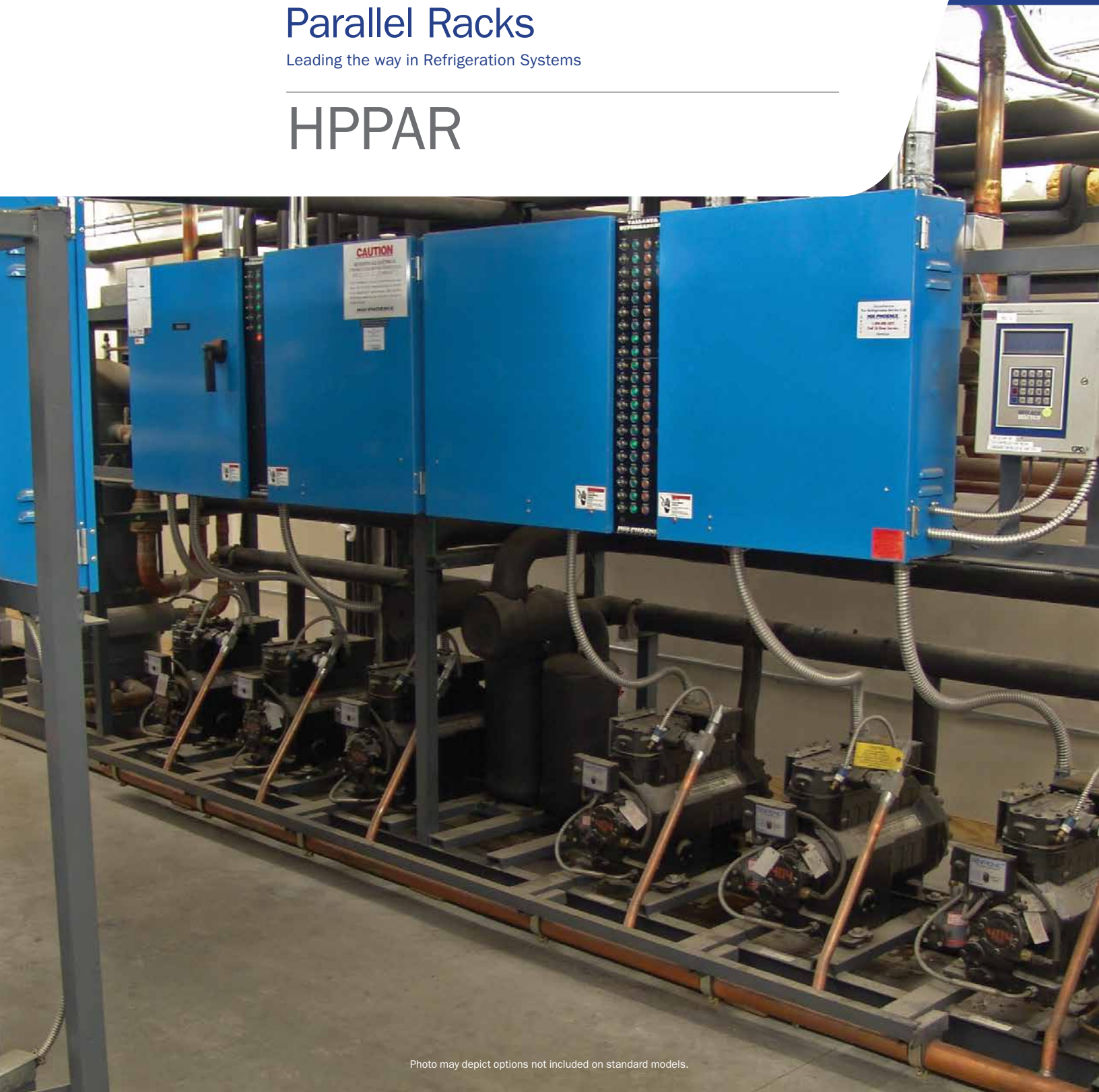


Parallel Racks

Leading the way in Refrigeration Systems

HPPAR





Hillphoenix –

The Leaders in Refrigeration Management Hillphoenix® provides the answers to today's refrigerant management challenges in supermarket refrigeration. We have the knowledge, the manufacturing capabilities, and the breadth of products, options, and configurations to meet the most demanding requirements. In our parallel compressor systems, we approach refrigerant management in two ways. First, through our Zero Leak™ Initiative and second through our many options available to reduce or improve management of your refrigerant charge.

Hillphoenix has instituted a “Zero Leak Initiative” with the goal of eliminating leaks in your store.

To accomplish so bold an undertaking, first we design our systems to maximize the use of pre-bent tubing, which in turn minimizes the use of brazed connections. Next, we provide a rigorous certification program for all brazers in our factories. Rest assured that when brazed connec-

tions are required these connections are made by certified, Hillphoenix brazing experts.

The initiative continues with a manufacturing process that includes a supplier component leak certification program adopted to eliminate leaks anywhere in the system, not just in the connections we build between components.

Further, our Quality Control process mandates that all fittings and joints be tested with a gas mixture of 95 percent nitrogen and 5 percent hydrogen, a safe, non-flammable green-labeled gas. We complete the process with a transportation pressure validation to ensure your refrigeration

system arrives at the job site free of leaks. The result is a compressor system with which you can rest assured will have the lowest leak potential of any in the industry.

Look to Hillphoenix for options to maximize your refrigerant management program.

Hillphoenix offers a variety of options to reduce your initial refrigerant charge and improve the annual leak rates in your stores.

- Split condenser valves and controls
- Receiver rupture disc and gauges
- Leak detection systems
- Enviroguard™ Refrigerant Management System
- Hydronic heating systems to minimize heat reclaim refrigerant charge



Systems are leak-tested during production with a safe, green-labeled gas.



You can use up to 100% of the available waste heat from your system.



We provide a rigorous certification program for all brazers in our factories.

Hillphoenix Enviroguard Refrigerant Management System

The Hillphoenix Enviroguard™ System is a low charge refrigeration system that allows optimal refrigerant management. The minimal refrigerant charge is obtained by isolating the receiver from the normal refrigeration circuit and using it as a storage tank for refrigerant charge required to adjust for seasonal changes in system operation. In addition to optimal refrigerant management, the Hillphoenix Enviroguard system operates in an energy efficient manner to lower your energy use as well.

Let Hillphoenix help you design a system that utilizes the waste heat from your refrigeration system while minimizing the amount of refrigerant required. Through the use of a low-charge brazed plate heat exchanger and pump system installed in close proximity to your parallel refrigeration system, you can use up to 100% of the available waste heat from your system to:

- Heat your store via hot water coils in your HVAC unit
- Operate water source heat pumps
- Melt snow on your sidewalks
- Heat your refrigerated shopping aisles

This is all done while using far less refrigerant when compared to using direct refrigerant heat reclaim.

Ask your Hillphoenix sales manager how you can take advantage of the Hillphoenix Refrigerant Management options today!

Zero
Leak Initiative

Our compressor systems have the lowest leak potential in the industry.



Total Quality starts at design and ends at your bottom line.

Hillphoenix Refrigeration Systems design experts work to design commercial refrigeration equipment that is specific to your applications and requirements. From the very beginning, the goal of the most experienced

refrigeration systems engineering organization in the business is to deliver the right product on time and most importantly on budget.

We utilize standardized and sequenced manufacturing operations combined with parallel modular assembly to reduce manufacturing lead times. Your equipment arrives as scheduled which allows your project to be complete on time.

While we meet our on-time delivery commitments, we also ensure that your equipment will be of the highest quality in the industry through our Total Quality System. It is our way of taking extra steps to deliver what we've promised by:

- Performing In-process, sequential quality inspections
- Providing our work force with visual work instructions at all work stations
- Conducting full functional tests
- Ensuring all employees are trained as valuable resources in Total Quality problem solving
- Using a closed loop corrective action system overseen by a cross-functional quality board.

In the end, our total quality control system produces a product that operates reliably and efficiently to provide you with an expected, maximum return on your investment.

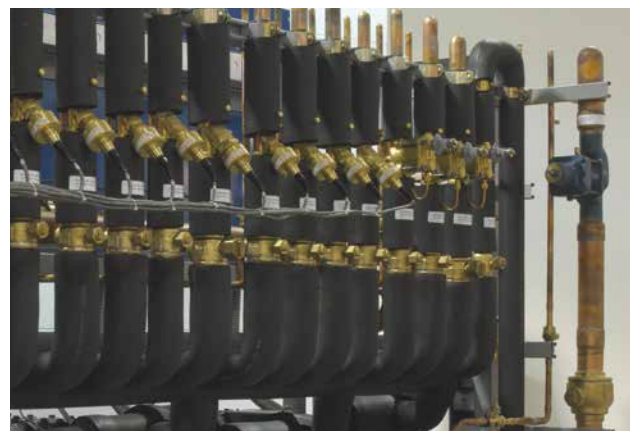
Our options are as numerous as our configurations are individual.

We design our systems around your specific store needs and installation requirements to meet the demands of your individual application. Hillphoenix Parallel Racks can be equipped with an almost limitless variety of features and capabilities.

Whatever focus or priorities required by your application, we have the options and configurations to meet them. Some of those may include multiple suction headers, split systems, remote manifolds, remote panels and a host of others from a complete list to provide a refrigeration system that meets your specification and imagination.



Horizontal receiver assemblies are just one example of the many system configurations we offer



Electronic evaporator pressure regulators are available to meet or exceed your specifications



Open drive compressors are just one of the many compressor choices you have

We have focused our energies on energy savings.

The first step to ensuring energy efficiency always begins with design. Our engineers have the knowledge and experience to combine your specific design requirements with the latest advancements in energy-efficient technology to ensure that your system operates at peak efficiency.

Based on best practices and leading edge technologies, Hillphoenix offers the most energy efficient approaches

to supermarket refrigeration. From traditional parallel compressor systems to distributed compressor systems to our Second Nature® secondary coolant refrigerant systems, our focus on energy efficiency include:

- The use of refrigerants proven to be the most efficient
- Continued emphasis on refrigeration cycle optimization

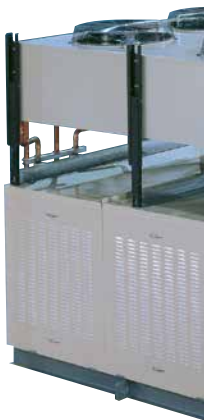
We can provide a variety of compressor types depending on customer preference and requirements. For instance, our



Traditional parallel racks



Distributed compressor systems



parallel compressor systems can be equipped with two stage open drive compressors that are up to 10% more efficient than other types of compressors.

A few of the options we offer that can improve the efficiency of your parallel compressor system includes:

- Mechanical unloaders
- Variable frequency drives for compressors
- Surge receiver piping
- Mechanical Sub-cooling
- Electronic evaporator pressure regulators
- Suction crossover with load shed arrangements
- Low speed condenser fans
- Variable frequency drives for condenser fan motors
- Enviroquard™ control strategies



Second Nature® system and pump station



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