Outdoor units

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Cooling Capacity (kBtu/h)</th>
<th>Heating Capacity (kBtu/h)</th>
<th>Voltage</th>
<th>Number of Compressors</th>
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<tbody>
<tr>
<td>MAP0724HT9UL</td>
<td>72/72</td>
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<td>MAP0964HT9UL</td>
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<td>108/104</td>
<td>208/230V</td>
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</tr>
<tr>
<td>MAP1144HT9UL</td>
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<td>130/126</td>
<td>208/230V</td>
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</table>

Notice: Toshiba Carrier is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements. All features and specifications are subject to change without prior notice.

Toshiba Carrier’s VRF system. Recognized by satisfied customers around the world for delivering greater comfort, energy efficiency, and reliability. Now proudly ready to make its North American debut.
Air Conditioning For Large Buildings

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Leading the world with next-generation quality
Welcoming in a breath of fresh air

<table>
<thead>
<tr>
<th>Outdoor units</th>
<th>Indoor units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Name</td>
<td>Loading Capacity (kBtu/h)</td>
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<tr>
<td>MAP0964HT9UL</td>
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</tr>
<tr>
<td>AP1444HT9UL</td>
<td>136/134</td>
</tr>
<tr>
<td>AP1684HT9UL</td>
<td>168/168</td>
</tr>
<tr>
<td>AP1924HT9UL</td>
<td>192/192</td>
</tr>
<tr>
<td>AP2284HT9UL</td>
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<table>
<thead>
<tr>
<th>Model Name</th>
<th>Nominal Tons</th>
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<tr>
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</table>

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3 compressors & 3 inverters
Variable Refrigerant Flow (VRF) heat pump system

Welcoming in a breath of fresh air
Loading the world with next-generation quality
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VRF (Variable Refrigerant Flow) technology realizes effective zone heating and cooling as part of an innovative new air conditioning system for larger buildings. By heating or cooling only rooms that require it, VRF systems minimize energy loss to realize remarkable energy savings.

The modular design of VRF systems allow them to respond quickly to the specific heating or cooling needs of each individual zone. Consider an office building installation. When any particular room is not in use, refrigerant flow to it is stopped but continues to be supplied to zones where temperature control is needed. The result is highly efficient operation that makes optimal use of zone-specific temperature control.

Another advantage of VRF systems is that they eliminate the need for large distribution fans, water pumps and large bore pipes. As such, VRF systems do not require dedicated maintenance rooms or service shafts. And the small footprint of the outdoor units help save space and ease installation.

Toshiba Carrier SMMS-i systems fully leverage the advantages of VRF as they combine energy efficiency with installation and operating ease, flexibility and reliability to embody the air conditioning solution for large buildings that can fully satisfy your needs.

Introducing the VRF Heat Pump System Advantage

Leading performance
Leading the world with Toshiba Carrier’s own DC inverter-driven compressor

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Variable control
Toshiba Carrier combines variable speed compressors with variable frequency inverters to provide greater operating performance under constant loads.

Energy efficient
Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant is supplied to each room, regardless of the type of indoor unit used and the length of the pipes.

Toshiba Carrier SMMS-i systems can be adjusted to achieve consistent temperature and humidity levels anywhere in the building.

Installation flexibility
System layouts can use a maximum equivalent distance of up to 720 ft. This makes it much easier to design for floors with many small rooms, or for tenants who often rearrange their floor layouts.

High-performance outdoor units
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VRF (Variable Refrigerant Flow) technology realizes effective zone heating and cooling as part of an innovative new air conditioning system for larger buildings. By heating or cooling only rooms that require it, VRF systems minimize energy loss to realize remarkable energy savings. The modular design of VRF systems allows for responsive energy use. For example, when a particular room is not in use, refrigerant flow to it is stopped but continues to be supplied to zones where temperature control is needed. The result is highly efficient operation that makes optimal use of zone-specific temperature control.

Another advantage of VRF systems is that they eliminate the need for large distribution fans, water pumps and large bore pipes. As such, VRF systems do not require dedicated maintenance rooms or service shafts. And the small footprint of the outdoor units help save space and ease installation.

Toshiba Carrier SMMS-i systems fully leverage the advantages of VRF as they combine energy efficiency with installation and operating ease, flexibility and reliability to embody the air conditioning solution for large buildings that can fully satisfy your needs.

**Introducing the VRF Heat Pump System Advantage**

**Fast-calculating vector-controlled inverter**

All-inverter control realizes finer control over operation to match the load on the system.

Toshiba Carrier SMMS-i controls all 3 compressors with a dedicated inverter board that taps the compressor's full potential to provide smoother operation.

**Leading performance**

Leading the world with Toshiba Carrier’s own DC inverter-driven compressor. Toshiba Carrier inverter-driven compressors deliver outstanding capacity under partial load. The 8- and 10-ton outdoor units incorporate three of these compressors per unit, while the 6-ton model uses two to achieve full performance. These compressors improve both energy efficiency and comfort.

**DC Inverter-driven compressor**

Optimization of discharge port positioning and blade thickness reduces compression loss and friction resistance. Rotor magnets with a large surface area and slit design realize greater efficiency and reduced noise.

Dedication to innovation and advanced intelligence fosters the imaginative creativity with which we deliver total value in air conditioning systems.

Toshiba Carrier combines variable speed compressors with a DC inverter-driven compressor to achieve greater operating performance under constant loads.

**Energy efficient**

The next-generation ‘quality’ trio

The next-generation ‘quality’ trio

Smooth sine curve

The fast-calculating vector-controlled inverter produces a smooth sine curve that improves operating efficiency.

Magnetic rotor

Each motor employs a compact and powerful magnetic rotor (rare earth magnet) and features reduced eddy-current loss.

Circuit board

The vector-controlled inverter quickly converts current into a smooth sine curve to achieve smoother operation of the compressor’s DC motor.

Can be adjusted to maintain consistent temperature

Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant is supplied to each room, regardless of the type of indoor unit used and the length of the pipes.

**Smart & sensitive VRF control**

Toshiba Carrier SMMS-i supports height differences of up to 130 feet between indoor units on a single system. That is enough height to cover an 11-story building.

*Calculated at 11.5 ft per floor

System layouts can use a maximum equivalent distance of up to 720 feet. This makes it much easier to design for floors with many small rooms, or for tenants who often rearrange their floor layouts.

**Installation flexibility**

System failure can be minimized by ensuring distance (30 ft) from the compressor to the building. This further improves system reliability and minimizes the length of the pipes.

Max. 130 ft

Toshiba Carrier SMMS-i supports installation of the system at up to 130 feet.
VRF (Variable Refrigerant Flow) technology realizes effective zone heating and cooling as part of an innovative new air conditioning system for larger buildings. By heating or cooling only rooms that require it, VRF systems minimize energy loss to realize remarkable energy savings.

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**Leading performance**

- Leading the world with Toshiba Carrier’s own DC inverter-driven compressor.
- Toshiba Carrier inverter-driven compressors deliver outstanding capacity under partial load.
- The 8- and 10-ton outdoor units incorporate three of these compressors per unit, while the 6-ton model uses two to achieve full performance. These compressors improve both energy efficiency and comfort.

**DC Inverter-driven compressor**

- Optimization of discharge port positioning and blade thickness reduces compression loss and friction resistance.
- Rotor magnets with a large surface area and slit design realize greater efficiency and reduced noise.

**Dedication to innovation and advanced intelligence**

- Toshiba Carrier combines variable speed compressors with high performance inverters to achieve superior operating performance under constant loads.

**Energy efficient**

- Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant is supplied to satisfy the demands of each room, regardless of the type of indoor unit used and the length of the pipes.

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- System layouts can use a maximum equivalent distance of up to 720 ft. This makes it much easier to design for floors with many small rooms, or for tenants who often rearrange their floor layouts.

**Installation flexibility**

- System design can be made regardless of elevation difference of up to 130 ft. The flexibility also makes installation of small units on the walls of existing buildings easy with the new designer units.
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Introducing the VRF Heat Pump System Advantage

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**Dedication to innovation and advanced intelligence**

Dedication to innovation and advanced intelligence fosters the imaginative creativity with which we deliver total value in air conditioning systems. Toshiba Carrier combines variable speed compressors with vector-controlled inverters to achieve greater operating performance under constant loads.

**Energy efficient**

The next-generation ‘quality’ trio

The fast-calculating vector-controlled inverter produces a smooth sine curve that improves operating efficiency. Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant to satisfy the demands of each room, regardless of the type of indoor unit used and the length of the pipes.

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Leading the world with Toshiba Carrier’s own DC inverter-driven compressor. Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant is delivered to satisfy the demands of each room, regardless of the type of indoor unit used and the length of the pipes.

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**Variable control**

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**Smart & sensitive VRF control**

Toshiba Carrier’s newly developed intelligent VRF control ensures that the right amount of refrigerant is delivered to satisfy the demands of each room, regardless of the type of indoor unit used and the length of the pipes.

**Installation flexibility**

System design can take maximum equivalent distance by ISO 13808. The inverter combines extra-compact mini outdoor units with different types of indoor units and great flexibility with the design of the rooms.

**Toshiba Carrier**

Toshiba Carrier SMMS-i supports installation of VRF in only 30-ft high buildings. The inverter combines extra-compact mini outdoor units with different types of indoor units and great flexibility with the design of the rooms.
Toshiba Carrier’s VRF system.

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Air Conditioning For Large Buildings

### Outdoor units

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling Capacity</th>
<th>Voltage</th>
<th>Indoor units</th>
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<tbody>
<tr>
<td>MAP0724HT9UL</td>
<td>72/72 kBtu/h</td>
<td>208/230V</td>
<td>3compressors &amp; 3inverters</td>
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<td>MAP0964HT9UL</td>
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<tr>
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<tr>
<td>AP2284HT9UL</td>
<td>226/198 kBtu/h</td>
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### Indoor units

- **MMD-** Slim Duct
  - AP0074H2UL
  - AP0094H2UL
  - AP0124H2UL
  - AP0154H2UL
  - AP0184H2UL
- **MMD-** Concealed Duct
  - AP0071H2UL
  - AP0091H2UL
  - AP0121H2UL
  - AP0151H2UL
  - AP0181H2UL