TOSHIBA
Carrier

OPTI-V SYSTEMS

Streamlined HVAC solution for buildings today

Toshiba-Carrier is proud to introduce the Opti-V System. These solutions are engineered to be easy to design, install, and maintain. Opti-V is a smart choice for office and retail applications with staggered occupancy, and any facility requiring flexible, energy-conscious climate control.

WHAT IS OPTI-V

Opti-V Systems are single-phase variable refrigerant flow heat pumps that provide heating or cooling to individual zones using an inverter-driven compressor for precise capacity control. They offer a scalable solution for multi-zone applications where limited electrical infrastructure, space constraints, and varied comfort requirements are key design considerations. Additional Opti-V benefits include:

- Fewer ductwork requirements for easier installation
- Optimized load matching for improved part-load efficiency
- Long-line length capability for greater design flexibility
- BMS compatible for streamlined system management
- Simultaneous heating and cooling with Opti-V Heat Recovery units

DESIGN BENEFITS - COST AVOIDANCE WITH OPTI-V SYSTEMS

For building projects aiming to balance performance, efficiency, and profitability, Opti-V systems are a smart investment from the ground up. Opti-V benefits include:

- Maximize usable square footage with compact equipment and less ductwork
- Slim-profile outdoor units reduce installation time and preserve curb appeal
- Quiet operation supports focused work environments and customer comfort
- Zoned temperature control for personalized comfort in offices, meeting rooms, or retail zones
- Ideal for retrofit projects—no need for three-phase power or major electrical upgrades
- Supports all-electric building designs and helps meet energy efficiency codes

Opti-V Heat Pump

Opti-V Heat Recovery

Opti-V – Engineered for Simplicity. Built for Performance.

Efficient Setpoint Maintenance

Opti-V maintains temperature set points so effectively that even unoccupied zones can "coast" with minimal energy use—ideal for offices with staggered occupancy or retail spaces with variable foot traffic.

Ultra-Low Demand Operation

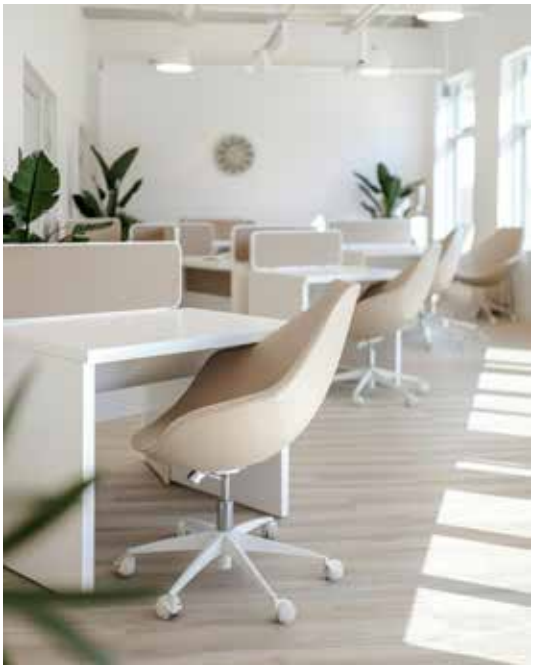
When only one space is occupied—like one person working late—the system's advanced turn-down capability allows it to operate efficiently without overproducing, unlike traditional zoning systems that waste energy to meet minimum thresholds.

Precise Load Matching

Inverter-driven compressors adjust output to match real-time demand, reducing energy waste and improving part-load efficiency across zones.

Simultaneous Heating and Cooling Zoned Control

Opti-V systems deliver precise zoned control with the added advantage of simultaneous heating and cooling, also known as heat recovery. This means different areas of a building can be heated or cooled at the same time—perfect for offices or retail spaces with varying comfort needs. Whether it's a single office after hours or a retail zone with fluctuating foot traffic, each indoor unit operates independently, allowing occupants to enjoy personalized comfort. By matching output to real-time demand and transferring energy between zones, the system maximizes efficiency and minimizes energy use. This flexibility makes Opti-V systems ideal for buildings with diverse usage patterns and occupancy levels.



Benefits of a low-carbon design

Buildings are responsible for up to 70% of emissions in many cities*—making HVAC electrification a key strategy for climate action. All-electric systems like **Opti-V can help reduce HVAC-related greenhouse gas emissions by up to 40–55%****, depending on the building type and local grid. By adopting low-carbon technologies now, developers can meet evolving standards, lower energy costs, and attract sustainability-focused tenants.

*https://www.epa.gov/ghgemissions/commercial-and-residential-sector-emissions
**https://docs.nrel.gov/docs/fy24osti/86103.pdf?

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