MagPak™ Refrigeration System

Sustainable Environmental Solutions Designed with Package Unit Technology

MagPak is the newest generation of distributed refrigeration systems from Hussmann. This compact, outdoor-rated package refrigeration system features our “V” design Microchannel condenser, and variable speed control fan motors for high energy efficiency, BACnet capable unit controller for seamless performance monitoring, all housed in a service-friendly enclosure that incorporates a hands-free weather shield and lighted control panel. MagPak is designed for optimal performance within the pre-defined capacity ranges and undergoes rigid factory performance testing to ensure years of reliable refrigeration performance.

Sustainable Solutions
Hussmann is dedicated to developing energy efficient technologies that reduce HFC and Carbon emissions. MagPak is just one of the many alternatives we offer to promote sustainable solutions.

www.hussmann.com
THE MAGPAK PACKAGE SYSTEM

The Sustainable Refrigeration Solution

The Hussmann MagPak™ is the newest generation of distributed refrigeration design. It starts with the highest quality components, incorporates optimal design and manufacturing techniques. Then each MagPak unit is subjected to rigorous functional performance testing before it leaves the factory to ensure years of reliable refrigeration performance.

Key Benefits
- Pre-defined capacity ranges facilitate easy unit selection and optimal performance within each range.
- Krack® super-efficient “V” design Microchannel condenser for a significant reduction in refrigerant charge and greenhouse gas emissions.
- Hands-free weather shield and lighted control panel for easy service.
- QR code provides instant access to piping and wiring drawings, parts list and service related videos.
- Single-suction groups with loop piping supports faster and lower cost installation.
- Variable speed control for each condenser fan improves energy efficiency.
- Factory-installed components make installation and start-up faster and easier.
- Factory performance testing ensures years of reliable refrigeration performance.
- Small platform package unit eliminates the need for a separate machine room.
- High and low pressure protection; Copeland CoreSense™ protection for oil level monitoring and compressor proofing.

Environmental Advantages
- Utilizing the Krack Microchannel condenser, the MagPak design provides a significant reduction in refrigerant charge and greenhouse gas emissions.
- Due to the inherent efficiency of the Microchannel and our “V” design, the size and weight is significantly less than units that use the traditional tube and fin condenser design.
- MagPak utilizes pre-bent tubing to eliminate braze joints where possible for fewer leak opportunities.

Design Advantages
- Factory-installed components include suction filters, liquid driers, and a heated insulated receiver to make installation easier.
- Single-point connections for electrical and loop-piping connections reduce the weight of the unit.
- Lower installation and building costs are achievable by eliminating individual circuits and the need for a machine room.
Unit Size Options
There are 10 sizes available:
- 5 Low Temp (LT)
- 5 Medium Temp (MT)
Each size is designed to optimize unit performance within the pre-defined capacity ranges based on load requirement. Each model number is based upon the capacity.

- For example, 85LT has a capacity of 85,000 btu/hour at -25°F evaporator temperature and 110°F saturated condensing temperature. The medium temperature unit model numbers and capacities are based on the set points of 15°F evaporator temperature and 115°F condensing temperature. See technical manual for unit selection at other operating conditions.

Performance Testing
- Three-step leak testing, including a highly sensitive helium leak test, is performed to ensure no leaks are present.
- Multiple-point electrical tests are also performed to make sure all electrical components are in working order.

High-Efficiency Compressors
MagPak utilizes the most efficient compressors available in a parallel configuration for each application.
- High-efficiency, vapor-injected scroll compressors for low temp applications.
- High-efficiency Discus compressors with digital unloading technology for load matching for medium temp applications.

Electronic Control System
The MagPak unit utilizes a BACnet capable unit controller to cycle compressors, vary condenser fan speeds, monitor refrigerant levels, gather data and provide specific alarms as needed, to ensure an efficient and balanced refrigeration system.
- With the BACnet capabilities, the data can be shared with most forms of building control systems or customer specific controllers.

Main controller.

Inside of electrical cabin with controller components.

Medium temp. Copeland discus compressors with individual pressure safety devices.

Low temp. Copeland scroll compressors with individual pressure safety devices.

Service-friendly, hands-free weather shield enclosure with lighted control panel.
## Standard Features and Sizes

### COMPRESSORS
- Copeland scrolls on low temp units.
  - 5 low temp models
  - Models include liquid and vapor injection (models KVE and K5E)
- Copeland reciprocating compressors on medium temp units.
  - 5 medium temp models
  - CoreSense protection
  - Digital compressor modulation
  - Individual discharge temperature sensors
  - Fixed high pressure encapsulated switch
  - Pre-set low pressure encapsulated switch
  - OMB oil level protection on low temp units

### HOUSING
- Galvanized sheet metal with left-up rain hood

### ELECTRICAL
- NEMA 1-Rated electrical panels
  - Main PDB
  - Individual compressor breaker/contactor
  - Control power breaker
  - 110V service outlet
  - Phase monitor
  - Power monitoring
  - Main Power Options: 440V/3/60
  - Control Power: 120V/1/60
  - Controller:
    - Hussmann controller
    - All units are 35A AIC rated

### LOW TEMP WEIGHTS AND SIZES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>STYLE</th>
<th>OVERALL DIMENSIONS (INCHES)</th>
<th>OPERATING WEIGHT (LB)</th>
<th>CAPACITY -25˚F SST, 110˚F AMBIENT (MBH)</th>
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</thead>
<tbody>
<tr>
<td>78LT</td>
<td>2x2</td>
<td>132 81 78</td>
<td>4,183</td>
<td>67.2</td>
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<tr>
<td>95LT</td>
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<td>132 81 78</td>
<td>4,279</td>
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<td>110LT</td>
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<td>132 81 78</td>
<td>4,344</td>
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<tr>
<td>130LT</td>
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<td>176 81 78</td>
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<tr>
<td>150LT</td>
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<td>176 81 78</td>
<td>5,203</td>
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</table>

### MEDIUM TEMP WEIGHTS AND SIZES

<table>
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<tr>
<th>MODEL</th>
<th>STYLE</th>
<th>OVERALL DIMENSIONS (INCHES)</th>
<th>OPERATING WEIGHT (LB)</th>
<th>CAPACITY 15˚F SST, 115˚F AMBIENT (MBH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>175MT</td>
<td>2x2</td>
<td>132 81 78</td>
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<tr>
<td>220MT</td>
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<td>300MT</td>
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<tr>
<td>350MT</td>
<td>2x3</td>
<td>176 81 78</td>
<td>6,071</td>
<td>396.7</td>
</tr>
</tbody>
</table>

### CONDENSER
- Microchannel condenser without electro-fin coating
- VFD controlled fans
- Microchannel condenser with electro-fin coating

### REFRIGERANTS
- R407A

### LOW SIDE
- Suction header with 3/4” insulation

### HIGH SIDE
- Turbashed oil separator
- Replaceable oil filter
- Removable core filter drier with service bypass
- 1/2” insulated sub-cooled liquid lines
- Heated insulated receiver with liquid level indicator

### CONDENSER
- Microchannel condenser without electro-fin coating
- VFD controlled fans
- Microchannel condenser with electro-fin coating

### GENERAL
- All units have loop piping
- Electronic control valves

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Scan the QR code providing instant access to piping and wiring drawings, parts list and service related videos.

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NOTE: We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions, or replacements for equipment previously sold or shipped.

For additional resources, contact your representative or visit www.hussmann.com.

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