TOSHIBA
Carrier

VRF

# Toshiba Carrier

## Single-Phase VRF Catalog

2024 Edition

# Cutting-Edge Climate Control

What if an HVAC system could fit seamlessly into any space—without compromising on comfort? VRF makes it possible. With limitless installation options and the ability to connect up to 25 indoor units to a single outdoor unit, VRF systems deliver individualized temperature control for every room. **How? They circulate refrigerant—not air—to efficiently heat or cool any space.**

Toshiba Carrier single-phase VRF systems offer all the benefits of standard VRF systems in a compact and powerful package. Available in 3- to 12-ton sizes, they're great for spaces that are too large for a ductless system but do not require three-phase power.

With both heat recovery (simultaneous heating and cooling) and heat pump (heating or cooling at once) options available, Toshiba Carrier VRF systems are **fully electric, exceptionally efficient and endlessly versatile.**

## Two System Types to Fit Any Need

### Heat pump systems are ideal for:

- New constructions
- Remodels and conversions
- Additions
- Retail and office spaces

### Heat recovery systems are great for:

- New constructions
- Large homes
- Contemporary designs
- Buildings with multiple temperature needs

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# The Value of Single-Phase VRF

As the most advanced climate-control technology available, every part of our single-phase VRF systems is designed to deliver superior performance.

## Peak Efficiency

Refrigerant is only circulated to the areas that need it—for a more efficient, sustainable, cost-effective system.

- Fully electric to reduce carbon emissions and increase sustainability
- Inverter-driven technology eliminates hard shutoffs and wasted energy
- Efficiency certifications future-proof projects with the potential to qualify for electrification programs

## Better Air Quality

Air filters in every indoor unit remove airborne pollutants in the room for a cleaner, healthier environment.

- Multiple indoor units create more filter points
- Continuous cycling increases filtering frequency and ventilation

## Total Flexibility

A zoned, modular design and small footprint allow for versatile options and customized comfort.

- Choose from multiple outdoor unit sizes
- Mix and match indoor unit styles to meet your design needs
- Easily integrate into any space without compromising architectural integrity
- Control zone temperatures from any room or moderate settings from a central controller

## Customizable Heating and/or Cooling

With automatic, concurrent heating and cooling for each designated space, **heat recovery** systems cater to everyone's needs. Or, get whole-home heating or cooling with a **heat pump** system.

- Designate up to 25 customizable temperature zones
- Designed to make installation simpler
- Reuses energy from one zone in other parts of the building

# Purpose-Built & Intentionally Designed

## Easier Installation & Maintenance

### Closed-Loop System

Single-phase systems come as a complete package—not just components—for quick installation.

### Enhanced Flexibility

Indoor units can be installed using a number of connection types, including Y-branch joints, branch headers, flow selector boxes and multi-port flow selector boxes.

### Twin Heat Recovery Units

Achieve up to 12-ton capacity with two single outdoor modules (6 tons each).

### Comprehensive Warranty

All applications are eligible for 10 years parts and compressor if registered within 90 days of installation/start-up. See warranty card for full details.

## Superior Performance

### Built for All Climates

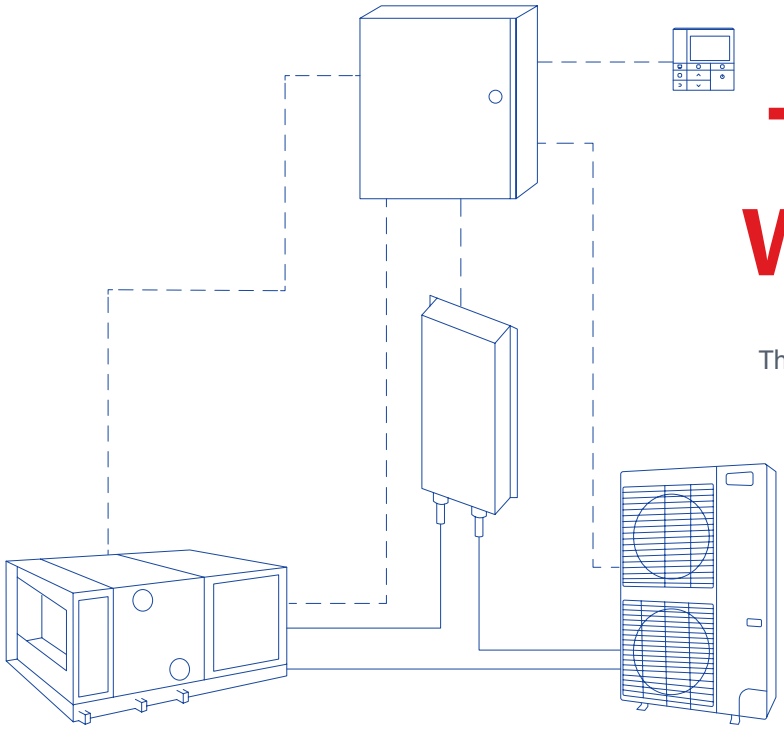
Single-phase VRF systems operate at peak performance in temperatures from -13° F to 118° F.

### Whisper Quiet

Outdoor units operate at as low as 52 dBA—like the faint humming of a refrigerator.

### Smart Technology

Touchscreens, programmable controllers, Wi-Fi® connectivity, sensors and third-party thermostat compatibility means our tech is sophisticated yet easy to use.



# Technology That Plays Nice With Everything

The DX Interface (p. 26) allows Toshiba Carrier VRF systems to integrate with an air handling unit (AHU) (pp. 22, 24) from any manufacturer.

VRF

# Outdoor Units

The powerhouse of the system, the Toshiba Carrier single-phase VRF outdoor unit is available in either heat pump or heat recovery options. Both are reliable and quiet—a fit for virtually every application. A single modular unit system can connect up to 25 indoor units for simple and flexible installation.

# Both are reliable and quiet—a fit for virtually every application.

## VRF Single-Phase **Outdoor Units** Overview

| Tonnage | Heat Recovery* | | Heat Pump |
|---|---|---|---|
| | Single-phase | | Single-phase |
| | 1 Module | 2 Module | 1 Module |
| 3 | | | 3 |
| 4 | | | 4 |
| 5 | | | 5 |
| 6 | 6 | | |
| 12 | | 6 + 6 | |

*For use with Flow Selector "FS" box and multiport FS box

# Single-Phase Heat Recovery Outdoor Unit (MMYF-1P) **208/230V-1-60**

**Standard Model (Combination)**

| Outdoor Unit Model Name | | | MMY- | MAP0726FT2P-UL | AP1446FT2P-UL |
|---|---|---|---|---|---|
| Nominal Tons | | | | 6 | 12 |
| Combination Model | | | MMY- | - | MAP0726FT2P-UL |
| | | | | - | MAP0726FT2P-UL |
| Cooling Capacity (*1) (With Non-Ducted Indoor Units / Ducted) | | Nominal | kBTU/h | 72.0 | 144.0 |
| | | Rated | kBTU/h | 69.0 | 138.0 |
| Heating Capacity (*1) (With Non-Ducted Indoor Units / Ducted) | | Nominal | kBTU/h | 81.0 | 162.0 |
| | | Rated | kBTU/h | 77.0 | 154.0 |
| **With Non-Ducted Indoor Units** Electrical Characteristics | Power Supply (*2) | | | 208V/230V / 1-Phase / 60Hz | |
| | Cooling | Power Consumption (*3) | kW | 4.53 | 9.92 |
| | | IEER (*4) | BTU/W*hr | 26.60 | 25.70 |
| | Heating | Power Consumption (*3) | kW | 5.98 | 11.69 |
| | | SCHE (*5) | BTU/W*hr | 28.75 | 31.30 |
| **With Ducted Indoor Units** Electrical Characteristics | Power Supply (*2) | | | 208V/230V / 1-Phase / 60Hz | |
| | Cooling | Power Consumption (*3) | kW | 5.11 | 10.10 |
| | | IEER (*4) | BTU/W*hr | 19.50 | 20.00 |
| | Heating | Power Consumption (*3) | kW | 6.25 | 11.82 |
| | | SCHE (*5) | BTU/W*hr | 26.90 | 26.60 |
| External Dimensions | | Height | in | 72.9 | |
| | | Width | in | 39.0 | 39.0 + 39.0 |
| | | Depth | in | 30.7 | |
| Total Weight | Unit | | lbs | 600.0 | 600.0 x 2.0 |
| Compressor | Type | | | Hermetic Twin Rotary Compressor | |
| | Motor Output | | kW | 2.1 x 2.0 | 2.1 x 2.0 + 2.1 x 2.0 |
| Fan Unit | Motor Output | | kW | 1.0 | 1.0 + 1.0 |
| | Air Volume | | cfm | 5,900.0 | 5,900.0 + 5,900.0 |
| | Maximum External Static Pressure | | in WG | 0.24 | |
| Refrigerant (*6) (Charged Refrigerant Amount) | | | lbs | 24.3 | 24.3 x 2.0 |
| Refrigerant Type | | | | R410A | |
| Electrical Specifications | Unit | MCA (*8) | A | 47.0 | 47.0 + 47.0 |
| | | Recommended Fuse Size | A | 50.0 | 50.0 + 50.0 |
| Refrigerant Piping | Connecting Port Diameter | Gas Side (Main Pipe) (Brazing) | in | 7/8 | 1-1/8 |
| | | Liquid Side (Main Pipe) (Flare) | in | 1/2 | 5/8 |
| | | Discharge (Main Pipe) (Flare) | in | 3/4 | 7/8 |
| | | Balance Pipe (Flare) | in | 3/8 | |
| Operation Temperature Range | | Cooling | ° F DB | 14-122 | |
| | | Heating | ° F WB | -13-60 | |
| Maximum Number of Connected Indoor Units | | | | 12.0 | 25.0 |
| Maximum Capacity of Combined Indoor Units (*8) | | | | 50-150% | |
| Sound Pressure Level Cooling/Heating | | | dB(A) | 57/60 | 60/63 |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB
(*2) The source voltage must not fluctuate more than ±10%
(*3) Only for outdoor unit
(*4) IEER: Integrated Energy Efficiency Ratio
(*5) SCHE: Simultaneous Cooling & Heating Efficiency
(*6) The amount does not consider extra piping length. Refrigerant must be added on site in accordance with the actual piping length.
(*7) Select wire size based on the larger value of MCA. MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)
(*8) In case the diversity exceeds 135%, the type of indoor unit is limited and the maximum number of indoor units is reduced

SMMS e SUPER MODULAR MULTI SYSTEM

**The standard pipe**
144 type – 228 type

**Equivalent piping length**
25 ft, Height difference: 0 ft

# Single-Phase Heat Pump Outdoor Unit (MCY7) **208/230V-1-60**


**Standard Model (Single Unit)**

| Outdoor Unit Model Name | | | MCY- | MAP0367HS-UL | MAP0487HS-UL | MAP0607HS-UL |
|---|---|---|---|---|---|---|
| Nominal Tons | | | | 3 | 4 | 5 |
| Cooling Capacity (*1) (With Non-Ducted Indoor Units / Ducted) | | Nominal | kBTU/h | 36.0 | 48.0 | 60.0 |
| Heating Capacity (*1) (With Non-Ducted Indoor Units / Ducted) | | Nominal | kBTU/h | 40.0 | 54.0 | 66.0 |
| **With Non-Ducted Indoor Units** Electrical Characteristics (Nominal)[1] | Power Supply (*2) | | | 208V/230V / 1-Phase / 60Hz | | |
| | Cooling | Power Consumption (*3) | kW | 2.52 | 3.64 | 4.88 |
| | | EER2 (*4) | BTU/W*hr | 14.30 | 13.20 | 12.30 |
| | Heating | Power Consumption (*3) | kW | 2.60 | 3.86 | 4.83 |
| | | COP2 (*5) | BTU/W*hr | 4.50 | 4.10 | 3.75 |
| | SEER2 (*6) | | | 22.80 | 22.60 | 23.10 |
| | HSPF2 (*7) | | | 10.00 | 10.30 | 10.60 |
| **With Ducted Indoor Units** Electrical Characteristics (Nominal)[1] | Power Supply (*2) | | | 208V/230V / 1-Phase / 60Hz | | |
| | Cooling | Power Consumption (*3) | kW | 2.98 | 4.10 | 5.83 |
| | | EER2 (*4) | BTU/W*hr | 12.10 | 11.70 | 10.30 |
| | Heating | Power Consumption (*3) | kW | 2.93 | 4.16 | 5.37 |
| | | COP2 (*5) | BTU/W*hr | 4.00 | 3.80 | 3.60 |
| | SEER2 (*6) | | | 20.10 | 17.90 | 18.40 |
| | HSPF2 (*7) | | | 10.90 | 10.00 | 9.80 |
| External Dimensions | | Height | in | 61.0 | | |
| | | Width | in | 39.8 | | |
| | | Depth | in | 14.6 | | |
| Total Weight | Unit | | lbs | 311 | | |
| Compressor | Type | | | Hermetic Twin Rotary Compressor | | |
| | Motor Output | | kW | 3.75 | | |
| Fan Unit | Motor Output | | kW | 100.0 + 100.0 | | |
| | Air Volume | | cfm | 4,520.0 | 4,690.0 | 4,850.0 |
| Refrigerant (*8) (Charged Refrigerant Amount) | | | lbs | 14.8 | | |
| Refrigerant Type | | | | R410A | | |
| Electrical Specifications | Unit | MCA (*9) | A | 36.3 | | |
| | | Recommended Fuse Size | A | 40.0 | | |
| Refrigerant Piping | Connecting Port Diameter | Gas Side (Main Pipe) (Brazing) | in | 5/8 | | 3/4 |
| | | Liquid Side (Main Pipe) (Flare) | in | 3/8 | | |
| Operation Temperature Range | | Cooling | ° F DB | 23-122 | | |
| | | Heating | ° F WB | -13-60 | | |
| Maximum Number of Connected Indoor Units | | | | 6.0 | 8.0 | 9.0 |
| Maximum Capacity of Combined Indoor Units (*10) | | | | 80-135% | | 50-135% |
| Sound Pressure Level Cooling/Heating | | | dB(A) | 52/55 | 54/57 | 55/58 |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB
(*2) The source voltage must not fluctuate more than ±10%
(*3) Only for outdoor unit
(*4) EER2: Energy Efficiency Ratio
(*5) COP2: Coefficient of Performance
(*6) SEER2: Seasonal Energy Efficiency Ratio
(*7) HSPF2: Heating Seasonal Performance Ratio
(*8) The amount does not consider extra piping length. Refrigerant must be added on site in accordance with the actual piping length.
(*9) Select wire size based on the larger value of MCA. MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)
(*10) In case the diversity exceeds 135%, the type of indoor unit is limited and the maximum number of indoor units is reduced

VRF

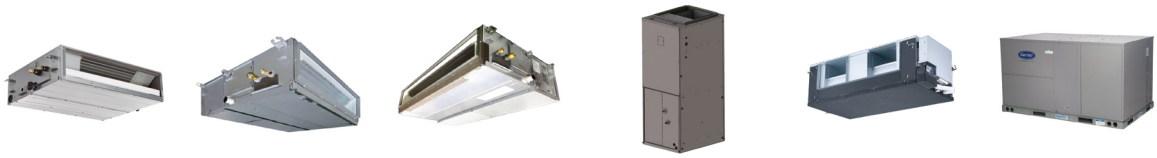


# Indoor Units

Toshiba Carrier offers a variety of unique indoor units to meet a range of needs, spaces and designs. Plus, they're efficient, quiet and easy to install and service.

# **VRF Single-Phase Indoor Units** Overview

| Cooling Capacity kBTU/h (Ton) | Non-Ducted Models | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-Way Cassette | Standard 4-Way Cassette | Compact 4-Way Cassette | High Wall | Underceiling | Floor Console (Recessed) | Floor Console (Exposed) |
| 7,500 (0.6) | ● | ● | ● | ● | | ● | ● |
| 9,500 (0.8) | ● | ● | ● | ● | | ● | ● |
| 12,000 (1) | ● | ● | ● | ● | | ● | ● |
| 15,000 (1.25) | ● | ● | ● | ● | | ● | ● |
| 18,000 (1.5) | ● | ● | ● | ● | ● | ● | ● |
| 24,000 (2) | ● | ● | | ● | ● | ● | ● |
| 30,000 (2.5) | | ● | | ● | ● | | |
| 36,000 (3) | | ● | | ● | ● | | |
| 42,000 (3.5) | | ● | | | | | |
| 48,000 (4) | | ● | | | ● | | |
| 54,000 (4.5) | | ● | | | | | |



| Cooling Capacity kBTU/h (Ton) | Ducted Models | | | | | |
|---|---|---|---|---|---|---|
| | Slim Ducted | Concealed Ducted | High Static Ducted | Vertical Air Handling Unit (AHU) | Outside Air | Rooftop Unit Air Handling Unit (AHU) |
| 7,500 (0.6) | ● | ● | | | | |
| 9,500 (0.8) | ● | ● | | | | |
| 12,000 (1) | ● | ● | | ● | | |
| 15,400 (1.25) | ● | ● | | | | |
| 18,000 (1.5) | ● | ● | | ● | | |
| 21,000 (1.75) | | ● | | | | |
| 24,000 (2) | | ● | ● | ● | | |
| 30,000 (2.5) | | ● | ● | ● | | |
| 36,000 (3) | | ● | ● | ● | | ● |
| 42,000 (3.5) | | ● | | ● | | |
| 48,000 (4) | | ● | ● | ● | ● | ● |
| 54,000 (4.5) | | ● | ● | | | |
| 60,000 (5) | | | | ● | | ● |
| 72,000 (6) | | | ● | | ● | |
| 96,000 (8) | | | ● | | ● | |
| 120,000 (10) | | | | | ● | |

# 1-Way Cassette

## MMU-UP***1YHP-UL

- Single louver that can be positioned at different angles
- Attractive grill / panel
- Built-in condensate lift (15.4")

| Model Name | | | MMU- | UP0071YHP-UL | UP0091YHP-UL | UP0121YHP-UL | UP0151YHP-UL | UP0181YHP-UL | UP0241YHP |
|---|---|---|---|---|---|---|---|---|---|
| Power Supply | | | | 230V (208V/230V) / 1-Phase / 60Hz (Separate power supply for indoor units is required.) | | | | | |
| Cooling Capacity (*1) | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 24.0 |
| Heating Capacity (*1) | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 27.0 |
| Running Current | | | A | 0.18 | 0.19 | 0.20 | 0.24 | 0.26 | 0.34 |
| Power Consumption | | | kW | 0.017 | 0.018 | 0.019 | 0.025 | 0.027 | 0.042 |
| FCU Dimension | Unit | Height | in | 5.9 | | | | | |
| | | Width | in | 39.0 | | | 46.4 | | |
| | | Depth | in | 17.7 | | | | | |
| | Panel | Height | in | 1.1 | | | | | |
| | | Width | in | 48.0 | | | 55.5 | | |
| | | Depth | in | 21.0 | | | 20.9 | | |
| Total Weight | Unit | | lbs | 31.0 | | | 34.0 | | 36.0 |
| | Panel | | lbs | 8.8 | | | 11.0 | | |
| Heat Exchanger | | | | Finned Tube | | | | | |
| Soundproof / Heat-Insulation Material | | | | Non-Flammable Insulation | | | | | |
| Fan | | | | Cross Flow Fan | | | | | |
| Air Flow Volume | Indoor Unit (H / M / L) | | cfm | 295 / 230 / 160 | 305 / 240 / 170 | 315 / 245 / 170 | 440 / 370 / 310 | 470 / 390 / 310 | 555 / 450 / 355 |
| Sound Pressure | Indoor Unit (H / M / L) | | dB(A) | 38 / 34 / 25 | 39 / 35 / 26 | 40 / 36 / 26 | 39 / 36 / 33 | 40 / 37 / 33 | 40 / 36 / 26 |
| Motor Output | | | W | 30.0 | | | | | 59.0 |
| Connecting Pipe | Gas Side | | in | 3/8 | | | 1/2 | | 5/8 |
| | Liquid Side | | in | 1/4 | | | | | 3/8 |
| | Drain Side | | in | VP25 | | | | | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB

## Optional Accessories

**Occupancy Sensor**
RBC-SIR41UYP-UL

**Wireless Receiver Kit**
RBC-AX33UYP-UL

## Required Parts

**Ceiling Panel**
RBC-UY32P-UL
RBC-UY42P-UL

# 4-Way Cassette

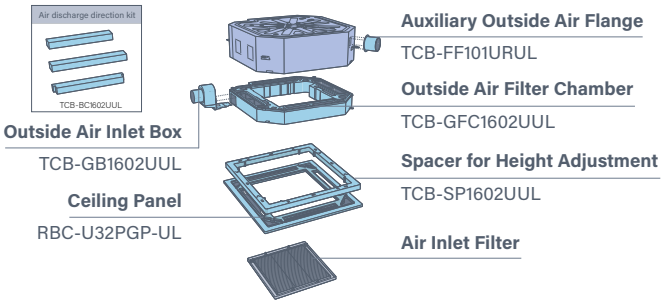
## MMU-UP***1HP-UL

- Four louvers that can each be positioned at different angles
- Customized airflow control
- Built-in condensate lift mechanism (Up to 26")

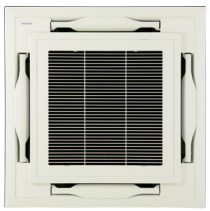
| Model Name | | | MMU- | UP0071HP-UL | UP0091HP-UL | UP0121HP-UL | UP0151HP-UL | UP0181HP-UL | UP0241HP-UL | UP0301HP-UL | UP0361HP-UL | UP0421HP-UL | UP0481HP-UL | UP0541HP-UL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Power Supply | | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | | | | | | |
| Cooling Capacity (*1) | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 |
| Sensible Cooling Capacity | | | kBTU/h | 5.8 | 7.1 | 8.6 | 12.0 | 12.8 | 16.5 | 20.6 | 24.7 | 29.4 | 33.6 | 37.8 |
| Heating Capacity (*1) | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 27.0 | 34.0 | 40.0 | 47.5 | 54.0 | 60.0 |
| Power Consumption | | | kW | 0.021 | | 0.023 | 0.026 | | 0.036 | 0.043 | 0.088 | 0.112 | | |
| FCU Dimension | Main Unit | Height | in | 10.1 | | | | | | | 12.6 | | | |
| | | Width | in | 33.1 | | | | | | | | | | |
| | | Depth | in | 33.1 | | | | | | | | | | |
| Total Weight | Main unit | | lbs | 45.0 | | | 51.0 | | | | 60.0 | | | |
| Heat Exchanger | | | | Finned Tube | | | | | | | | | | |
| Soundproof / Heat-Insulation Material | | | | Polyethylene Foam | | | | | | | | | | |
| Fan | | | | Turbo Fan | | | | | | | | | | |
| Air Flow Volume | Indoor Unit (H / M / L) | | cfm | 470 / 430 / 400 | | 550 / 480 / 440 | | | 670 / 540 / 490 | 730 / 630 / 510 | 1160 / 840 / 630 | 1250 / 840 / 670 | 1250 / 840 / 670 | 1250 / 890 / 720 |
| Sound Pressure | Indoor Unit (H / M / L) | | dB(A) | 32.5 / 30.5 / 29 | | 35 / 33 / 31 | | | 38 / 33 / 31 | 41 / 36.5 / 34 | 46 / 40.5 / 36.5 | 48.5 / 40.5 / 37.5 | 48.5 / 40.5 / 37.5 | |
| Motor Output | | | W | 60.0 | | | | | | | 150.0 | | | |
| Flare Connections | Gas Side | | in | 3/8 | | | 1/2 | | 5/8 | | | | | |
| | Liquid Side | | in | 1/4 | | | | | 3/8 | | | | | |
| | Drain Pipe | | in | VP25 (Polyvinyl Chloride Tube: External Dia. 1-1/4 Internal Dia. 1) | | | | | | | | | | |
| Operating Range for SMMS-I, SMMS-e | Cooling | | ° F | 41 ~ 109 | | | | | | | | | | |
| | Heating | | ° F | 14 ~ 109 | | | | | | | | | | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80˚ F Dry Bulb / 67˚ F Wet Bulb, Outdoor 95˚ F Dry Bulb
Heating: Indoor air temperature 70˚ F Dry Bulb, Outdoor 47˚ F Dry Bulb / 43˚ F Wet Bulb

## Optional Accessories




## Required Parts



**Ceiling Panel**
RBC-U32PGP-UL

# Compact 4-Way Cassette

## MMU-UP***1MH-UL

- Perfect for grid-system ceiling
- Matches standard architectural modules for less cutting of ceiling tiles
- Includes 4-Way Cassette features listed on previous page
- Slim design is only 10.6 inches in height, even with an electrical box located inside the unit
- Installation is easy using the panel adjust pocket
- Available for ceilings up to 11.5 feet in height
- Drain-checking hole makes it possible to check the drain pan through the side case
- Built-in condensate lift (24.7")

| Model Name | | | MMU- | UP0071MH-UL | UP0091MH-UL | UP0121MH-UL | UP0151MH-UL | UP0181MH-UL |
|---|---|---|---|---|---|---|---|---|
| Cooling Capacity | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 |
| Heating Capacity | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 |
| Electrical Characteristics | Power Supply | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | |
| | Running Current | | A | 0.23 | 0.24 | 0.25 | 0.28 | 0.36 |
| | Power Consumption | | kW | 0.023 | 0.025 | 0.027 | 0.030 | 0.039 |
| | Starting Current | | A | 0.41 | 0.43 | 0.44 | 0.50 | 0.62 |
| Appearance | Main Unit | | | Zinc Hot Dipping Steel Plate | | | | |
| | Ceiling Panel (*1) | Model Name | | RBC-UM21PG-UL | | | | |
| | | Panel Color | | Gran White (Mansell 5PB9 / 1) | | | | |
| Outer Dimension | Main Unit | Height | in | 10.1 | | | | |
| | | Width | in | 22.6 | | | | |
| | | Depth (2*) | in | 22.6 | | | | |
| | Ceiling Panel | Height | in | 0.5 | | | | |
| | | Width | in | 24.4 | | | | |
| | | Depth | in | 24.4 | | | | |
| Total Weight | Main Unit | | lbs | 33.1 | | | | |
| | Ceiling Panel | | lbs | 5.5 | | | | |
| Heat Exchanger | | | | Finned Tube | | | | |
| Soundproof / Heat-Insulation Material | | | | Non-Flammable Insulation | | | | |
| Fan Unit | Fan | | | Turbo fan | | | | |
| | Standard Air Flow (H / M + / M / L + / L) | | cfm | 320 / 290 / 270 / 230 / 220 | 340 / 310 / 280 / 230 / 220 | 350 / 320 / 300 / 250 / 240 | 390 / 350 / 320 / 280 / 270 | 450 / 420 / 380 / 320 / 310 |
| | Motor | | W | 60.0 | | | | |
| Air Filter | | | | Standard Filter (Long life filter) (14.0 in x 14.0 in) | | | | |
| Controller (*1) | | | | Remote Controller | | | | |
| Connecting Pipe | Gas Side | | in | 3/8 | | | 1/2 | |
| | Liquid Side | | in | 1/4 | | | | |
| Drain Port (Nominal dia. mm) | | | | VP20 (Polyvinyl chloride tube) | | | | |
| Sound Pressure Level (H / M + / M / L + / L) | | | dB(A) | 39 / 36 / 35 / 32 / 31 | 40 / 37 / 35 / 33 / 31 | 40 / 38 / 36 / 34 / 32 | 43 / 39 / 38 / 35 / 33 | 46 / 44 / 42 / 39 / 37 |
| Sound Power Level (H / M + / M / L + / L) | | | dB(A) | 52 / 49 / 48 / 45 / 44 | 53 / 50 / 48 / 45 / 44 | 53 / 51 / 49 / 46 / 45 | 55 / 52 / 50 / 47 / 46 | 59 / 57 / 54 / 51 / 49 |
| Operating Range (*3) | Cooling | | ° F | 59 to 75 (Wet Bulb) | | | | |
| | Heating | | ° F | 59 to 82 (Dry Bulb) | | | | |

(*1) Remote controller and ceiling panel are sold separately
(*2) Depth doesn't include the Electric parts box
(*3) Refer to outdoor unit databook for operating range of outdoor units

## Optional Accessories

**Auxiliary Outside Air Flange**
TCB-FF101URUL

## Required Parts

**Ceiling Panel**
RBC-UM21PG-UL

# High Wall

## MMK-UP***1HP-UL

- Auto-swing louver provides uniform air distribution and enhanced comfort control
- Optional Condensate Drain Kit available
- Aesthetically pleasing and blends with any room's interior decor while efficiently heating and cooling the space

| Model Name | | | MMK- | UP0071HP-UL | UP0091HP-UL | UP0121HP-UL | UP0151HP-UL | UP0181HP-UL | UP0241HP-UL | UP0301HP-UL | UP0361HP-UL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Power Supply | | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | | | |
| Cooling Capacity (*1) | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 24.0 | 30.0 | 36.0 |
| Sensible Cooling Capacity | | | kBTU/h | 5.6 | 7.1 | 9.0 | 11.6 | 13.5 | 18.0 | 22.5 | 27.0 |
| Heating Capacity (*1) | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 27.0 | 34.0 | 40.0 |
| Power Consumption | | | kW | 0.015 | 0.016 | 0.017 | 0.028 | 0.032 | 0.050 | 0.058 | 0.066 |
| FCU Dimension | Main Unit | Height | in | 11.6 | | | 12.6 | | | 13.7 | |
| | | Width | in | 31.5 | | | 41.4 | | | 47.2 | |
| | | Depth | in | 9.1 | | | 9.9 | | | 11.0 | |
| Total Weight | Main Unit | | lbs | 27.0 | | | 36.0 | | | 46.3 | |
| Heat Exchanger | | | | Finned Tube | | | | | | | |
| Soundproof / Heat-Insulation Material | | | | Polyethylene Foam | | | | | | | |
| Fan | | | | Cross Flow Fan | | | | | | Centrifugal Fan (Sirocco Fan) | |
| Air Flow Volume | Indoor Unit (H / M / L) | | cfm | 285 / 225 / 160 | 300 / 230 / 160 | 320 / 240 / 160 | 495 / 405 / 325 | 530 / 425 / 325 | 700 / 530 / 355 | 940 / 825 / 705 | 970 / 910 / 735 |
| Sound Pressure | Indoor Unit (H / M / L) | | dB(A) | 35 / 30 / 27 | 36 / 31 / 27 | 37 / 32 / 27 | 40 / 36 / 32 | 41 / 37 / 32 | 45 / 39 / 33 | 48 / 44 / 41 | 50 / 47 / 43 |
| Motor Output | | | W | 30.0 | | | | | | 61.0 | |
| Flare Connections | Gas Side | | in | 3/8 | | | 1/2 | | 5/8 | | |
| | Liquid Side | | in | 1/4 | | | | | 3/8 | | |
| | Drain Pipe | | in | VP16 (Polyvinyl Chloride Tube: Dia. 0.87 Internal Dia. 0.63) | | | | | | | |
| Operating Range for SMMS-I, SMMS-e | Cooling | | ° F | 41 ~ 109 | | | | | | 41 ~ 109.4 | |
| | Heating | | ° F | 14 ~ 109 | | | | | | 14 ~ 109.4 | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB

## Included Parts

**Wireless Controller**

# Underceiling

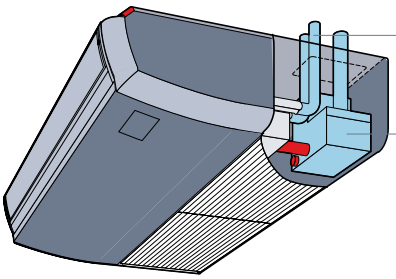
## MMC-UP***1HP-UL

- Airflow angle is automatically set to the most suitable setting according to cooling or heating needs
- Optional Condensate Drain Kit available
- Automatic swing mode enables airflow to reach all areas of the room to create a comfortable ambiance
- Outside air knockout

| Model Name | | | MMC- | UP0181HP-UL | UP0241HP-UL | UP0301HP-UL | UP0361HP-UL | UP0481HP-UL |
|---|---|---|---|---|---|---|---|---|
| Power Supply | | | | 220V 230V (208V/230V) / 1-Phase / 60Hz | | | | |
| Cooling Capacity (*1) | | | kBTU/h | 18.0 | 24.0 | 30.0 | 36.0 | 48.0 |
| Sensible Cooling Capacity | | | kBTU/h | 13.5 | 18.0 | 22.5 | 27.0 | 36.0 |
| Heating Capacity (*1) | | | kBTU/h | 20.0 | 27.0 | 34.0 | 40.0 | 54.0 |
| Power Consumption | | | kW | 0.034 | 0.067 | | 0.083 | |
| FCU Dimension | Main Unit | Height | in | 9.3 | | | | |
| | | Width | in | 37.5 | 50.0 | | 62.5 | |
| | | Depth | in | 27.2 | | | | |
| Total Weight | Main Unit | | lbs | 58.0 | 69.0 | | 89.0 | |
| Heat Exchanger | | | | Finned Tube | | | | |
| Soundproof / Heat-Insulation Material | | | | Polyethylene Foam | | | | |
| Fan | | | | Centrifugal Fan | | | | |
| Air Flow Volume | Indoor Unit (H / M / L) | | cfm | 565 / 425 / 320 | 845 / 600 / 440 | 845 / 600 / 440 | 1095 / 795 / 600 | 1095 / 900 / 706 |
| Sound Pressure | Indoor Unit (H / M / L) | | dB(A) | 38 / 35 / 32 | 43 / 36 / 33 | 43 / 36 / 33 | 44 / 38 / 32 | 44 / 41 / 35 |
| Motor Output | | | W | 94.0 | | | 139.0 | |
| Flare Connections | Gas Side | | in | 1/2 | 5/8 | | | |
| | Liquid Side | | in | 1/4 | 3/8 | | | |
| | Drain Side | | in | 20 (Polyvinyl Chloride Tube) | | | | |
| Operating Range for SMMS-I, SMMS-e | Cooling | | ° F | 41 ~ 109 | | | | |
| | Heating | | ° F | 14 ~ 109 | | | | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB

## Optional Accessories



**Elbow Piping Kit**
TCB-KP14CP-UL
TCB-KP24CP-UL

**Drain Pump Kit**
TCB-DP31CE

## Required Parts

**Auxiliary Outside Air Flange**
TCB-FF101URUL

# **Floor Console** (Recessed)

### MML-UP***1BH-UL

- Installed inside a wall or custom-built cabinet to match interior space design

| Model Name | | | MML- | UP0071BH-UL | UP0091BH-UL | UP0121BH-UL | UP0151BH-UL | UP0181BH-UL | UP0241BH-UL |
|---|---|---|---|---|---|---|---|---|---|
| Cooling Capacity | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 24.0 |
| Heating Capacity | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 27.0 |
| Electrical Characteristics | Power Supply | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | |
| | Power Consumption | 208V | kW | 0.047 | | | 0.095 | | 0.104 |
| | | 230V | kW | 0.056 | | | 0.114 | | 0.120 |
| Appearance | | | | Zinc Hot Dipping Steel Plate | | | | | |
| Dimension | Unit | Height | in | 23.6 | | | | | |
| | | Width | in | 29.3 | | | 41.1 | | |
| | | Depth | in | 8.7 | | | | | |
| | Packing | Height | in | 26.9 | | | | | |
| | | Width | in | 31.9 | | | 43.7 | | |
| | | Depth | in | 10.8 | | | | | |
| Total Weight | Unit | | lbs | 50.7 | | | 68.3 | | |
| | Packing | | lbs | 57.3 | | | 75.0 | | |
| Heat Exchanger | | | | Finned Tube | | | | | |
| Fan Unit | Fan | | | Centrifugal Fan | | | | | |
| | Standard Air Flow (H / M / L) | | cfm | 270 / 240 / 180 | | | 440 / 350 / 290 | | 560 / 470 / 380 |
| | Motor | | W | 19.0 | | | 70.0 | | |
| Air Filter | | | | Standard Filter (Simple Filter) (21.5 in x 8.4 in) | | | Standard Filter (Simple Filter) (33.3 in x 8.4 in) | | |
| Connecting Pipe | Gas Side | | in | 3/8 | | | 1/2 | | 5/8 |
| | Liquid Side | | in | 1/4 | | | | | 3/8 |
| | Drain Port (Nominal Dia. mm) | | | 20 (Polyvinyl Chloride Tube) | | | | | |
| Sound Pressure Level (H / M / L) (*1) | | 208V | dB(A) | 40 / 36 / 33 | | | | | 47 / 42 / 35 |
| | | 230V | dB(A) | 42 / 39 / 36 | | | 43 / 39 / 36 | | 49 / 44 / 37 |
| Operating Range (*2) | Cooling | | ° F | 59 to 75 (Wet Bulb) | | | | | |
| | Heating | | ° F | 59 to 82 (Dry Bulb) | | | | | |

(*1) The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise
(*2) Refer to outdoor unit databook for operating range of outdoor units

# **Floor Console** (Exposed)

### MML-UP***1H-UL

- Installed flush against a wall typically under a window or in a room with an exterior wall

| Model Name | | | MML- | UP0071H-UL | UP0091H-UL | UP0121H-UL | UP0151H-UL | UP0181H-UL | UP0241H-UL |
|---|---|---|---|---|---|---|---|---|---|
| Cooling Capacity | | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 24.0 |
| Heating Capacity | | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 27.0 |
| Electrical Characteristics | Power Supply | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | |
| | Power Consumption | 208V | kW | 0.049 | | 0.080 | | 0.098 | |
| | | 230V | kW | 0.058 | | 0.093 | | 0.113 | |
| Appearance | | | | Silky Shade (Munsell 1Y8.5/0.5) | | | | | |
| Dimension | Unit | Height | in | 24.8 | | | | | |
| | | Width | in | 37.4 | | | | | |
| | | Depth | in | 9.1 | | | | | |
| | Packing | Height | in | 29.0 | | | | | |
| | | Width | in | 41.3 | | | | | |
| | | Depth | in | 12.9 | | | | | |
| Total Weight | Unit | | lbs | 81.6 | | | | 88.2 | |
| | Packing | | lbs | 88.2 | | | | 94.8 | |
| Heat Exchanger | | | | Finned Tube | | | | | |
| Fan Unit | Fan | | | Centrifugal Fan | | | | | |
| | Standard Air Flow (H / M / L) | | cfm | 280 / 250 / 210 | 280 / 250 / 210 | 530 / 460 / 380 | 530 / 460 / 380 | 640 / 550 / 460 | 640 / 550 / 460 |
| | Motor | | W | 19.0 | | 45.0 | | 70.0 | |
| Air Filter | | | | Standard Filter (Simple Filter) (18.4 in x 6.3 in x 2 sheets) | | | | | |
| Connecting Pipe | Gas Side | | in | 3/8 | | | 1/2 | | 5/8 |
| | Liquid Side | | in | 1/4 | | | | | 3/8 |
| | Drain Port (Nominal Dia. mm) | | | 20 (Polyvinyl Chloride Tube) | | | | | |
| Sound pressure level (H / M / L) (*1) | | 208V | dB(A) | 39 / 38 / 35 | | 47 / 44 / 40 | | 51 / 46 / 41 | |
| | | 230V | dB(A) | 42 / 40 / 38 | | 50 / 46 / 42 | | 53 / 48 / 43 | |
| Operating Range (*2) | Cooling | | ° F | 59 to 75 (Wet Bulb) | | | | | |
| | Heating | | ° F | 59 to 82 (Dry Bulb) | | | | | |

(*1) The actual values in an external operating environment are generally higher than the indicated values due to the contribution from ambient noise
(*2) Refer to outdoor unit databook for operating range of outdoor units

# **Slim Ducted** (Low Profile)

### MMD-UP***1SPH-UL

- Quiet, powerful operation
- Only 8.3 inches in height allows for greater application flexibility
- Three-step static pressure setup
- Concealed installation within a ceiling void
- Outside air intake available
- Built-in condensate lift (23.1")
- No filters provided with the unit
- Can be used with any style of air diffuser

| Model Name | | MMD- | UP0071SPH-UL | UP0091SPH-UL | UP0121SPH-UL | UP0151SPH-UL | UP0181SPH-UL |
|---|---|---|---|---|---|---|---|
| Cooling Capacity | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 |
| Heating Capacity | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 |
| Electrical Characteristics | Power Supply | | 230V (208V/230V) / 1-Phase / 60Hz | | | | |
| | Running Current | A | 0.53 | 0.57 | 0.63 | 0.59 | 0.69 |
| | Power Consumption | kW | 0.048 | 0.051 | 0.057 | 0.054 | 0.069 |
| | Starting Current | A | 0.93 | 1.00 | 1.10 | 1.03 | 1.21 |
| Appearance | | | Zinc Hot Dipping Steel Plate | | | | |
| Dimension | Height | in | 8.3 | | | | |
| | Width | in | 27.6 | | | 35.4 | |
| | Depth | in | 17.7 | | | | |
| Total Weight | | lbs | 37.5 | | | 44.1 | |
| Heat Exchanger | | | Finned Tube | | | | |
| Soundproof / Heat-Insulating Material | | | Polyethylene Foam + Polyurethane Foam | | | | |
| Fan | | | Centrifugal Fan (Sirocco Fan) | | | | |
| Standard Air Flow (H / M + / M / L + / L) | | cfm | 320 / 290 / 270 / 250 / 240 | 340 / 310 / 290 / 260 / 250 | 350 / 320 / 310 / 280 / 260 | 410 / 390 / 380 / 350 / 320 | 460 / 450 / 430 / 410 / 380 |
| Motor Output | | W | 31.0 | | | 46.0 | |
| External Static Pressure (No Filter) | | in WG | 0.05 (Factory setting) -0.09 -0.13 -0.17 -0.21 <5step> | | | 0.07 (Factory setting) -0.11 -0.15 -0.19 -0.23 <5step> | |
| Controller | | | Remote Controller | | | | |
| Air Filter | | | Local Procurement | | | | |
| Connecting Pipe | Gas Side | in | 3/8 | | | 1/2 | |
| | Liquid Side | in | 1/4 | | | | |
| | Drain Port (Nominal Dia. mm) | | 25 (Polyvinyl Chloride Tube) | | | | |
| Sound Pressure Level (H / M + / M / L + / L) | Under Air Intake | dB(A) | 43 / 41 / 39 / 37 / 35 | 44 / 42 / 40 / 38 / 37 | 45 / 43 / 41 / 39 / 38 | 41 / 40 / 39 / 37 / 36 | 44 / 43 / 42 / 40 / 39 |
| | Back Air Intake | dB(A) | 33 / 32 / 30 / 29 / 27 | 34 / 33 / 31 / 30 / 28 | 36 / 33 / 32 / 30 / 29 | 31 / 30 / 29 / 28 / 27 | 33 / 32 / 31 / 30 / 29 |
| Operating Range (*1) | Cooling | ° F | 59 to 75 (Wet Bulb) | | | | |
| | Heating | ° F | 59 to 82 (Dry Bulb) | | | | |

(*1) Refer to outdoor unit databook for operating range of outdoor unit

## Optional Accessories

**Auxiliary Outside Air Flange**
TCB-FF101URUL

# **Concealed Ducted** (Medium Static)

### MMD-UP***1BHP-UL

- External static pressure can be raised as high as 0.8 inches WG, so all areas of the room can be reached for even temperature distribution, no matter how complex the layout
- Built-in condensate lift (24.3")

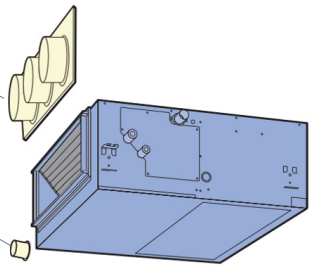
| Model Name | | MMD- | UP0071BHP-UL | UP0091BHP-UL | UP0121BHP-UL | UP0151BHP-UL | UP0181BHP-UL | UP0211BHP-UL | UP0071BHP-UL | UP0091BHP-UL | UP0121BHP-UL | UP0151BHP-UL | UP0181BHP-UL | UP0211BHP-UL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cooling Capacity (*1) | | kBTU/h | 7.5 | 9.5 | 12.0 | 15.4 | 18.0 | 21.0 | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 |
| Heating Capacity (*1) | | kBTU/h | 8.5 | 10.5 | 13.5 | 17.0 | 20.0 | 24.0 | 27.0 | 34.0 | 40.0 | 47.5 | 54.0 | 60.0 |
| Electrical Characteristics | Power Supply | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | | | | | | | |
| | Running Current | A | 0.48 | 0.62 | 0.89 | | 0.96 | 1.35 | | 1.41 | 2.12 | | 2.18 | |
| | Power Consumption | kW | 0.07 | 0.09 | 0.13 | | 0.14 | 0.21 | | 0.22 | 0.33 | | 0.34 | |
| | Starting Current | A | 0.68 | 0.82 | 1.29 | | 1.36 | 2.15 | | 2.21 | 2.92 | | 2.98 | |
| Appearance | | | Zinc Hot Dipping Steel Plate | | | | | | | | | | | |
| Outer Dimension | Height | in | 10.9 | | | | | | | | | | | |
| | Width | in | 27.6 | | 39.4 | | | 55.2 | | | | | | |
| | Dept | in | 29.5 | | | | | | | | | | | |
| Total Weight | | lbs | 56.0 | | 73.0 | | | 93.0 | | | | | | |
| Heat Exchanger | | | Finned Tube | | | | | | | | | | | |
| Soundproof / Heat-Insulation Material | | | Polyethylene Foam | | | | | | | | | | | |
| Fan Unit | Fan | | Centrifugal Fan (Sirocco Fan) | | | | | | | | | | | |
| | Standard Air Flow (H / M / L) | cfm | 320 / 265 / 210 | 395 / 330 / 265 | 590 / 490 / 395 | | 625 / 490 / 395 | 705 / 580 / 510 | | 740 / 650 / 545 | 1130 / 955 / 810 | | 1175 / 1025 / 885 | |
| | Motor Output | W | 150 | | | | | | | | 250 | | | |
| External Static Pressure (Default) | | in WG | 0.4 | | | | | 0.6 | | | | | | |
| External Static Pressure | | in WG | 0.6 | | | | | 0.8 | | | | | | |
| Controller (*2) | | | Wired or Infrared Remote Controller | | | | | | | | | | | |
| Air Filter | | | Standard Filter Supplied | | | | | | | | | | | |
| Flare Connections | Gas Side | in | 3/8 | | | | | 5/8 | | | | | | |
| | Liquid Side | in | 1/4 | | | | | 3/8 | | | | | | |
| | Drain Pipe | in | VP25 (Polyvinyl Chloride Tube) | | | | | | | | | | | |
| Sound Pressure Level (H / M / L) | | dB(A) | 39 / 34 / 30 | 41 / 36 / 32 | 44 / 41 / 35 | | 45 / 41 / 35 | 44 / 34 / 30 | | 45 / 35 / 31 | 46 / 41 / 37 | | 47 / 42 / 38 | |
| Sound Power Level (High) | | dB(A) | 54.0 | 56.0 | 59.0 | | 60.0 | 59.0 | | 60.0 | 61.0 | | 62.0 | |
| Operating Range (*3) | Cooling | ° F | 41 ~ 109 | | | | | | | | | | | |
| | Heating | ° F | 14 ~ 109 | | | | | | | | | | | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB
(*2) Controller is sold separately
(*3) Non-attached filter

## Optional Accessories

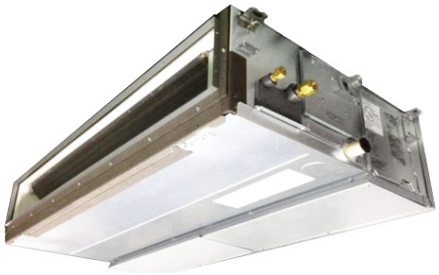
**Zoning Duct Flange**
TCB-SF56C6BP-UL
TCB-SF80C6BP-UL
TCB-SF160C6BP-UL

**Auxiliary Fresh Air Flange**
TCB-FF151US-E



**Filter Rail Kit**
TCB-FW561DP-UL
TCB-FW801DP-UL
TCB-FW1401DP-UL

# High Static Ducted



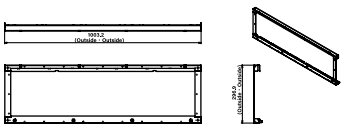
## MMD-UP***1HP-UL

- Compatible with external static pressures up to 1.0 inches WG
- Filters provided with the unit (Except 6 & 8 ton)
- Switchable static pressure
- Built-in condensate lift (24.3") (Except 6 & 8 ton)

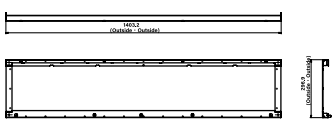
| Model Name | | | MMD- | UP0241HP-UL | UP0301HP-UL | UP0361HP-UL | UP0481HP-UL | UP0541HP-UL | UP0721HP-UL | UP0961HP-UL |
|---|---|---|---|---|---|---|---|---|---|---|
| Power Supply | | | | 230V (208V/230V) / 1-Phase / 60Hz | | | | | | |
| Cooling Capacity (*1) | | | kBTU/h | 24.0 | 30.0 | 36.0 | 48.0 | 54.0 | 72.0 | 96.0 |
| Sensible Cooling Capacity | | | kBTU/h | 19.2 | 24.0 | 28.8 | 38.4 | 43.2 | 60.1 | 80.6 |
| Heating Capacity (*1) | | | kBTU/h | 27.0 | 34.0 | 40.0 | 54.0 | 60.0 | 81.0 | 108.0 |
| Power Consumption | | | kW | 0.255 | 0.295 | 0.350 | 0.385 | 0.435 | 0.54 | 0.79 |
| FCU Dimension | Main Unit | Height | in | 11.8 | | | | | 17.6 | |
| | | Width | in | 39.4 | | 55.2 | | | 55.1 | |
| | | Depth | in | 29.6 | | | | | 35.4 | |
| Total Weight | Main Unit | | lbs | 80.0 | | 98.0 | | | 218.0 | |
| External Static Pressure (Default) | | | in WG | 0.8 | | | | | 0.6 | |
| External Static Pressure | | | in WG | 1.0 | | | | | 0.2-1.0 (7 Steps) | |
| Heat Exchanger | | | | Finned Tube | | | | | | |
| Soundproof / Heat-Insulation Material | | | | Polyethylene Foam | | | | | | |
| Fan | | | | Centrifugal Fan | | | | | | |
| Air Flow Volume | Indoor Unit (H / M / L) | | cfm | 705 / 570 / 470 | 885 / 795 / 705 | 1130 / 920 / 790 | 1235 / 1025 / 835 | 1415 / 1200 / 975 | 2235 / 1885 / 1470 | 2825 / 2470 / 2060 |
| Sound Pressure (*2) | Indoor Unit (H / M / L) | | dB(A) | 45 / 35 / 30 | 50 / 46 / 43 | 51 / 46 / 41 | 52 / 47 / 42 | 53 / 49 / 44 | 44 / 40 / 36 | 46 / 42 / 38 |
| Motor Output | | | W | 250.0 | | 350.0 | | | 1000.0 | |
| Flare Connections | Gas Side | | in | 5/8 | | | | | 7/8 | |
| | Liquid Side | | in | 3/8 | | | | | 1/2 | |
| | Drain Pipe | | | VP25 (Polyvinyl Chloride Tube: Dia. 1-1/4 Internal Dia. 1) | | | | | | |
| Operating Range for SMMS-I, SMMS-e | Cooling | | ° F | 41 ~ 109 | | | | | | |
| | Heating | | ° F | 14 ~ 109 | | | | | | |

(*1) Rating testing conditions:
Cooling: Indoor air temperature 80° F DB / 67° F WB, Outdoor 95° F DB
Heating: Indoor air temperature 70° F DB, Outdoor 47° F DB / 43° F WB
The cooling capacities and electrical characteristics are measured under the conditions specified by JIS B 8615 based on the reference piping
The reference piping consists of 16'5''(5m) of main piping and 8'2''(2.5m) of branch piping connected with 0 meter height
(*2) The sound level are measured in an anechoic chamber in accordance with JIS B 8616
Normally, the values measured in the actual operating environment become larger than the indicated valves due to the effects of external sound

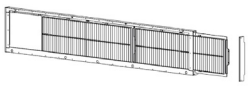
## Optional Accessories



**Filter Kit**
TCB-LK801DP-UL

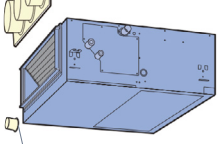


**Filter Kit**
TCB-LK1401DP-UL



**Filter Kit**
TCB-LK2801DP-UL

**Zoning Duct Flange**
TCB-SF80C6BP-UL
TCB-SF160C6BP-UL



**Auxiliary Fresh Air Flange**
TCB-FF151US-E

# Vertical Air Handling Unit (AHU)

### MMD-UP***1VHG-UL

- Multi-position installation option
- Energy-efficient ECM operation ensures proper performance across a wide range of duct static pressure, maximizing cooling and heating capacities
- All sizes of the units are multi-position ready for upflow or horizontal applications
- Units can also be suspended from roof or ceiling joints
- 1" filter rack

| Model Name | | | MMD- | UP0121VHG-UL | UP0181VHG-UL | UP0241VHG-UL | UP0301VHG-UL | UP0361VHG-UL | UP0421VHG-UL | UP0481VHG-UL | UP0601VHG-UL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cooling Capacity | | | kBTU/h | 12.0 | 18.0 | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 60.0 |
| Heating Capacity | | | kBTU/h | 13.5 | 20.0 | 27.0 | 34.0 | 40.0 | 45.0 | 54.0 | 67.0 |
| | | | kW | 4.0 | 5.9 | 7.9 | 10.0 | 11.7 | 13.2 | 15.8 | 19.6 |
| Electrical Characteristics | Power Supply | | | 208V/230V / 1-Phase / 60Hz | | | | | | | |
| | Power Consumption (*1) | | kW | 0.12 | 0.174 | 0.178 | 0.296 | 0.41 | 0.386 | 0.496 | 0.938 |
| | MCA | | A | 1.9 | 2.8 | | 4.5 | | 6.1 | 7.5 | 9.5 |
| | MOCP | | A | 15 | | | | | | | |
| Dimension | Unit | Height | in | 46.9 | | | 51.9 | | 55.9 | | 57.9 |
| | | Width | in | 17.7 | | | 20.2 | | 22.2 | | 24.2 |
| | | Depth | in | 22.3 | | | 25.3 | | 27.3 | | 31.3 |
| | Packing | Height | in | 53.5 | | | 58.5 | | 62.5 | | 64.5 |
| | | Width | in | 24.0 | | | | | | | 28.0 |
| | | Depth | in | 30.0 | | | | | | | 33.0 |
| Total Weight | Unit | | lbs | 130.0 | 164.0 | | 170.0 | | 200.0 | | 253.0 |
| | Packing | | lbs | 157.0 | 191.0 | | 216.0 | | 257.0 | | 336.0 |
| Heat Exchanger | Type | | | Finned Tube | | | | | | | |
| | Shape | | | Slab | | | | | | | |
| | Row x Length | | in | 2 x 17 | 3 x 17 | | 3 x 20 | | 3 x 22 | | 3 x 26 |
| Fan Unit | Fan | | | Sirocco Fan | | | | | | | |
| | Nominal Air Volume | | cfm | 480.0 | 670.0 | 760.0 | 1,000.0 | 1,160.0 | 1,400.0 | 1,600.0 | 2,000.0 |
| | Air Volume (H / M / L) (at standard static pressure) | | cfm | 480 / 440 / 340 | 670 / 640 / 600 | 760 / 660 / 600 | 1,000 / 990 / 950 | 1,200 / 1,150 / 1,050 | 1,400 / 1,340 / 1,260 | 1,600 / 1,510 / 1,420 | 2,000 / 1,830 / 1,640 |
| | Fan Motor | Type | | Direct Drive (EC Motor) | | | | | | | |
| | | HP | | 1/3HP | | | 1/2HP | | 3/4HP | | 1HP |
| | External Static Pressure (*2) | Standard | in WG | 0.3 | | | 0.5 | | | | |
| | | Max | in WG | 0.5 | | | 0.8 | | | | |
| Connecting Pipe | Gas Side | | in | 3/8 (Brazed) | 1/2 (Brazed) | 5/8 (Brazed) | | | | | |
| | Liquid Side | | in | 1/4 (Brazed) | | 3/8 (Brazed) | | | | | |
| | Drain Port (Nominal dia.) | | in | 3/4 FPT | | | | | | | |

(*1) The value is based on the standard external static pressure with high tap fan mode
(*2) With standard MERV 3 filter attached

| Product Name | | Model Name | Description |
|---|---|---|---|
| Electric Heater (240V/208V) | 1.0 kW / 0.8 kW | TCB-HT101VDGUL | For 012 to 060 type |
| | 3.0 kW / 2.3 kW | TCB-HT301VDGUL | For 012 to 060 type |
| | 5.0 kW / 3.8 kW | TCB-HT501VDGUL | For 012 to 060 type |
| | 6.0 kW / 4.5 kW | TCB-HT601VDGUL | For 018 to 060 type |
| | 8.0 kW / 6.0 kW | TCB-HT801VDGUL | For 024 to 060 type |
| | 9.5 kW / 7.1 kW | TCB-HT951VDGUL | For 030 to 060 type |
| Plenum, with 2" MERV8 Filter | | TCB-PL2S241VDGUL | For 012, 018, 024 type |
| | | TCB-PL2S361VDGUL | For 030, 036 type |
| | | TCB-PL2S481VDGUL | For 042, 048 type |
| | | TCB-PL2S601VDGUL | For 060 type |
| Filter Box, 2" MERV8 Filter | | TCB-FB2F241VDGUL | For 012, 018, 024 type |
| | | TCB-FB2F361VDGUL | For 030, 036 type |
| | | TCB-FB2F481VDGUL | For 042, 048 type |
| | | TCB-FB2F601VDGUL | For 060 type |

Notes:

1. Plenum has 1/2" fiberglass insulation
2. 2" filter box has filter rails that can be removed to allow use with 4" filter
3. Return air grill(s) and duct collars are field-provided and field-installed
4. Plenum has return air duct opening on front and right side as standard. Field-changeable to front and left side duct opening. Additional opening will require the field cut and modification.

# Outside Air

## MMD-UP***1HFP-UL

- Controls discharge air temperature
- Energy-efficient DC fan motor
- CFM ranges from 600 to 1,200 for a wide array of outside air applications

| Model Name | | MMD- | UP0481HFP-UL | UP0721HFP-UL | UP0961HFP-UL | UP1201HFP-UL |
|---|---|---|---|---|---|---|
| Cooling Capacity (*1) | | kBTU/h | 48.0 | 72.0 | 96.0 | 120.0 |
| Heating Capacity (*1) | | kBTU/h | 30.0 | 47.0 | 59.0 | 75.0 |
| Electrical Characteristics | Power Supply | | 208V/230V / 1-Phase / 60Hz | | | |
| | Running Current | A | 0.77 | 0.86 | 1.07 | 1.30 |
| | Power Consumption | kW | 0.11 | 0.16 | 0.20 | 0.33 |
| | Starting Current | A | 1.95 | 7.80 | | |
| Outer Dimension | Height | in | 12.9 | 18.8 | | |
| | Width | in | 56.3 | | | |
| | Depth | in | 29.5 | 35.4 | | |
| Total Weight | | lbs | 97.0 | 218.0 | | |
| Heat Exchanger | | | Finned Tube | | | |
| Soundproof / Heat-Insulation Material | | | Non-Flammable Insulation | | | |
| Fan | | | Centrifugal Fan | | | |
| Standard Air Flow ( H / M + / M / L + / L ) | | cfm | 635 / 580 / 545 / 495 / 445 | 990 / 920 / 850 / 775 / 705 | 1235 / 1150 / 1060 / 955 / 865 | 1800 / 1660 / 1520 / 1395 / 1255 |
| Motor | | kW | 0.35 | 0.94 | | |
| External Static Pressure (Factory Default) | | in WG | 0.4 | | | |
| External Static Pressure | | in WG | 0.8-0.7-0.6-0.5-0.4-0.3-0.2 | | | |
| Air Flow Limit | Lower Limit | cfm | 355.0 | 565.0 | 775.0 | 1060.0 |
| | Upper Limit | cfm | 775.0 | 1200.0 | 1485.0 | 2120.0 |
| Air Filter | | | Field Supply | | | |
| Controller | | | Wired Remote Controller | | | |
| Connecting Pipe | Gas Side | in | 5/8 | 7/8 | | 1" 1/8 |
| | Liquid Side | in | 3/8 | 1/2 | | 5/8 |
| | Drain Pipe | in | Outside Dia. 1" 1/4 | | | |
| Sound Pressure Level ( H / M + / M / L + / L ) | | dB(A) | 38 / 37 / 35 / 32 / 31 | 38 / 37 / 36 / 35 / 33 | 39 / 38 / 36 / 35 / 33 | 42 / 40 / 38 / 37 / 35 |
| Operation Range for SMMS-u | Cooling (*2) | ° F DB | 41 ~ 115 (*4) | | | |
| | Heating (*3) | ° F BD | 14 ~ 115 | | | |
| Operation Range for SMMS-i, SMMS-e | Cooling (*2) | ° F DB | 41 ~ 115 (*5) | | | |
| | Heating (*3) | ° F BD | 23 ~ 115 | | | |

* The setting temperature is Cooling: 55 - 77° F, Heating: 64-86° F
* Height difference between outside air units must be within 16.4 ft (5m)
(*1) Rating testing conditions:
Cooling: Outdoor air temperature 91° F DB / 82° F WB, setting temperature 64° F
Heating: Outdoor air temperature 32° F DB / 26.78° F WB, setting temperature 77° F
(*2) When supply air temperature is “setting temperature + 5° F” or less, outside air unit operates as FAN mode
(*3) When supply air temperature is “setting temperature - 5° F” or over, outside air unit operates as FAN mode
(*4) 115-126° F is also available but temporary operable
(*5) Case of setting for all outside air unit connection (SMMS-e) is available up to 115° F (46° C)

# Rooftop Unit


## 40QQ-***ABA*-0A0

- Features EcoBlue™ technology, which includes a more compact vane axial fan and simplified design for better performance
- Lightweight compared to standard rooftop unit
- Direct drive (multi-speed / torque) ECM motor
- Single point electrical connection
- Non-corrosive composite condensate pan
- Access panels with easy grip handles
- 2 inch disposable return air filters

| Model Name | | 40QQ- | 030ABA3-0A0 | 048ABA3-0A0 | 060ABA3-0A0 | 030ABA6-0A0 | 048ABA6-0A0 | 060ABA6-0A0 |
|---|---|---|---|---|---|---|---|---|
| Cooling Capacity | | kBTU/h | 36.0 | 48.0 | 60.0 | 36.0 | 48.0 | 60.0 |
| Sensible Cooling Capacity | | kBTU/h | 35.2 | 33.6 | 42.0 | 35.2 | 33.6 | 42.0 |
| Heating Capacity | | kBTU/h | 38.0 | 52.0 | 66.0 | 38.0 | 52.0 | 66.0 |
| Electrical Characteristics | Power Supply | | 208V/230V / 1-Phase / 60Hz | | | 460V / 3-Phase / 60Hz | | |
| | MCA | A | 8.0 | | 11.0.0 | 2.0 | | 3.0 |
| | MOCP | A | 15 | | | | | |
| Appearance | | | Painted Grey | | | | | |
| External Dimensions Main Unit | Height | in | 33-3/8 | 41-3/8 | | 33-3/8 | 41-3/8 | |
| | Width | in | 74-3/8 | | | | | |
| | Depth | in | 46-5/8 | | | | | |
| Total Weight | | lbs | 364.0 | 388.0 | 401.0 | 364.0 | 388.0 | 401.0 |
| Fan Unit | Standard Rated Air Flow (Cooling) | cfm | 1,050.0 | 1,350.0 | 1,750.0 | 1,050.0 | 1,350.0 | 1,750.0 |
| | Standard Rated Air Flow (Heating) | cfm | 1,050.0 | 1,750.0 | | 1,050.0 | 1,750.0 | |
| | Motor | HP | 1.10 | 1.08 | 1.46 | 1.10 | 1.08 | 1.46 |
| | Motor Type | | EC | | | | | |
| Connecting Pipe | Gas Side | in | 5/8 | | | | | |
| | Liquid Side | in | 3/8 | | | | | |
| | Drain Port (Nominal Dia.) | in | 3/4 | | | | | |
| Sound Pressure Level (H / M / L) (*1) | | dB(A) | 76 / 73 / 68 | 76 / 73 / 66 | 77 / 73 / 66 | 76 / 73 / 68 | 76 / 73 / 66 | 77 / 73 / 66 |

(*1) The actual values in an operating environment are generally higher than the indicated values due to the contribution from ambient noise

| Model Number | CRHEATER323A00 + CRSINGLE037A00 | CRHEATER324A00 + CRSINGLE037A00 | CRHEATER325A00 + CRSINGLE037A00 | CRHEATER326A00 + CRSINGLE037A00 | CRHEATER328A00 + CRSINGLE037A00 |
|---|---|---|---|---|---|
| Application | 4.4 KW, 208/230V, 3-Phase, 60Hz | 6.5 KW, 208/230V, 3-Phase, 60Hz | 8.7 KW, 208/230V, 3-Phase, 60Hz | 10.5 KW, 208/230V, 3-Phase, 60Hz | 16.0 KW, 208/230V, 3-Phase, 60Hz |
| Description | Single Point Electric Heater | | | | |

| Model Number | CRHEATER331A00 + CRSINGLE038A00 | CRHEATER333A00 + CRSINGLE037A00 | CRHEATER334A00 + CRSINGLE037A00 | CRHEATER335A00 + CRSINGLE037A00 | CRHEATER336A00 + CRSINGLE037A00 |
|---|---|---|---|---|---|
| Application | 21.0 KW, 208/230V, 3-Phase, 60Hz | 6.0 KW, 460V, 3-Phase, 60Hz | 8.8 KW, 460V, 3-Phase, 60Hz | 11.5 KW, 460V, 3-Phase, 60Hz | 14.0 KW, 460V, 3-Phase, 60Hz |
| Description | Single Point Electric Heater | | | | |

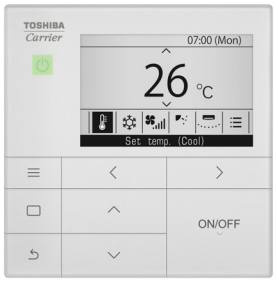
| Model Number | CRHEATER337A00 + CRSINGLE037A00 | CRECOMZR077A00 | CRECOMZR076A00 | CRRFCURB001A01 | CRRFCURB002A01 |
|---|---|---|---|---|---|
| Application | 23.0 KW, 460V, 3-Phase, 60Hz | - | - | - | - |
| Description | Single Point Electric Heater, | Economizer - Horizontal | Economizer - Vertical | Roofcurbs - 14" Tall | Roofcurbs - 24" Tall |

VRF

# Controls & Accessories

Toshiba Carrier controls provide maximum flexibility and regulation. They easily integrate with all Toshiba Carrier HVAC lines and VRF systems. Plus, with the BACNet® Interface, they can communicate with existing and third-party building automation systems (BAS)—for a complete view of your entire system.

# Controls

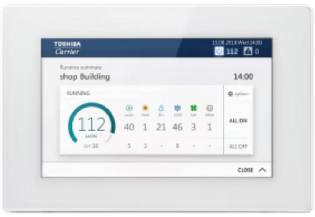



## RBC-AWSU52-UL

Wired Zone Controller

The Wired Remote Controller (programmable) is a low voltage thermostat mounted on the wall that maintains room temperature by controlling system operation.

- Backlit
- Fan speed
- Clock setting
- Schedule timer
- Dual set-point
- 1° F temperature indication
- Set temperature range limiting
- Service check mode
- Compatible with Toshiba Carrier RAV and VRF System




## BMS-CT2560U-UL

Touchscreen Central Controller

The Touchscreen Central Controller is a wall-mounted, line voltage controller with a touch-screen LCD display panel. This controller allows for easy system monitoring and management from one central location.

- Compatible with both e-Series and u-Series VRF systems
- Energy monitoring and reporting features available
- Manages up to 256 indoor units
- List view function allows all indoor units to be displayed on one screen
- Includes advanced operation and master schedule functions
- Thin device profile and separate power supply unit enable easy installation


## RBC-ASCU11-UL

Simple Wired Remote Control

The Simple Wired Remote Control is mounted on the wall, allowing remote sensing of room temperature along with user interface with the system

- Start / Stop
- Temperature setting
- Airflow changing
- Check code display


## TCB-AX32UL

Stand-Alone Receiver

The Stand-Alone Receiver is a combination of a wall / ceiling mounted receiver and a handheld wireless remote that allows a user to interface with the unit.

- Includes Wireless Remote Control Kit
- For 4-Way Cassette, Compact 4-Way Cassette, Underceiling, Concealed Duct, Slim Duct and Vertical AHU


## RBM-A****UPVA-UL and TCB-IFDMR01UP-UL

u-Series DX Interface Kit

The Toshiba Carrier VRF DX Interface Kit enables the easy integration of any third-party heat pump air handling unit (AHU) into Toshiba Carrier single-phase systems.

- Compatible with both u-Series heat pumps and three-phase e-Series systems
- Equipped with three PMV kits for use in configurations up to 40 tons
- Allows for regulation of supply air (0-10V), return air (RA) and ventilation air (TF) using a single controller

# Controls


## TCB-TC41LUL

Remote Sensor

The Remote Sensor is mounted on the wall, allowing remote sensing of room temperature without any user interface with the system.

- Power supply from indoor unit
- Prevents overcooling or overheating of the space


## Wireless Remote Control

- Start / Stop
- Changing mode
- Temperature setting
- Airflow changing
- Timer function
- Control by two remote controllers is available
- Two wireless remote controllers can operate one indoor unit
- The indoor unit can then be operated separately from the two different locations
- Check code display

## TCB-1FTHUUG-UL 24V

Thermostat Interface

The 24V Interface allows third-party conventional thermostat to communicate and operate Toshiba Carrier VRF indoor fan coil units.

**Two Methods of Control**

- Inverter control
- Two-stage cooling / heating

**Features**

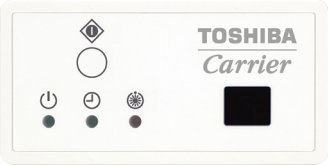
- Fan speed control: high, medium and low
- Operating modes: cooling, heating, fan and off
- Group control

## RBC-AX32UW-UL

Integral Receiver (For 4-Way Cassette)

The Integral Receiver is a combination of a mounted receiver on an 4-way cassette indoor unit and handheld wireless remote that allows a user to interface with the unit.

- ON / OFF
- Louver setting
- Timer function
- Error display
- Operating modes: auto, heat, dry, cool, and fan
- Fan modes: auto, high, medium and low




## RBC-AX33C-UL

Integral Receiver (For Underceiling)

The Integral Receiver is a combination of a mounted receiver on an underceiling indoor unit and handheld wireless remote that allows a user to interface with the unit.

- ON / OFF
- Louver setting
- Timer function
- Error display
- Operating modes: auto, heat, dry, cool, and fan
- Fan modes: auto, high, medium and low

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