

# CAREL retail sistema for CO2 convenience store

Nicola Pieretti

# CONVENIENCE Store

## Break down the CO<sub>2</sub> barriers:

- Handy technology
- Gained knowledge
- Match supply with demand

## Convenience Store

It's a small store that stocks a range of everyday items such as groceries, snack foods, soft drinks and newspapers. With a typical dimension around **80-120 m<sup>2</sup>** and an operational time of **24/7**

## Follow the target:

- From hypermarket to smallest stores
- No frills
- Integration

# C-Store Key Factor

## 1. Integration of

- Refrigeration
- Air Conditioning
- Lighting mng
- Energy mng

## 2. Interaction trough

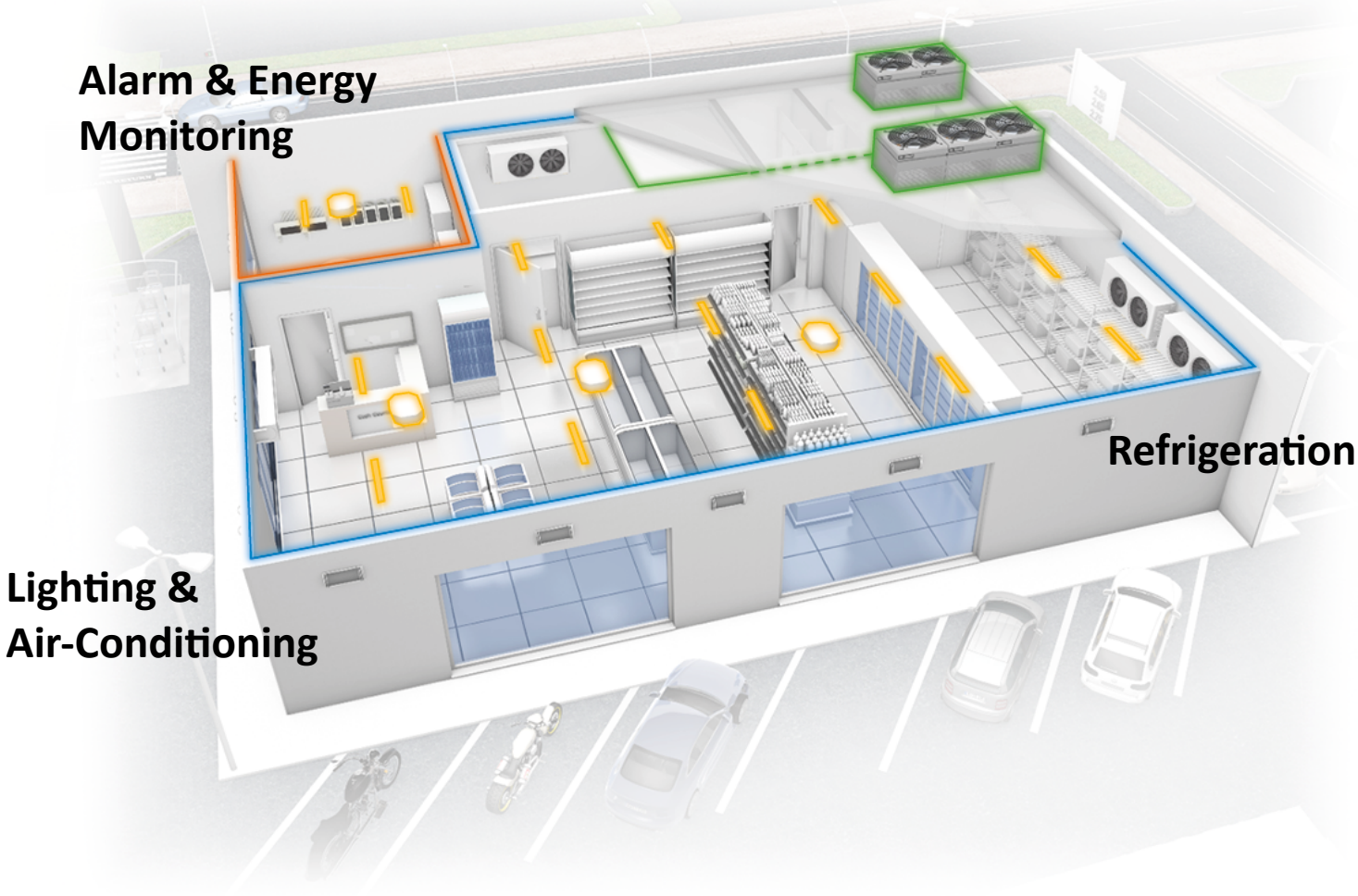
- Shared information
- Possible synergies
- Keep it simple

## 3. Optimization for

- Optimized the performance of the different areas (ref., A/C, lights, etc.)
- Reduce the energy consumptions
- Keep the comfort

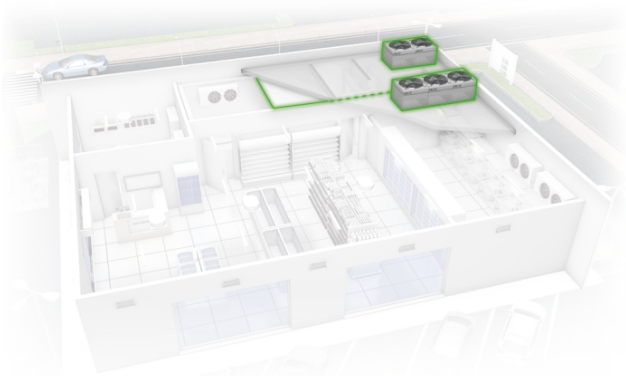
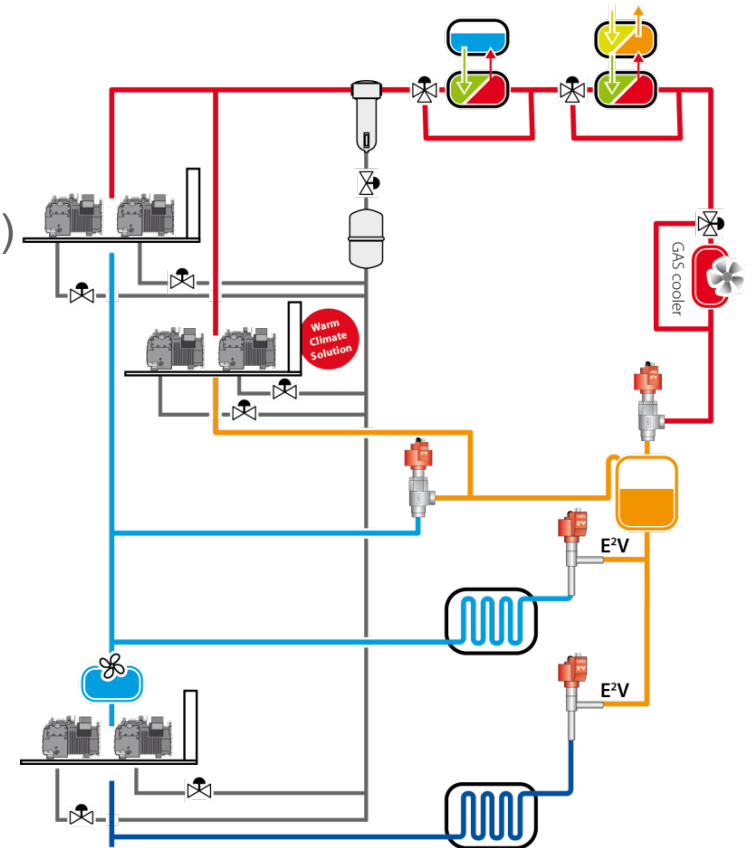
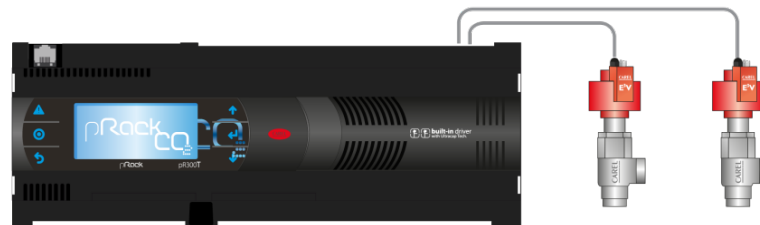


# C-Store from a CAREL point of view

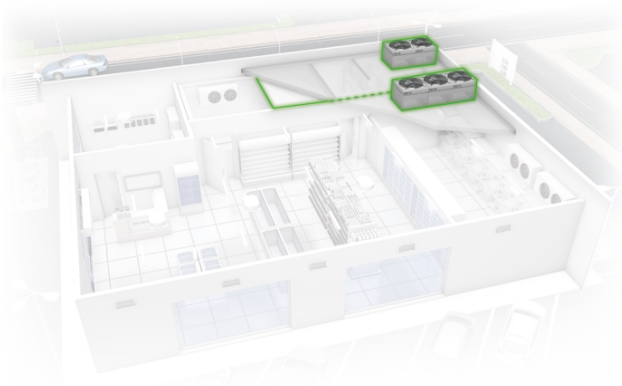


# 3 suctions in 1 controller

- **Compact** solution: just **ONE** board
- High Pressure **Valves** directs management
- **Easy** setup and service
- Graphic display **built-in**
- **DSS** between the **THREE** suction lines
- **Complete** unit management (incl. protections, alarms...)

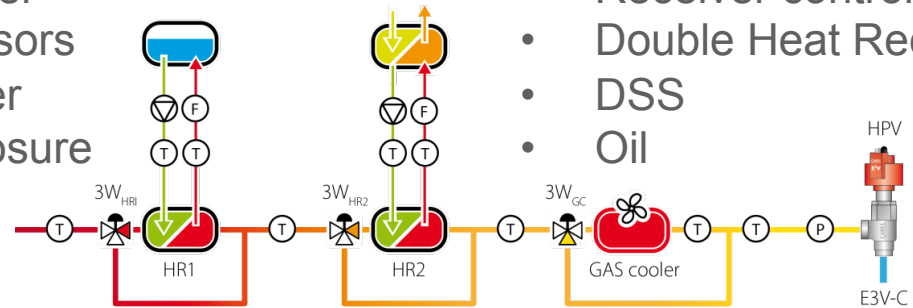


# pR300T for complete rack control

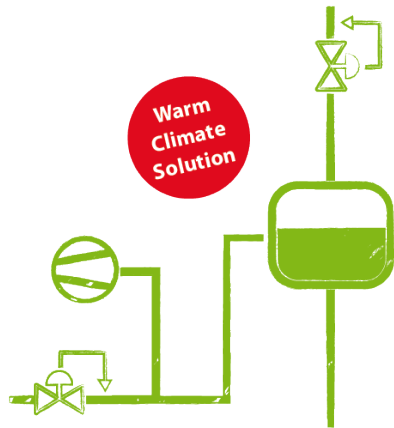


- High Pressure Valves
- Gas Cooler
- Compressors
- Intercooler
- Safety closure

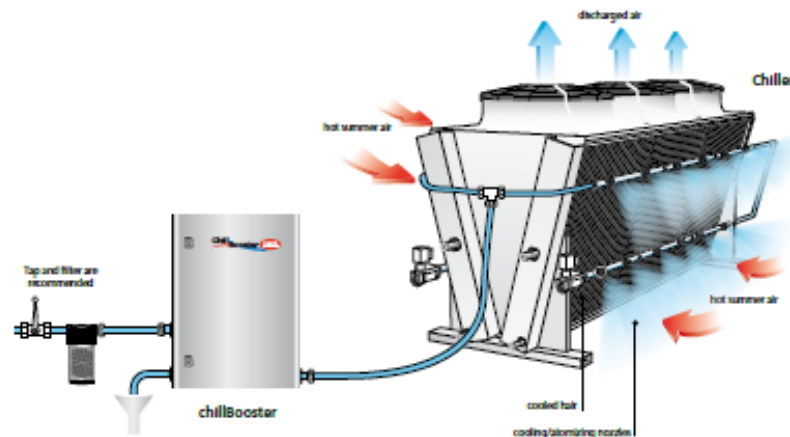
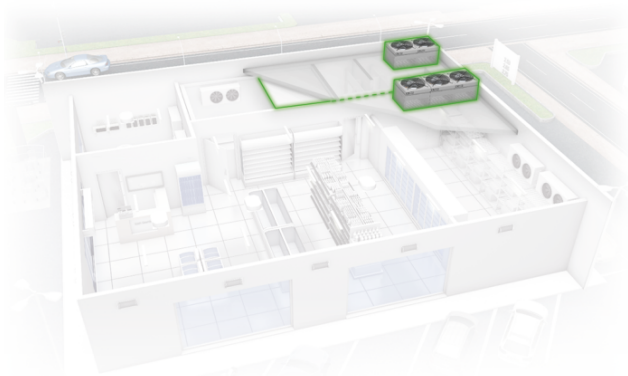
- Parallel Compression
- Receiver control
- Double Heat Recovery
- DSS
- Oil



# Solution for mild climate

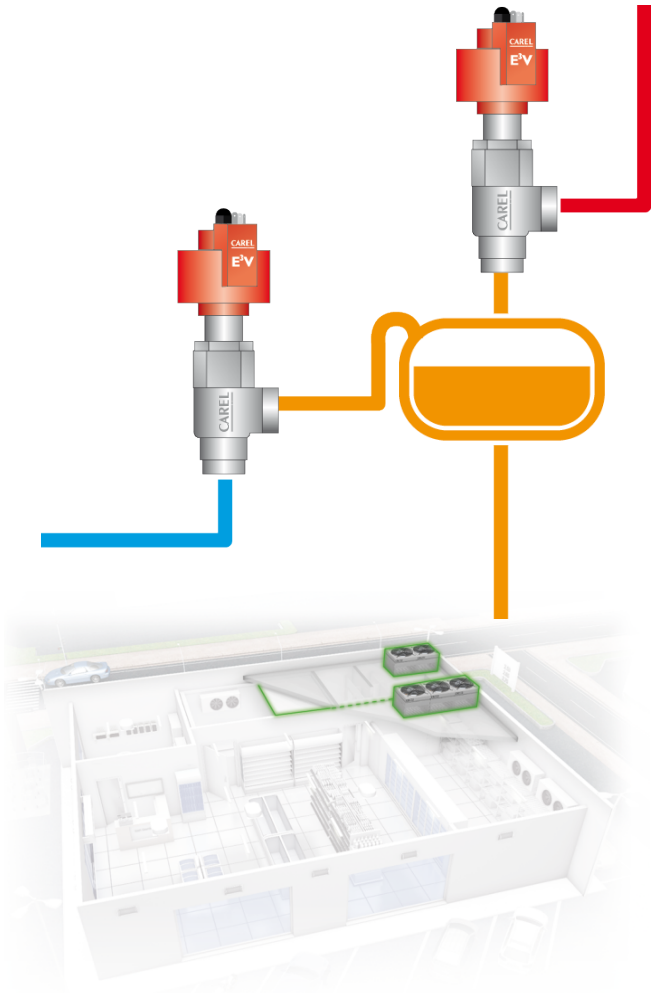


- **Third Suction Line** integrated for parallel compressor
- **chillBooster**: evaporative cooling system for CO2 gas cooler
- **Subcooler** integration





# E3V-C High Pressure Valve



- Proportional **Stepper** Valve
- Stainless **steel** construction
- Size equivalent to 30÷65
- **140 barg** Maximum Operating Pressure
- 90 bar Max.Op.Press. Differential
- **Demountable** design
- Built-in **filter**
- New **Patent** regulation pin
- Same functions and accessories of the ExV sistema
- Connections 5/8" (30-45) and 7/8" (55-65)
- Up to **250kW** cooling and 100 kW bypass

