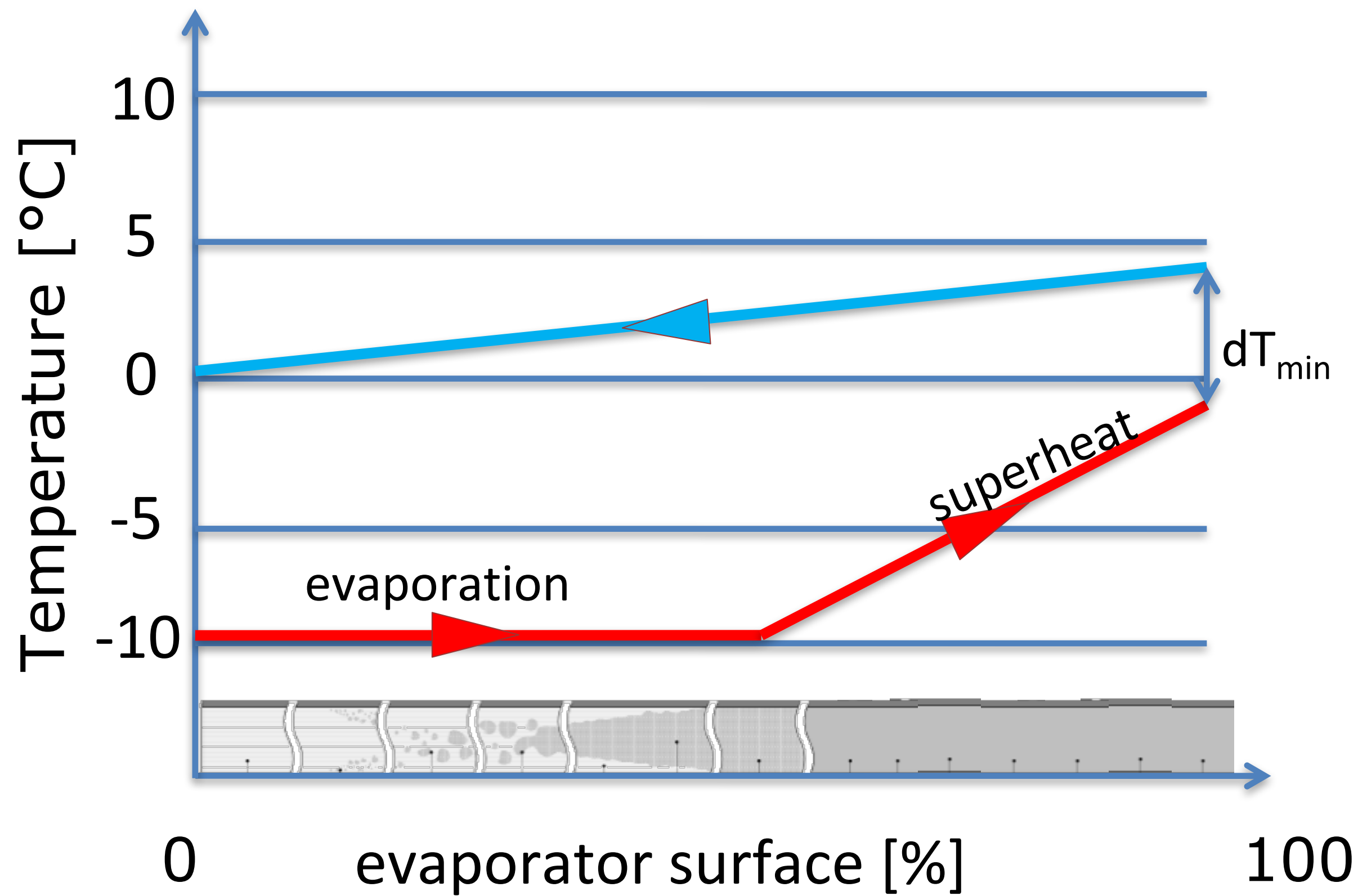
197 kW Medium Temperature
66 kW Low Temperature

Including:

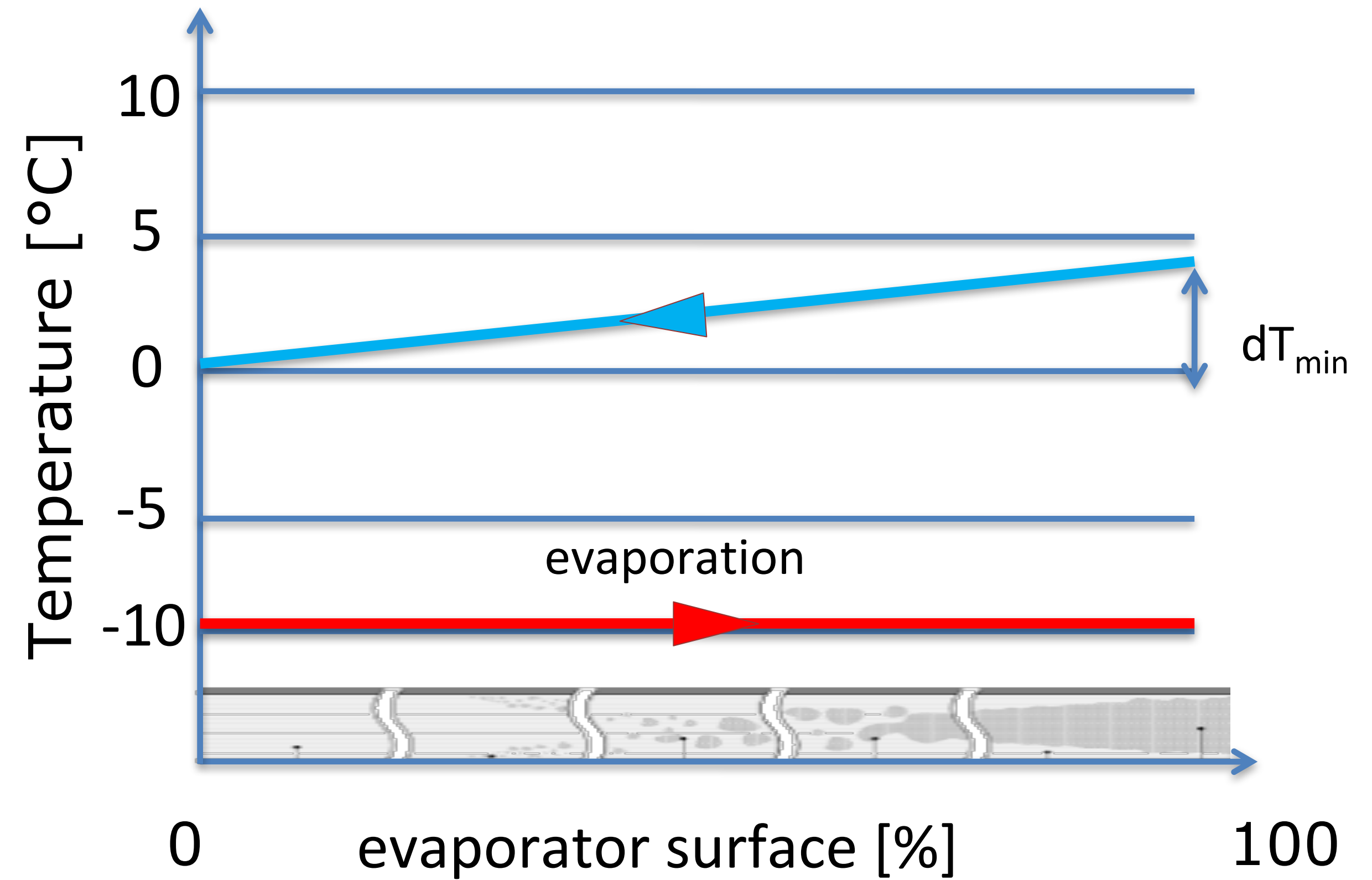
- Parallel compression
- Venturi valve (gas ejector)
- Different liquid ejectors
- FTE-System: Full Transcritical Efficiency
- Overfeeded evaporators
- Internal heat-exchanger (Economizer)

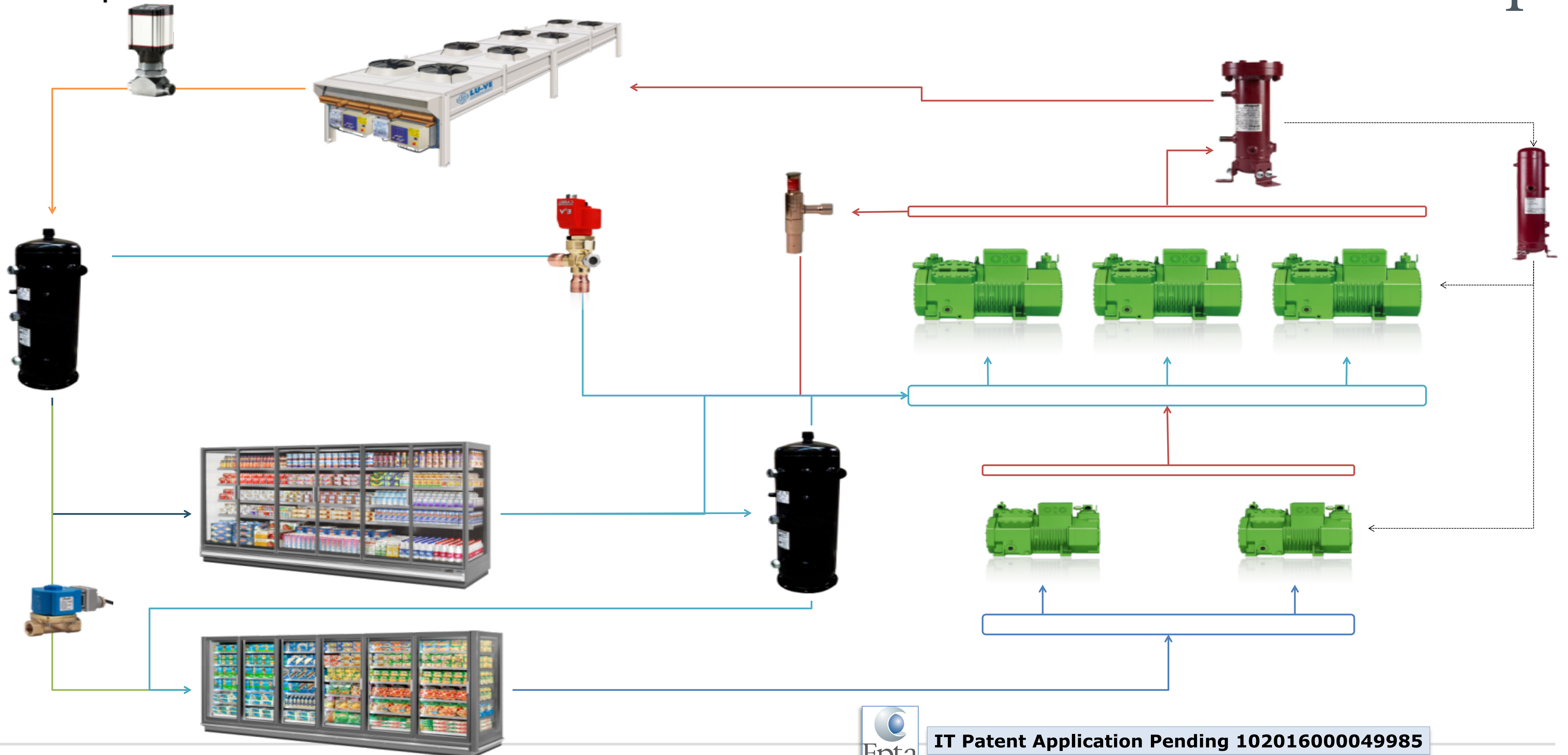


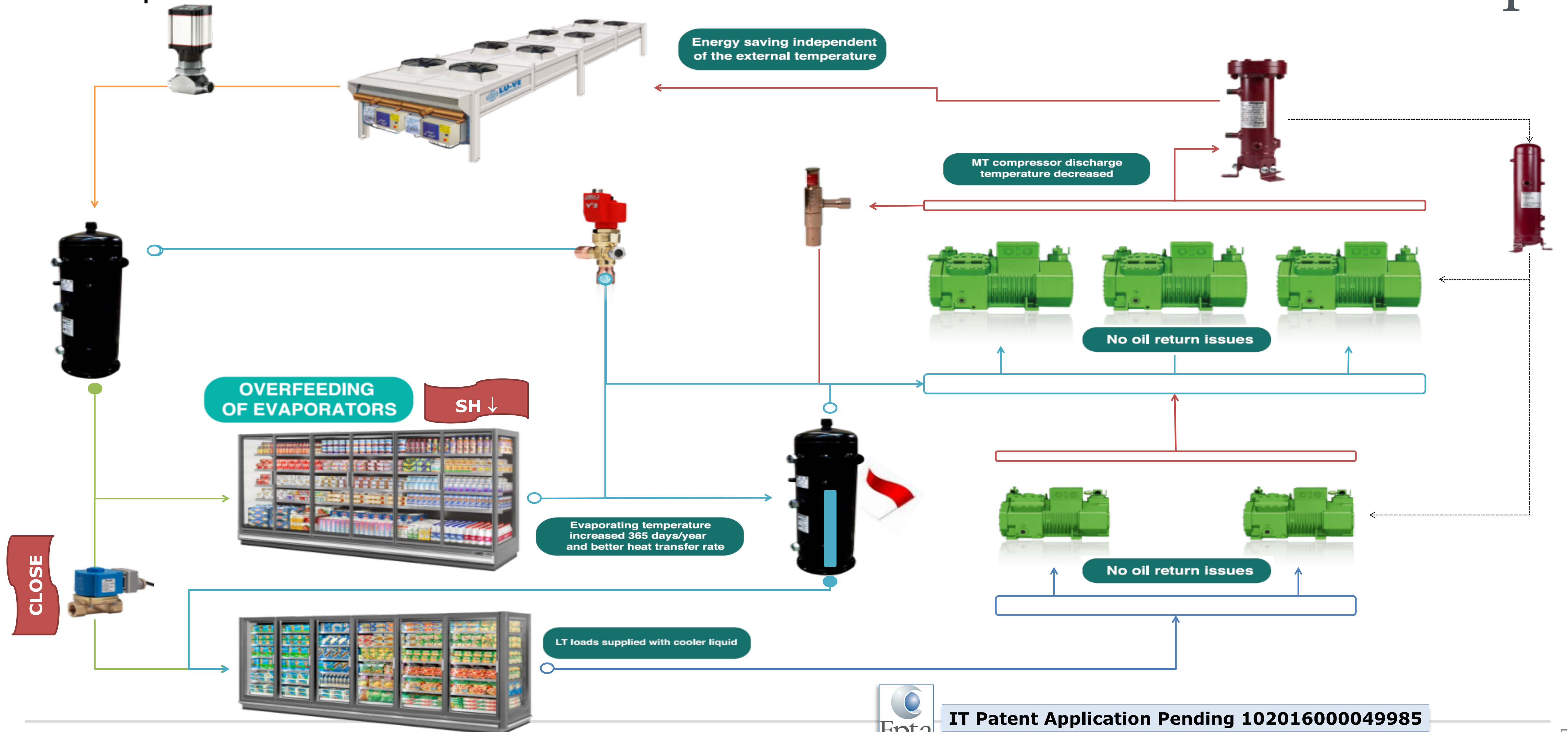
Superheating



Overfeeding



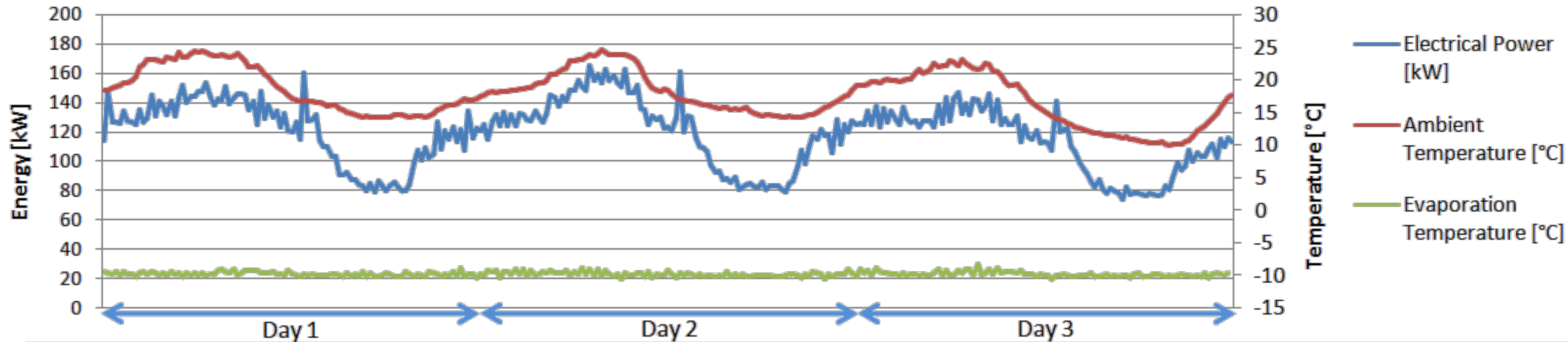
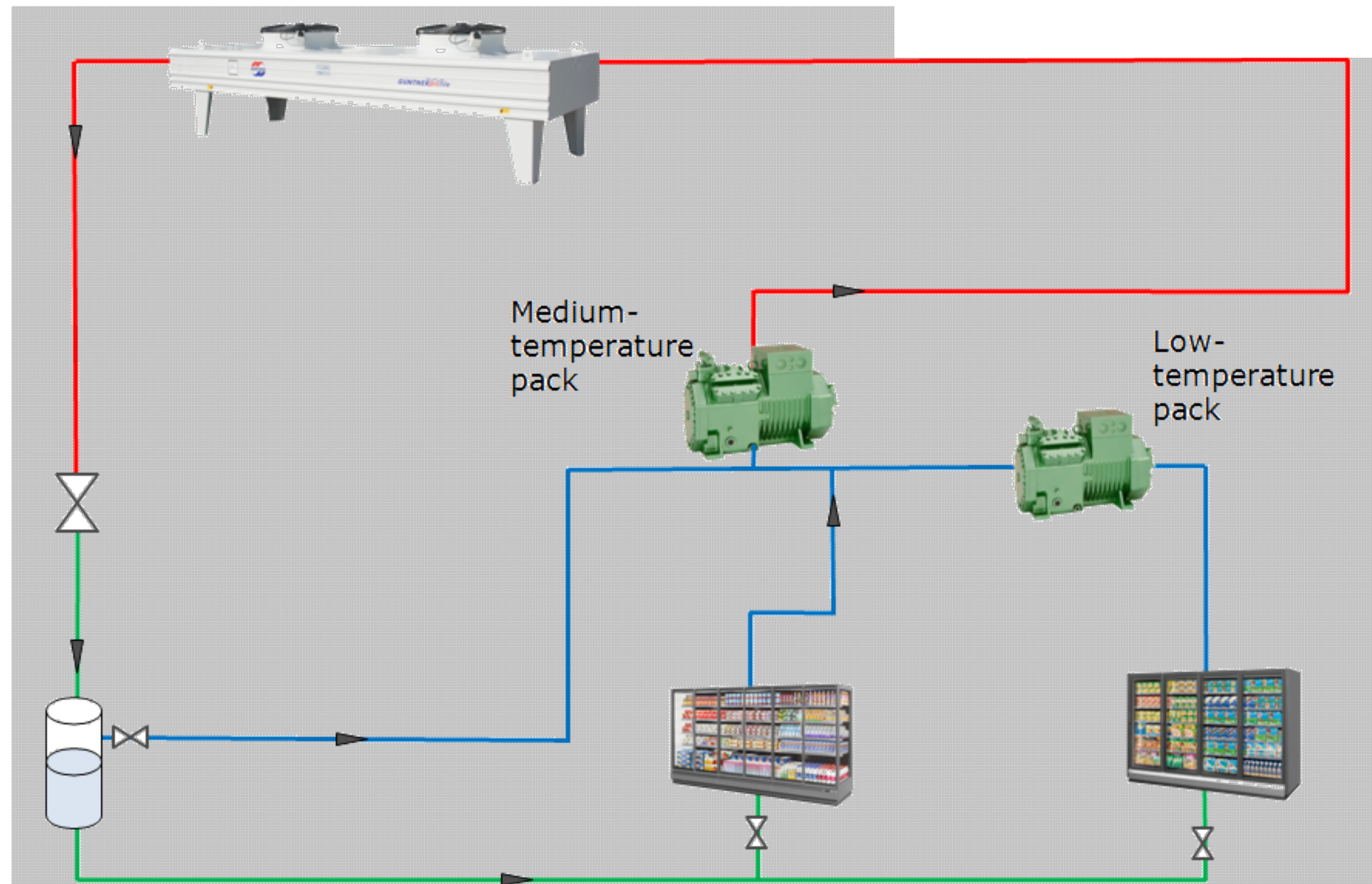




IT Patent Application Pending 102016000049985

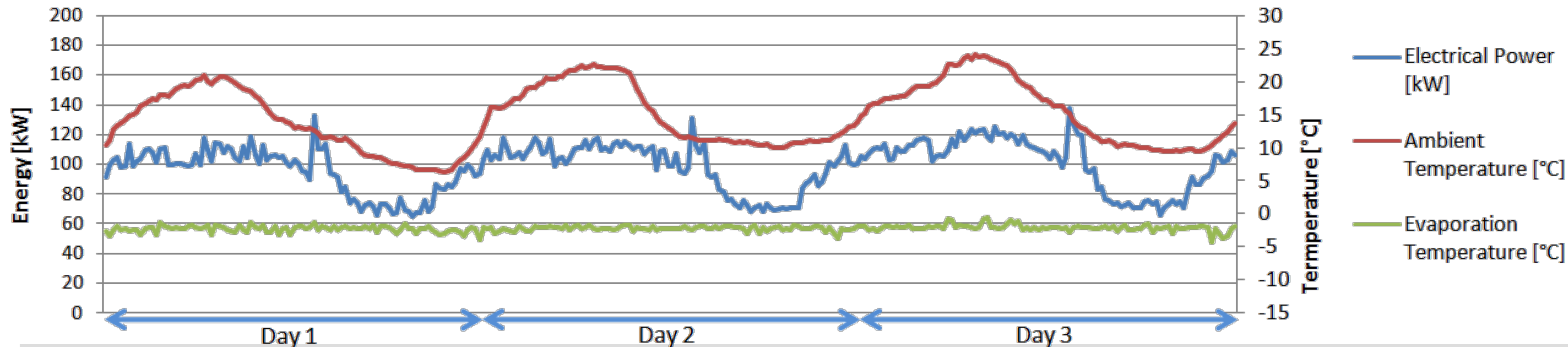
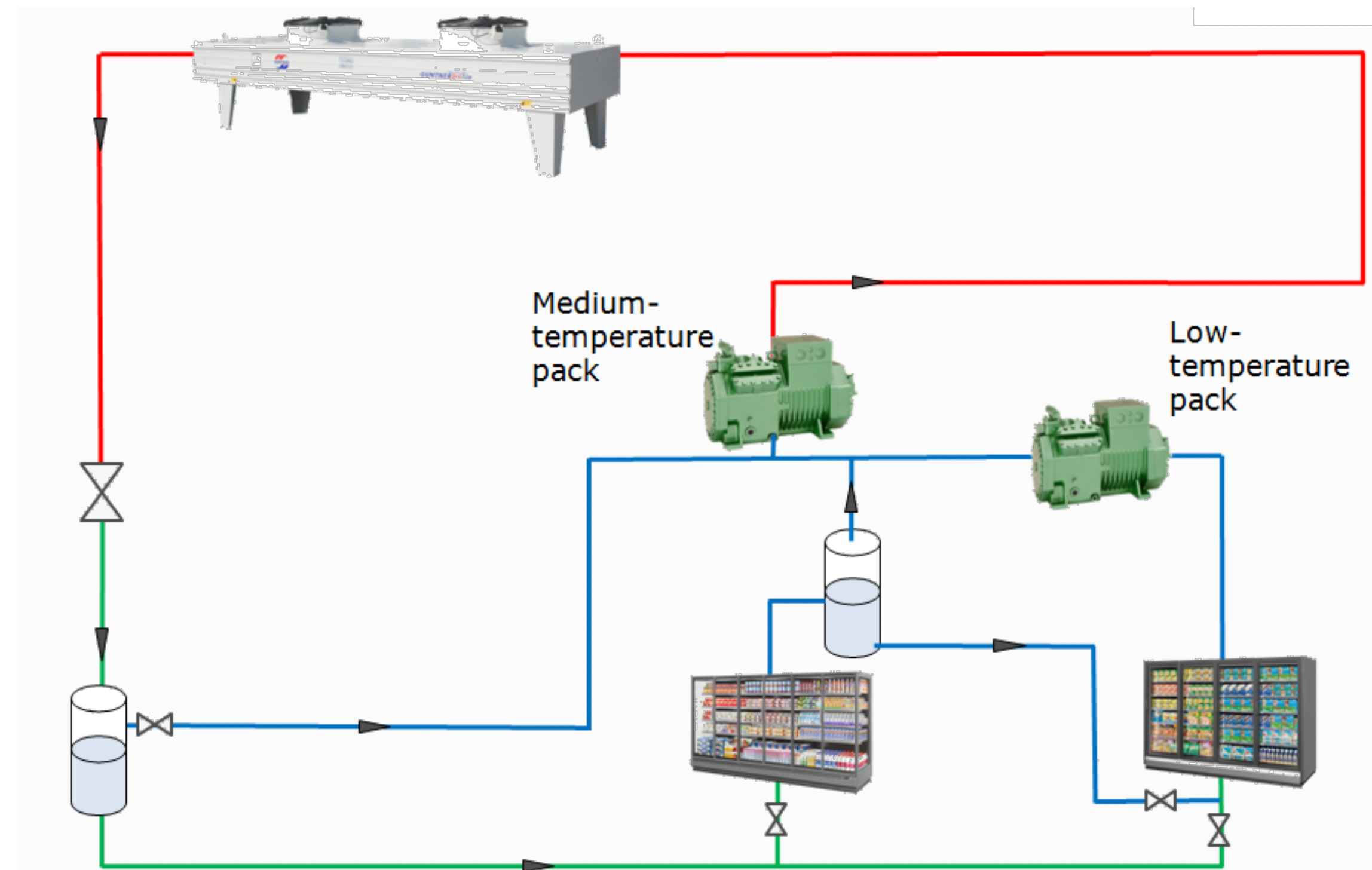
**Standard CO₂
transcritical booster**

Average daily energy
consumption: 2840kWh



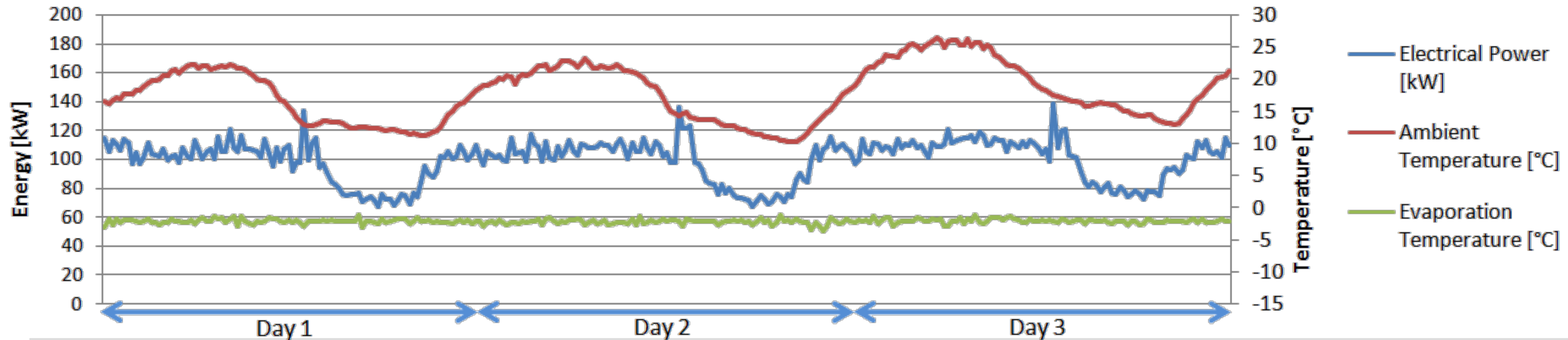
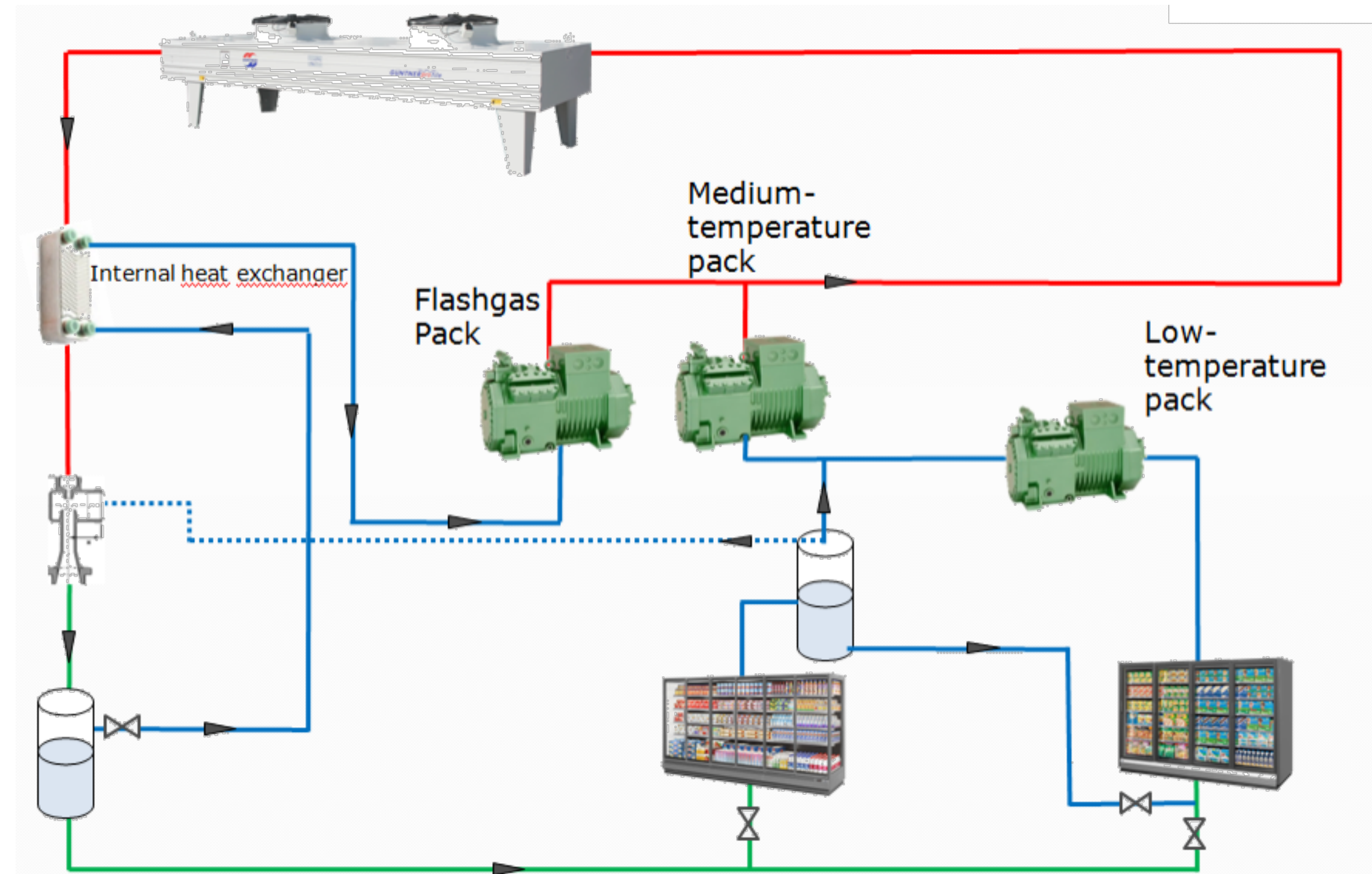
Transcritical booster with FTE

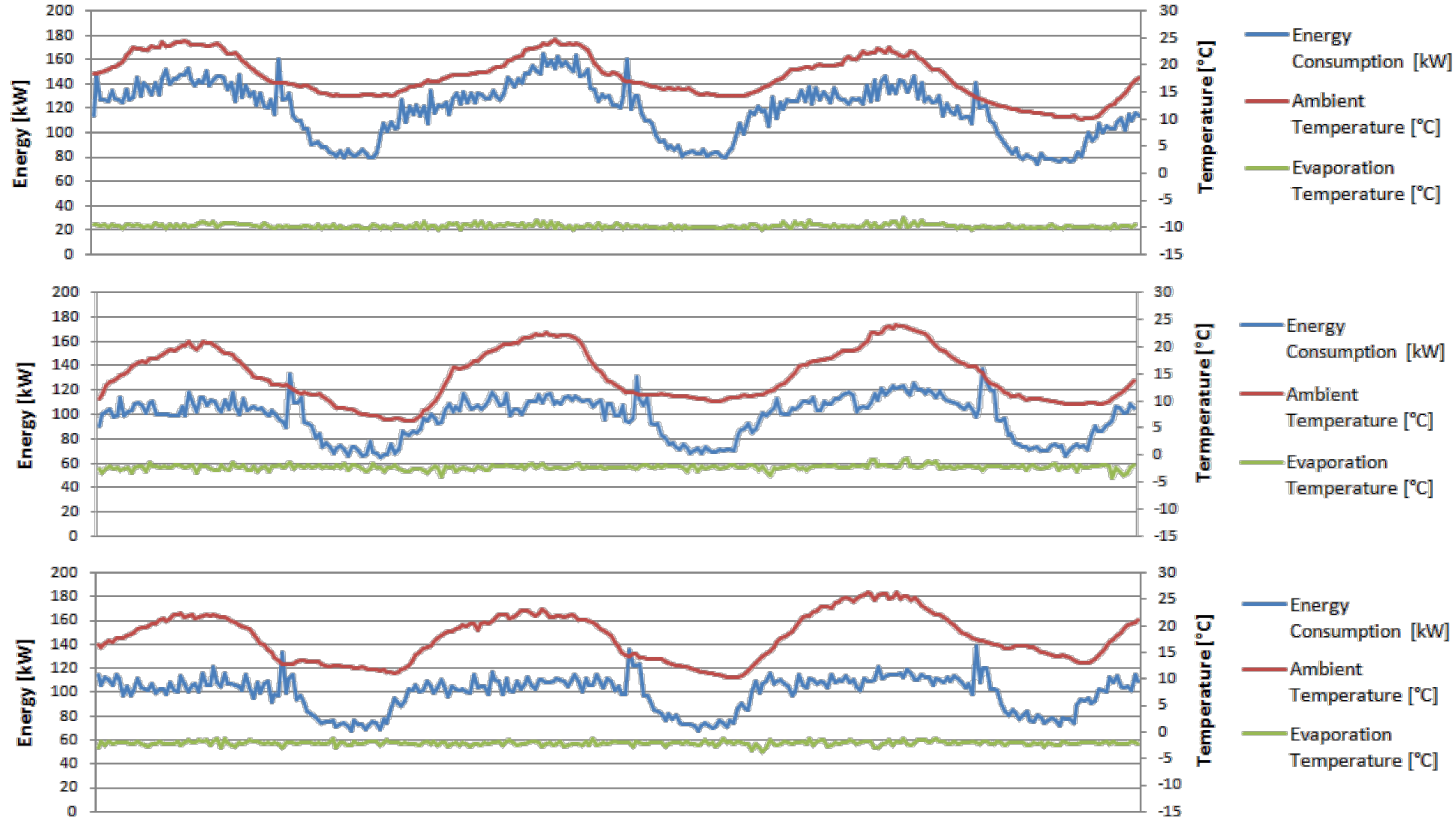
Average daily energy consumption: 2350kWh



Transcritical booster with FTE & Gas-Ejector & Liquid-Ejector & Parallel compression & internal heat-exchanger

Average daily energy consumption: 2383kWh





Standard

FTE

-17%

**Ejectors
+ FTE**

-17%

FTE: Full Transcritical Efficiency

Simple: Only receiver and bypass required

Efficient: Energy savings independent from ambient conditions, in all climates and through the whole year

Industrialized: Available now – everywhere; with a ROI < 3years

The future of natural refrigeration depends on systems that combine **cost, energy saving and reliability** in a simple design.

With CO₂ FTE SYSTEM the cost, performance and reliability gaps can finally be seen to be bridged.

FTE can really give a significant contribution to break down the barriers to a natural future in refrigeration.



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sphere

Thank you very much!

