LOW GWP INSTALL LEADS TO 50% ENERGY REDUCTION, $2M GRANT

California meal production facility capitalizes on Heatcraft CO_2 technology, expertise

During the beginning of the COVID-19 pandemic in Spring 2020, Heatcraft Refrigeration Products helped a major meal production and delivery company build a $20 million, 56,000-square-foot food production facility in Union City, Calif. The company is an industry leader in providing sustainable and ethically produced, locally and regionally sourced food for the healthcare, education and retail sectors.

The meal production company partnered with Grounded Ventures, a project development and financing company dedicated to sustainability ventures, to form Faber Street Foodworks LLC. This newly formed company purchased the property and served as the project owner and developer.

Grounded Ventures
b.modrn sustainability enterprise

"Heatcraft's responsiveness and execution on this project made all the difference. They provided the right equipment, engineering and service to help future-proof our investment."

— **Kevin Warner,** principal managing partner, Grounded Ventures, and managing member, Faber Street Foodworks LLC

KEY CHALLENGES

CHALLENGE NO. 1 – SUSTAINABILITY

The meal production company's major client, a leading American health care provider, contracted them to provide patient meals to all its facilities in northern California. The health care provider committed to 100% local and sustainably produced food by 2025, which meant the meal production company needed a sustainable food preparation plant to align with the provider's mission.

CHALLENGE NO. 2 – REGULATIONS AND REFRIGERANTS

California Air Resources Board (CARB) regulations phase out the most conventional refrigerants for new installations due to their significant global warming potential (GWP). Thus, low GWP refrigerants and equipment were an absolute necessity.

The facility also needed technology that could operate on CO_2. The project partners were intent on future-proofing against hydrofluorocarbon (HFC) regulations and couldn't use ammonia (NH_3) due to its toxicity and the facility's proximity to a highly populated urban area.

CHALLENGE NO. 3 – EDUCATION AND ENERGY SAVINGS

The major gas and electric utility for northern California had no experience with a prescriptive rebate on a refrigeration system. Extensive education from Heatcraft's cold storage team was required to show calculations on energy savings and familiarize the utility with the benefits of low GWP technology.

SOLUTIONS & SERVICE

Creating a custom solution for a sustainable, 56,000-square-foot food processing facility was no easy feat, especially during a pandemic. Heatcraft's engineering and application teams created a usecase for low GWP technology by dissecting the end-customer's needs on equipment, temperature ranges and regulatory compliance with both CARB and the United States Department of Agriculture (USDA). They also calculated the energy efficiency of the equipment for future rebates and total cost of ownership.

Heatcraft offered a complete, cost-effective CO_2 solution to meet all the cold storage equipment needs across function, temperature and pressure. Though there were strong competitors during the design phase, **Faber Street Foodworks ultimately chose Heatcraft based on the right product and application expertise, responsiveness and the ability to secure grant funding and demonstrate the data necessary for rebates from the utility.**

To meet industrial food processing standards, Heatcraft installed 36 Larkin model multi-temperature evaporators as part of a CO_2 transcritical system.

This allowed most of the load to be carried by the medium temp system (230HP), which allowed for:

- Maximum energy efficiency
- Reduced energy costs
- Energy rebate qualification

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HEATCRAFT Worldwide Refrigeration

HCR-22102

PROJECT HIGHLIGHTS

>$45,000 energy rebate

The project received a direct utility rebate based on the ability of Heatcraft's eCO_2Boost Transcritical Refrigeration System to provide 40 to 100% of the building's hot water load.

$2 million grant

Because of the environmental benefits of the project, special funding was provided in the form of a grant to lower the capital cost of the installation.

50% energy reduction

The CO_2 evaporators, coolers and rack demonstrated an energy consumption of half that of HFC systems, lowering energy costs instantly for the end-customer's operations.

CARB compliance

By installing low GWP, CO_2 transcritical systems, the end-customer met CARB's GWP regulations for industrial cooling and will be protected from any refrigeration phase-outs in the future.

Timely completion

From start to finish, the new facility was built and operational in less than a year.