

Sustainable cooling solutions:

SUSTAINABLE BEVERAGE COOLERS WITH 50% ENERGY SAVINGS PER DAY

CATEGORY:

Commercial Refrigeration

THE CONTEXT:

Being always on the run or just to have a relaxing moment of refreshment, we have become used to grabbing and enjoying a cold drink. Beverage coolers are nowadays common appliances all over the world in the number of hundreds of millions. They are highly customized to entice potential customers with their attractive and evocative looks; they are also reasonably compact, yet capable of accommodating, like in this case study, 497 x 33-cc cans (note that these must be cooled down as quickly as possible after each reload to be ready for sale). The cooler's power consumption is low with around 300 W electric. However, given the huge number of installed units, which is expected to increase even further, and the frequency of reloads, with the associated cool-down energy consumption, every improvement in energy efficiency becomes extremely important for the sustainability of beverage coolers as such.

SUSTAINABLE COOLING SOLUTION:

- Heez integrated and modulating control solution for a beverage cooler using R-290 (propane) as refrigerant:
 - Controller with user-friendly display, NFC and Bluetooth®
 - VFD (VSD) for the R-290 compressor (Orione M1 R290 DC Inverter Rotary)
 - EEV (Electronic Expansion Valve) with driver
 - Driver for EC fans
- 2x low-noise EC fans



BENEFITS:

- With respect to European EN 16902:
 - Max. daily energy savings: -47%
Note: vs. TOPTEN.eu best cooler, average EEI of M2 class (-1°C to 7°C) at 25°C, 60 %rh (as of September 2017)
 - Max reduction of HRR time (Half Reload Recovery): -62% (5 hours vs. 13 hours as per EN 16902)
- With respect to US DOE 2017: -52% daily energy consumption (1.082 kWh/day vs. 2.262 kWh/day of DOE 2017)

TOPIC:

- Energy Efficiency

GENERAL INFORMATION

NAME OF THE COMPANY:

CAREL Industries SpA

CONTACT PERSON:

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HYPERLINK TO LEARN MORE ABOUT THE SUSTAINABLE COOLING SOLUTION:

[“Heez for beverage coolers: efficiency and performance tested by Re/genT”](#)

