

**MB MASTER-BILT**<sup>®</sup>  
™ Refrigeration Solutions



PS & GPS SERIES  
PARALLEL RACK  
REFRIGERATION SYSTEMS

## PS Series Parallel Racks

For those who want to maximize energy savings and have full control of an entire refrigeration network within a facility, PS Series parallel rack systems are the right choice. A variety of electronic controllers allow you to access functions remotely and integrate into existing networks. PS systems are available in many configurations such as horizontally or vertically discharged air, water- or air-cooled, indoor with remote condenser, or with condensers and compressors on a common frame. Systems may also be located in a back room or on a roof in close proximity to refrigeration equipment for reduced piping.

## GPS Series Glycol Parallel Racks

Looking to lower global warming potential for your refrigeration system? A GPS Series system greatly reduces the refrigerant charge via the secondary, non-toxic glycol medium. Coupled with electronic controls, energy consumption is reduced by 15-20% by comparison to mechanically controlled systems. Just like PS systems, GPS models offer a diverse array of configurations.

## Why Use A Master-Bilt® System?

- **Fewer Refrigerant Leaks**
  - With parallel racks there are fewer leaks due to less vibration throughout the refrigeration system
  - In GPS systems there are virtually no leaks when ABS plastic lines are used due to low pressure and glued joints vs. soldered copper joints

- **Energy Savings**
  - Because parallel units match refrigeration capacity to actual load and are not "full on or full off" as with single compressor units, they provide 20%+ savings over single compressor units.
  - Optional subcooling increases refrigerant efficiency on low temp applications by approximately 17%
  - With optional heat reclaim, a heat exchanger and water storage tank may be used to recover waste heat normally dissipated from the condenser and use it to heat water for a variety of applications.
  - Optional hot gas defrost increases energy efficiency by using waste heat for defrost

- **Electronic Control**
  - Choose from a variety of electronic controller systems depending on individual requirements such as monitoring of system features, diagnostics, interfacing with existing building controls and incorporating HACCP recording
  - Remote communications may be integrated
  - Optional alarm features

- **Reliability**
  - Multiple compressors ensure that there will be sufficient capacity to handle the refrigeration load requirement
  - Less stress on the unit due to smooth running
  - Reduced component wear due to less cycling

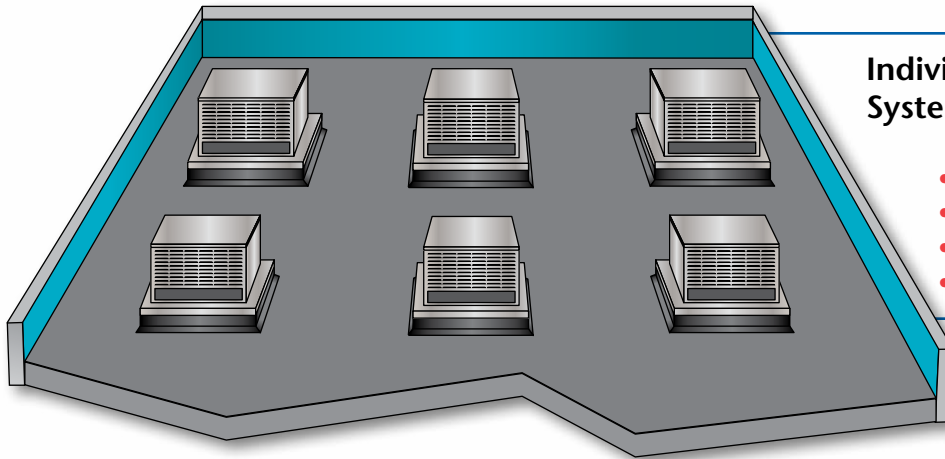
- **A Complete Source**
  - Master-Bilt® can supply the parallel system, walk-ins, reach-ins and all other refrigeration equipment saving you the hassle of "shopping around"



Parallel rack systems feature a standard galvanized steel housing with optional stainless steel available.

## Installation & Energy Savings Compared to Single-Compressor Systems

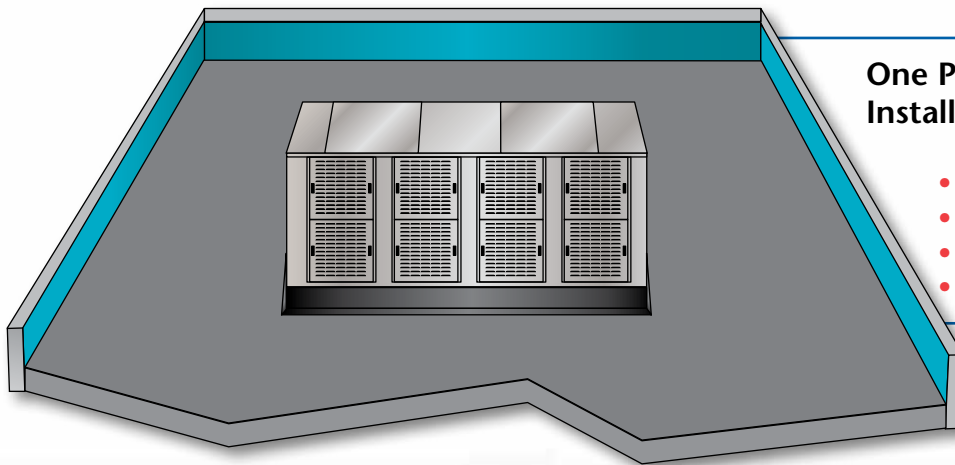
Remoting all refrigerated equipment in an establishment, including reach-ins, walk-ins and ice machines, to a single parallel system, removes the heat produced by multiple refrigeration units inside a kitchen or store and reduces air conditioning load and energy bills. A remote system also reduces noise level and service calls and extends the life of equipment. GPS glycol systems offer additional installation savings when ABS plastic piping is used instead of copper and the cost of glycol is significantly less than traditional refrigerant.



### Individual Single-Compressor System Installations

- **MULTIPLE** roof curbs
- **MULTIPLE** roof penetrations
- **MULTIPLE** electrical connections
- **MULTIPLE** piping connections

VS.



### One Parallel Rack System Installation

- **SINGLE** roof curb
- **SINGLE** roof penetration
- **SINGLE** electrical connection
- **SINGLE** piping connection

## Cost & Energy Savings

	PS SERIES	GPS SERIES
Cost Savings - One Rack Install vs. Multiple Installs*	\$400-\$500 per system	\$400-\$500 per system
Cost Savings - Single Roof Penetration vs. Multiple**	\$250-\$350 per system	\$250-\$350 per system
Further Energy Savings Via Digital Capacity Control	15-20%	20-25%***

\* Based on single compressor systems requiring individual disconnects vs. single point power connection.

\*\* Based on single compressor systems requiring multiple roof penetrations vs. single pitch pocket requirement for rack application.

\*\*\* Energy savings gained by using electronic controls which take advantage of floating head pressure on air-cooled systems.

Comparison based on typical secondary glycol systems using a mechanical thermostatic expansion valve.

## Features & Benefits



Condenser sections are provided either as a separate unit located remotely or with condensers and compressors on a common frame.



Adjustable head pressure controls protect systems in low ambient conditions.



A wide range of compressors is available, including digital scrolls, to better match capacity and budget needs while providing the most energy efficient and environmentally friendly system.



A pre-wired electrical panel with one-point connection allows simple, cost-effective installation and service.



A wide selection of electronic controllers is available to fit most any application. Controllers monitor systems, feature alarms and diagnostics and can interface into existing building controls for remote communications.

## Options

- Water cooled systems
- Heat reclaim
- Discus or semi-hermetic variable speed compressors
- Energy efficient variable speed control condenser fans
- Subcooling
- Hot gas defrost

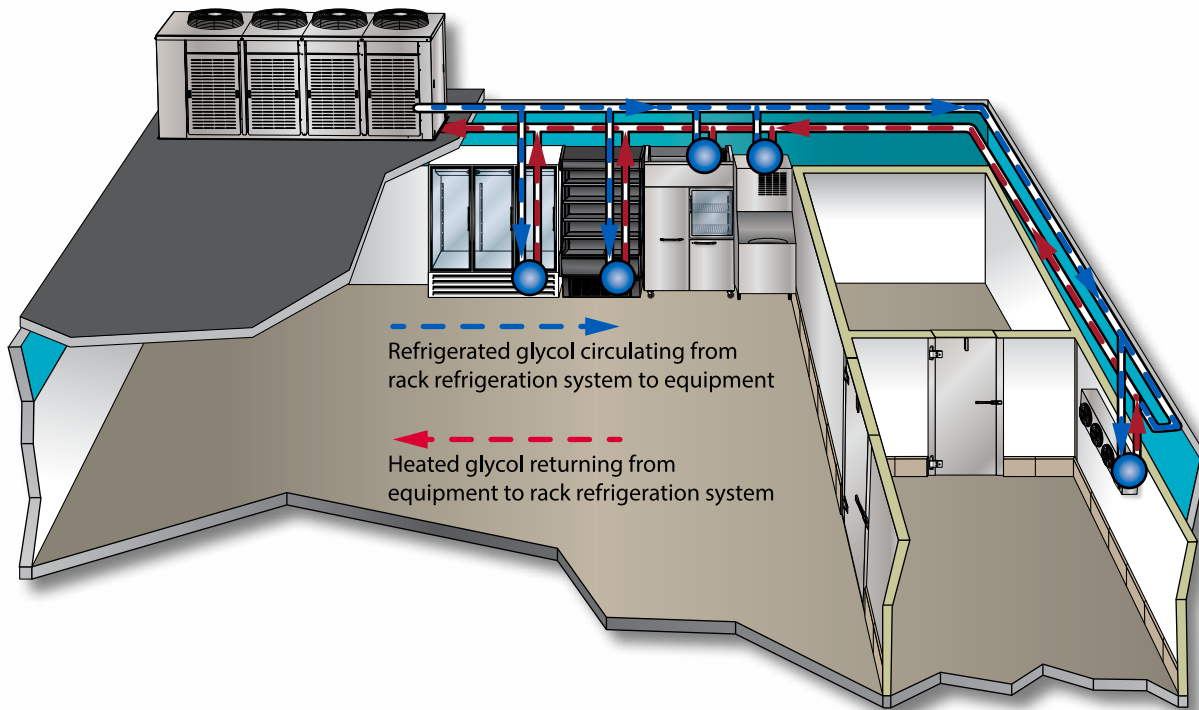
## GPS Series Glycol Systems

GPS series parallel glycol rack systems use the most efficient combination of refrigeration system and glycol loop technology to cool refrigeration equipment in foodservice and retail environments.

GPS series glycol systems utilize **electronic floating head pressure technology** to

reduce energy consumption by **as much as 25% over conventional mechanically controlled glycol systems**. State-of-the-art all-digital controls also provide greater precision, diagnostics, data logging and monitoring capability.

In addition, refrigerant charge and piping are reduced for less chance of refrigerant leaks.



### THE GLYCOL LOOP PROCESS

Master-Bilt® GPS series parallel rack systems circulate glycol through a loop, typically copper or ABS piping, to refrigeration equipment such as merchandisers, reach-ins and walk-ins. Return lines carry heated glycol from each piece of equipment back to the rack system for re-cooling.



See the glycol  
rack system  
video.



For the latest product information and specifications go to [www.master-bilt.com/products/products.htm](http://www.master-bilt.com/products/products.htm).



908 Highway 15 North • New Albany, MS 38652  
Phone: 800-647-1284 • Fax: 800-232-3966  
[www.master-bilt.com](http://www.master-bilt.com)



Due to continuous product enhancements, we reserve the right to change specifications without notice.

1469-8/15-web ©2019 Master-Bilt Products, an unincorporated division of Standex International Corporation. All rights reserved. Printed in U.S.A.