

Sustainable cooling solutions:

Integral Display Cases solution delivers more than 40% system efficiency on new display case design

CATEGORY:

Commercial Refrigeration

THE CONTEXT:

The client was looking to improve the efficiency of their refrigeration systems, and reduce energy costs, whilst maintaining the existing installed integral display cases architecture. The requirement was to provide a system designed and tested to European codes and standards using natural refrigerant Hydrocarbon (R290) in conjunction with and to client's technical standards and system design requirements. From a Design Concept discussed in 2018 to a delivered solution in the 3rd trimester of 2019.

SUSTAINABLE COOLING SOLUTION:

- Between October 2018 and 3rd quarter of 2019, five sites were commissioned with the new integrated display cases using Emerson's solution with natural refrigerant R290. Each site had 40 display cabinets. Based on proven energy reduction and system performance, future commitments were taken to support additional cabinet OEMs.
- The solution: integrate and test a display case water-cooled condensing unit, incorporating the **latest Emerson Horizontal Variable Speed Scroll Solution**. This allowed the OEM to support the end-user's technical and commercial objectives, with integration of the control and monitoring functions into a third-party system.
- The ability of Emerson to provide a customized solution, and a full technical support during the development phase, enabled the manufacturer to develop the solution required by the end-user.
- Running prototypes were supported during 2019 and were tested both in Germany and the UK prior to site trials. This allowed Emerson to obtain validated real-life performance data.



BENEFITS:

- F-Gas compliant solution
- Proven GWP significant reduction
- Validated system performance >40% of overall system efficiency delivered
- Significant savings were achieved compared to the previous installed systems
- Reduced service call outs
- Reduced maintenance costs
- Technical support in the development stage
- Proven solution with value adding products
- Safe and innovative concept

TOPIC:

- Energy Efficiency
- Service & Maintenance
- Refrigerants

GENERAL INFORMATION

NAME OF THE COMPANY:

Emerson Commercial & Residential Solutions

CONTACT PERSON:

Thomas Tomski

HYPERLINK TO LEARN MORE ABOUT THE SUSTAINABLE COOLING SOLUTION:

<https://climate.emerson.com/en-gb/products/refrigeration>

