
HOW

Self-Contained Refrigeration Systems

FREEZE OUT

THE COMPETITION





On your mark, get set, connect! In the world of plug-and-play solutions, this concept reigns. Once a piece of equipment is plugged into an electrical outlet, it self-adjusts to its environment.

These types of solutions are making waves across a variety of industries — and commercial refrigeration is no exception. Plug-in refrigerators, or self-contained refrigeration systems as they are often called, are outfitted with all components involved in the refrigeration cycle, from compressors and condensers to valves and evaporators. While a simplified design leads to faster installation times, this only scratches the surface of the benefits these systems deliver.

In this guide, we'll look at the natural evolution of commercial refrigeration and how self-contained systems are improving the bottom line of retailers, foodservice providers and restaurants alike.

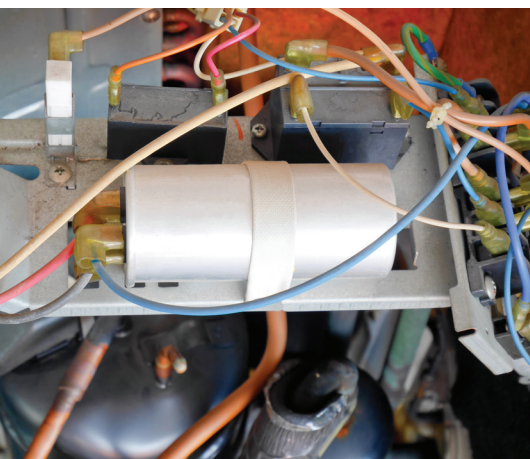


The Current Landscape of Commercial Refrigeration

Complex piping has traditionally underlined the operation of commercial refrigeration systems. *The suction line carries refrigerant vapor to the compressor. The liquid line comes out of the compressor and carries liquid refrigerant that travels to the evaporator coil. A condensate drain line safely moves condensation away from refrigerator components to a drain pan.*

From an installation perspective, it's easy to see where an extensive piping network adds time to the clock. Each of these piping lines needs to speak to one another, as well as hook into their larger infrastructure — a process that involves an array of mechanics, materials and tools. This makes it a challenge to get new refrigeration systems up and running fast, with more downtime anticipated.

While this is where the concerns behind commercial refrigeration systems begin, it's not where they end. Consider the maintenance of the system, for instance. Because these systems are broken up and connecting lines are not always easily accessible, routine check-ups and repairs can become a longer, more disruptive process.



Energy use is also a topic of conversation. When substances like coolants and refrigerants have to travel longer distances between a commercial refrigerator, the equipment has to work harder. This added energy consumption not only increases monthly bills and negatively impacts the environment, but it can also decrease the life span of the refrigeration system as a whole.

Then, there's the element of flexibility. What if you want to change the layout of your space? When complex piping is involved, chances are this task is going to require significant time and costs to implement. So whether it's a matter of preference or need, a lack of design mobility can leave businesses in a frustrating bind.



Plugging Into the Future

Self-contained refrigeration systems have introduced a new wave of simplicity in commercial refrigeration. With condensers and compressors built into every refrigerated display case, there is no need to run piping outside of the individual units. All these systems require is an electrical outlet to fuel operations.

Here's what this transition means for businesses:

- ✓ By eliminating the need to fabricate pipe on-site, refrigeration units can be installed at a faster pace and the room-for-error decreases.
- ✓ With all of the refrigeration components in one place, servicing units becomes easier — not to mention, there's no need to maintain external pipelines (drains included).
- ✓ Eliminating external pipelines lowers the energy use of refrigeration systems (which reduces energy bills) and enhances the reliability of the system as a whole.
- ✓ Plug-and-play connections allow self-contained refrigeration units to be easily moved from location to location — a way to keep up with industry trends and maximize sales.



While this introduces some of the overarching benefits of self-contained refrigeration systems, you're probably wondering how this all factors into your business operations. Here are three unique scenarios that showcase how the benefits of self-contained refrigerators are brought to light in various industries.



Retailers Can Improve Customer Experience & Boost Loyalty



Imagine a scenario where a customer walks into a grocery store or convenience store only to find that display cases are filled with spoiled food, or no food at all because it spoiled. This makes for poor customer experience and can lead to food safety hazards. Not to mention, it can create frustrations for employees who have to stop and deal with these spoiled products.

The enhanced reliability of self-contained refrigeration units helps retail centers remain confident in display performance and avoid profit loss due to food spoilage, as well as repair expenses. With better customer experience, odds are shoppers are more likely to return and repurchase. All the while, stores become increasingly energy-efficient, saving monthly utility costs and improving their environmental footprint.



In a typical grocery store, refrigeration and lighting account for about 65% of total electricity and gas use, making them the best targets for energy savings.

While full lineups of displays are common in food retail stores, on-the-spot displays are also a popular option. Whether added as a permanent fixture or a temporary way to promote products, these self-contained displays easily fit in the existing themes of retail stores and entice customers to take advantage of special offers or purchase items near the end of their shelf life.



Foodservice Providers Can Create Value Through Operational Excellence



Foodservice directors and managers are no stranger to the pressure of meeting strict quality and control standards. After all, when a customer has a negative experience, the reputation of a cafeteria or dining hall suffers. By the same token, there is just as much pressure to add value through profit management.

Self-contained refrigeration systems set the scene for operational excellence in foodservice. Their reliable performance helps keep students, employees and visitors safe and satisfied — and more likely to stay on campus for meals — while a less robust system reduces energy use and minimizes downtime, causing fewer inconveniences to the business and customers alike.



According to the Food Recovery Network, college campuses collectively throw out 22 million pounds of uneaten food every year.

With their hectic schedules, students are always on the lookout for grab-and-go food options. Open-display, self-contained cases make merchandise easily accessible. With the proper design to maintain optimum temperatures and eliminate cold air loss, these styles of cases complement dine-in services so students can eat while on the move.



Restaurants Can Easily Showcase Food Products & Maximize Sales



Whether restaurants offer deli-style to-go items or savory desserts, these items are hard to sell when they are hidden in a back-of-house refrigerator. A menu can provide helpful descriptions and employees can offer recommendations, but the value of actually seeing the products can't be overstated. In fact, it's often what entices customers to make a purchase in the first place.

Thanks to self-contained refrigerated displays, restaurants can increase the visibility of their food products in a convenient, low-maintenance manner. Functioning as part of the business's marketing toolkit, these displays serve as advertisements for the available selection of products. While the faster sale of food items can increase profits, it also avoids wasted inventory that can add to a restaurant's monthly costs.



41% of restaurant owners reported that high operating costs are their largest obstacle in business.

The original location a display case is installed may not always be the best spot for it as time goes on. This can be attributed to new industry trends, as well as customer feedback. Whatever the source of motivation may be, self-contained display cases are flexible enough to evolve with the restaurant's new layout.



Work With Pro HVAC/R For All Your Self-Contained Refrigeration Needs

As a full-service provider of self-contained refrigeration systems, Pro HVAC/R sets you up for success from start to finish. It all starts with Pure Cold self-contained fixtures. Made with the highest quality materials and engineered to be efficient, reliable and long-lasting, these flexible refrigeration solutions are available in a variety of formats to meet your needs.

The team at Pro HVAC/R uses the latest technologies to install and maintain the Pure Cold fixtures. Through energy monitoring, submetering and thermal imaging monitoring services, our team can help you reduce energy use and troubleshoot temperature/ventilation to maintain proper refrigeration performance and avoid costly repairs.



Interested in working with Pro HVAC/R
for your refrigeration needs?

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