



Rebel[®] commercial packaged rooftop systems for retailers



Advanced technologies propel energy savings and customer comfort to uncommon levels.



3 – 28 tons

Capitalize on superior energy savings

Designed for efficiency

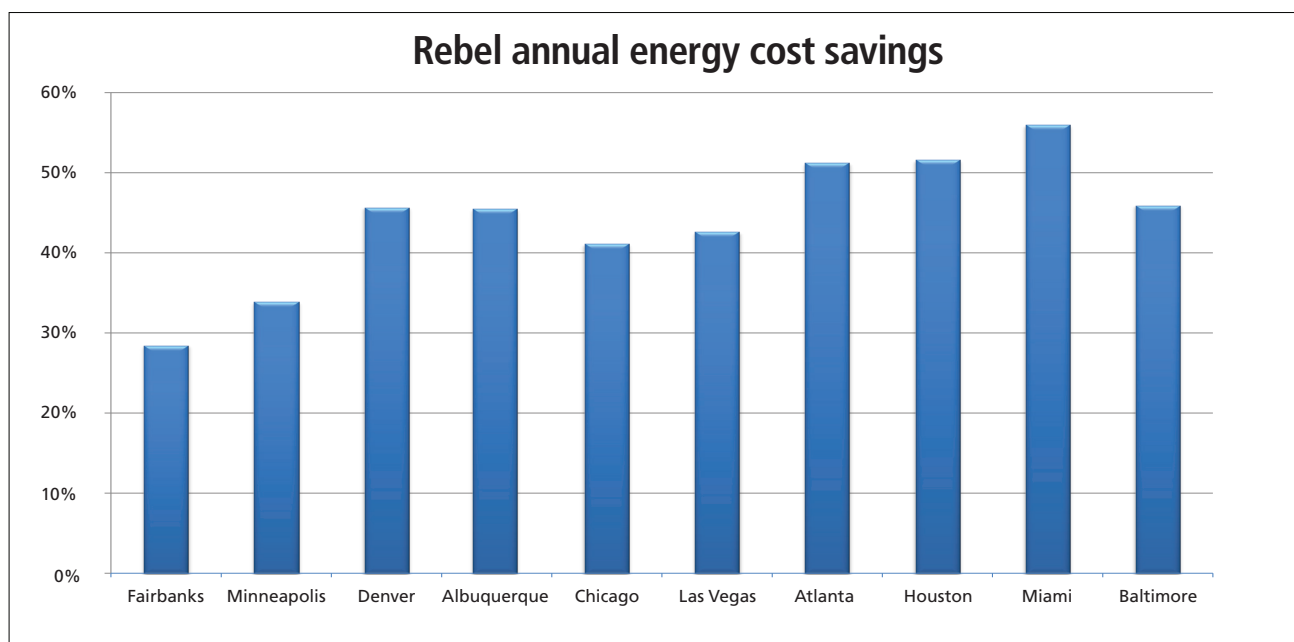
A Rebel packaged rooftop system is the ideal solution for any retail application. Rebel comes equipped with an array of energy-saving features like ECM fans, inverter scroll compressors, and the energy recovery wheel.

Producing an astounding 43 percent part-load energy savings above ASHRAE's 90.1-2016 energy standard code minimums, Rebel generates efficiencies previously unachievable in a commercial rooftop system.

Exceptional cost savings and performance makes Rebel ideal for any retail application such as 100 percent outdoor air, variable air volume (VAV) with duct pressure control, single-zone VAV, or constant air volume (CAV).

The graph below shows a 12-ton Rebel single-zone VAV gas heat unit versus a CAV gas heat unit set in a 7-day retail application in climates where annual energy costs often exceed \$5,000 (results vary depending on location).

It's easy to see Rebel saves...and saves significantly. Rebel gives retailers one of the lowest total costs of ownership for any commercial rooftop system. Call your Daikin representative to model your potential savings using our enhanced Rebel Payback Calculator.



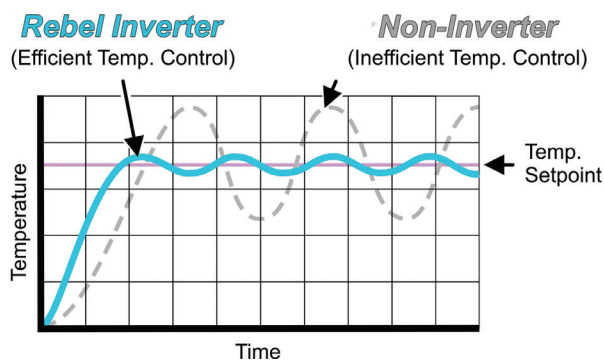
Inverter scroll compressor boosts efficiency

At the core of Rebel's remarkable performance is its inverter scroll compressor, which produces superior energy efficiencies, an extended lifecycle, ultra-quiet operation, and better shopper comfort.

Non-inverter compressors must operate at full capacity, even in mild conditions. Like a light switch, these units must be either turned on or turned off. At part-load conditions, they cycle frequently between on and off, leading to spikes in power demand as well as compressor wear, temperature fluctuations, and overcooling.

Rebel's inverter compressor, on the other hand, is tightly modulated to provide optimal efficiency and consistently maintain user-established setpoints at both full and part-load conditions. Consequently, the system's operation consumes only the energy required to meet the cooling needs of the space.

For retailers, these extraordinary part-load capabilities mean exceptional energy savings, precise comfort control, and accelerated payback.



Effective dehumidification for comfortable shopping

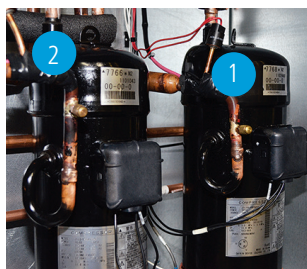
Packaged rooftop systems can deliver effective dehumidification only when their compressors are actively working. As a result, the on/off cycling of non-inverter compressors reduces dehumidification capacity.

In contrast, Rebel's inverter compressor modulates, providing steady moisture regulation for the in-store environment.

Rebel is well-equipped to provide you with the dehumidification your store needs. It offers two-point temperature control, which utilizes cooling coils and modulating hot gas reheat coils to perform effective dehumidification without overcooling the air.

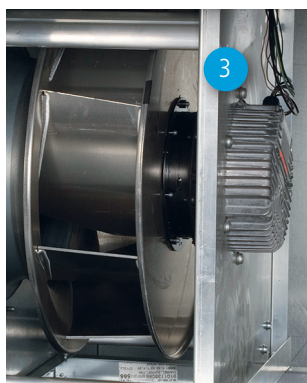


- 1] Variable speed inverter scroll compressor
- Optimum comfort via modulating capacity control and discharge air temperature control
 - Exceptional part-load efficiencies
 - Enclosed for quiet operation



- 2] Variable speed heat pump
- More economical than gas heat during cold weather
 - Greater comfort control from variable speed capacity

- 3] Direct-drive variable speed ECM or VFD fan motors
- Increases system reliability and efficiency by eliminating belts and bearing setscrews
 - Increases energy savings at part-load conditions
 - Offers superior fan efficiencies and quiet performance



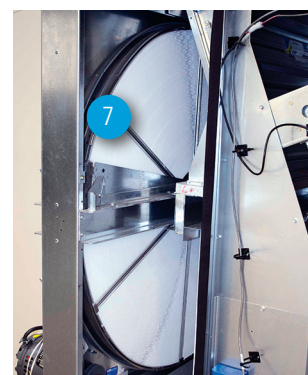
- 4] MicroTech® III unit controller
- Simplified BAS integration using Open Choices™ feature with BACnet® or LONMARK® communications
 - Improved serviceability with intuitive unit diagnostics
 - Option of DIII gateway or iTM with BACnet Client for iTouch VRV controls

- 5] Electronic expansion valves
- Delivers optimum control of superheat
 - Prevents liquid refrigerant compressor slugging
 - Increases efficiencies by lowering head pressure



- 6] Seamless top panel and hinged access door
- Leak-free construction
 - Easy service and maintenance access using 1/4-turn latch doors

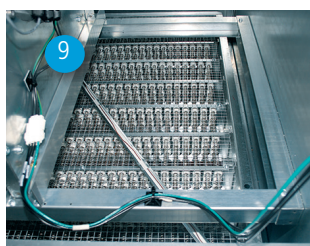
- 7] Energy recovery wheel
- Reduces summer/winter ventilation loads by transferring energy to and from exhaust air.
 - Increases efficiency by up to 20 percent
 - Simplifies operation with integrated unit control
 - Wheel is an integral part of the cabinet, eliminating field assembly and water leakage



- 8] 2" and 4" slide-out filter racks
- Quick serviceability with easy filter change-outs
 - MERV 8 prefilters, MERV 11 – 14 after-filters
 - 4" factory-installed filters (16 – 28 tons)



- 9] Supplemental heat
- Gas furnace with up to 12:1 turn-down
 - Electric heat with SCR
 - Hot water heat

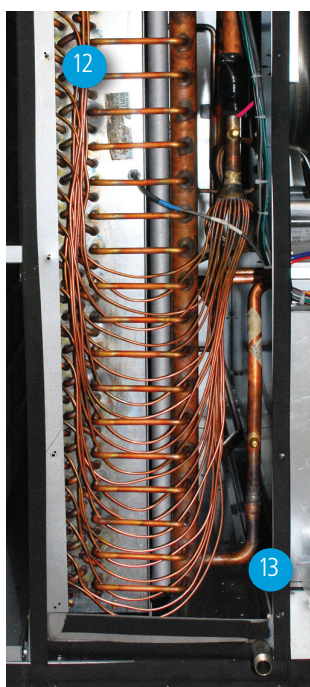


- 10] Double-wall foam cabinet
- Provides for fiber-free air stream
 - Energy-efficient R7 and R13 foam-injected panels

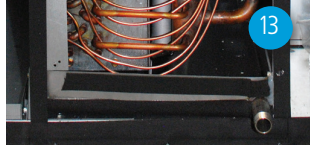


- 11] Condenser fans with variable speed ECM motor
- Energy savings
 - Quiet operation
 - Fully modulating head pressure control

- 12] Modulating hot gas reheat coil
- Reuses waste heat for increased energy efficiency
 - Maintains desired indoor dew point temperatures
 - Two-point temperature control provides effective dehumidification without overcooling the space



- 13] Stainless steel, double-slope drain pan
- Prevents corrosion and standing water to promote higher indoor air quality



- 14] Economizer
- Free cooling when outdoor conditions are favorable
 - Meets many local statutes for fresh air provision
 - Integrates operation with mechanical cooling
 - Increases efficiency with demand control ventilation

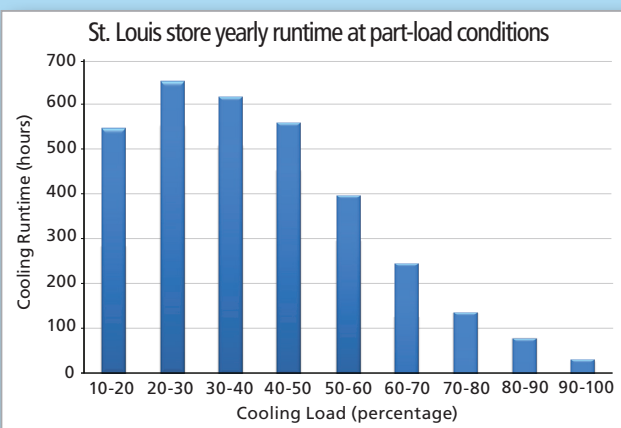


- 15] Outdoor air monitor
- Building pressure override automatically opens dampers
 - Monitor ensures precision airflow
 - Efficient integrated operation with mechanical cooling



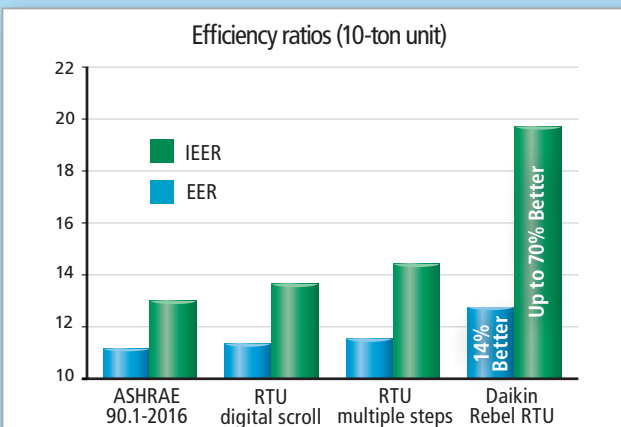
Rooftop efficiencies

Many stores often require only a portion of their rooftop unit's cooling power. One analysis of the cooling load of a retail building in St. Louis, Missouri showed the majority of the cooling demand happening at 40 percent of full-load capacity or lower.



Rebel excels under partial-load conditions, offering up to 70 percent improvements to IEER compared to ASHRAE 90.1-2016 code minimums, which equates to 43 percent energy savings. With EERs that surpass 90.1-2016 minimums by up to 14 percent, Rebel is also equipped to provide efficient full-load operation.

Between its part and full-load efficiencies, Rebel is one of the industry's most energy-efficient rooftop systems, providing energy savings and often earning utility rebates.



Advanced technology drives customer comfort



Elevate the shopping experience

As a retailer, you may feel conflicted between the need to ensure shopper comfort and the desire to keep energy costs low. With Rebel packaged rooftop unit, you get both.

Rebel delivers powerful temperature control and quiet operation to create a pleasant environment for your customers. The inverter scroll compressor enables precision temperature control by moderating speed at part-load conditions. This feature also decreases radiated noise, as do the ECM condenser fans, so Rebel stays quiet while keeping your customers comfortable.

In addition, Rebel's economizer can be set to monitor and adjust outdoor air intake to meet air quality requirements.

Providing high-quality indoor air, quiet performance, and precise temperature control, Rebel ensures that your building is a relaxing space for customers to explore and shop.

High-tech features lead to lifecycle savings

Rebel achieves one of the lowest costs of ownership among comparable units because its efficient technologies, intelligent controls, and hassle-free maintenance produce energy savings and reliable performance throughout its lifecycle.

In addition to precision temperature control, the inverter scroll compressor minimizes cycling, saving energy and extending the unit's service life. Slide-out features and easy access to electrical and mechanical components make Rebel's upkeep incredibly simple.

SiteLine™ Building Controls' proactive monitoring and timely notifications for maintenance keep Rebel performing year after year, so you get long-term uninterrupted operation.

Take control over your space and give your customers an incredibly comfortable shopping experience, all while enjoying the benefits of Rebel's low lifecycle costs.

Get connected

Smart businesses run on SiteLine™ Building Controls

Gain effortless insight & optimal performance for your HVAC equipment

Daikin makes building automation simpler, more effective and easier to scale than any other controls solution on the market today.

Whether you're overseeing a complex HVAC ecosystem of equipment and buildings or monitoring standalone units, SiteLine Building Controls and Service Solutions will help you create comfortable and sustainable environments where tenants work and live.

Daikin's scalable, cloud-based building automation systems (BAS) instantly and easily optimize the performance of any HVAC ecosystem—including other makes and existing building systems. Plus, our real-time analytics provide effortless insight and enable optimization for energy, indoor air quality (IAQ) and sustainability.



Choose a comprehensive system for optimum performance

STEP 1

Select Rebel for stand-alone or application-specific operation



1. Cooling only or cooling with supplement heat
 - a. VAV with duct pressure control or single-zone VAV
 - b. Heat pump, gas, electric, or hot water
 - c. Economizer and powered exhaust
2. 100 percent outdoor air

Offered with the above:

- Stand-alone controls (complete with time clock and comfort controls) or
- Network communication to LONMARK®, BACnet®, Daikin VAV, or Daikin VRV control systems
- SiteLine™ Building Controls for 24/7 remote access to real-time data and your HVAC system

STEP 2

Select from complementary Daikin products



Maverick® II heating & cooling
with optional inverter compressor
15 to 75 tons



RoofPak® heating & cooling
with optional inverter compressor
15 to 140 tons



Variable air volume (VAV) terminal units
with MicroTech® Integrated System controls



Variable refrigerant volume (VRV)
systems with cassettes

The industry leader in environmental solutions

Daikin Applied is committed to sustainable practices as part of our corporate culture. We believe it is the right thing to do for our customers, our community, the environment, and ourselves. As the global HVAC leader, Daikin Applied has a unique opportunity to make a difference in sustainable initiatives and to continue to lead the industry in environmental solutions.



For more information about our rooftop systems with advanced technologies, contact your local Daikin Applied sales office or visit www.DaikinApplied.com to find an office near you.