# Honeywell

Achieve more with lower-GWP and energy-efficient Solstice® L4OX and Solstice<sup>®</sup> 454C refrigerants

As carbon emission regulations become more stringent on the use of high-GWP HFC (hydrofluorocarbon) refrigerants, more grocery and convenience stores are opting to replace their legacy refrigerants with lower-GWP solutions like Honeywell Solstice® L40X(R-455A) and Solstice<sup>®</sup> 454C(R-454C).

### Compared to CO<sub>2</sub> and propane, Solstice<sup>®</sup> refrigerants deliver\*:









### Part of the proven Solstice® Technology

For years, customers have chosen Honeywell Solstice® refrigerants when considering factors such as reliability, safety, sustainability, performance, efficiency and total cost of ownership. Solstice<sup>®</sup> refrigerants help food retailers, convenience stores and drug stores meet environmental regulations and their sustainability goals - without impacting their balance sheets.



Solstice<sup>®</sup> L40X and Solstice<sup>®</sup> 454C are mildly flammable (A2L), <150 GWP refrigerants that provide energy efficiency improvement over CO2, helping supermarkets reduce overall CO2 footprint (Scope 1 and Scope 2 emissions).

Designed for new refrigeration systems in

low- and medium-temperature applications, Solstice refrigerants are easy to install and maintain. In contrast to CO2 based systems, which demand specialized skills and capabilities, Solstice® L4OX and Solstice® 454C systems follow standard installation and maintenance practices, requiring no elite skillset and experience.

Unlike CO2 refrigeration systems, Solstice® refrigerants have a lower CAPEX requirement. Being a highpressure refrigerant, CO2 systems need entirely new equipment and costly components to withstand high pressure conditions.



With the transition to <150 GWP refrigerants, Solstice<sup>®</sup> L40X and Solstice<sup>®</sup> R-454C are gaining traction as cost-effective, easier-to-use refrigerants.



Because mildly flammable A2L refrigerants are subject to safety regulations and some charge limitations, Honeywell's team of experts will collaborate closely with you throughout the installation to make the transition seamless.

# **Choose Solstice<sup>®</sup> refrigerants with confidence** and start your journey to a lower carbon future.

# **CUSTOMER SUCCESS STORIES**



Edeka – Erxleben, Germany Installed Solstice<sup>®</sup> L40X in November 2020



MD Discount – Persiceto, Italy Installed Solstice® L40X in January 2023

- 30% savings on electricity and heating costs compared to central refrigeration systems
- 40% lower energy consumption than plug-in refrigeration units without heat recovery
- 35% lower investment costs than a comparable CO<sub>2</sub> system
- 25% lower lifetime emissions projected compared to CO<sub>2</sub> systems
- Projected savings of €260,000 in lifetime cost compared to CO<sub>2</sub> systems





\* Based on ORNL report - Technology Options for Low Environmental Impact Air-Conditioning and Refrigeration Systems, for efficiency evaluated at typical design condition (95°F). The COP for Solstice 454C, Solstice L40X, R-290 and CO2 are 1.99, 2.05, 1.62 and 1.17 respectively at ambient temperature of 95°F. The report also provides LCCP analysis for Atlanta (Emission Factor – 0.497 kgC02/kWhr) for Solstice 454C, Solstice L40X, R-290 and CO2, which are 7269901 kgC02e, 7158019 kgC02e, 8444764 kgC02e and 8853301 kgC02e respectively as total emissions which is the sum of direct and indirect emissions. For details, please visit OSTI.GOV Unlike CO2 refrigeration systems, Solstice® refrigerants have a lower CAPEX requirement. Being a high-pressure refrigerant, CO2 systems need entirely new equipment and entirely new equipment entirely new equipment and entirely new equipment entities entirely new equipment entirely new equipment entirely enti

costly components to withstand high pressure conditions.

#### For more information

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THE **FUTURE** IS WHAT WE ΜΔΚΕ ΙΤ

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