

# SMMS-e Single VRF Outdoor Unit MMY-MAP1686HT9P-UL - Heat Pump

**TOSHIBA**  
*Carrier*

## Submittal Data

Job Data \_\_\_\_\_ Location \_\_\_\_\_  
 Buyer \_\_\_\_\_ Buyer PO # \_\_\_\_\_ Carrier # \_\_\_\_\_  
 Unit Number \_\_\_\_\_ Model Number \_\_\_\_\_  
 Performance Data Certified By \_\_\_\_\_ Date \_\_\_\_\_



### SMMS-e VRF Heat Pump Features

- 6, 8, 10, 12, & 14 ton modules are available.
- Modules have 2 inverter-driven twin rotary compressor.
- Backup capability due to multiple compressors
- Compressor speed varied in 0.1 Hz increments for comfort and efficiency
- Direct drive, inverter-driven 64-step outdoor motor
- Modules can be combined to form larger systems up to 38 tons.
- 985 ft (300 m) actual total system piping (liquid line)
- Up to 330 ft (100 m) control wiring between outdoor units
- 623 ft (190 m) actual piping length from outdoor unit to furthest fan coil
- Up to 6560 ft (2000 m) control wiring between the outdoor unit and indoor units
- Operating temperature range  
Cooling (db): 14 to 122 F (-10 to 50 C)  
Heating (wb): -13 to 60 F (-25 to 15.6 C)
- Protection: high pressure switch, low pressure sensor and switch, process controller board fuse, inverter overload protection
- 7-year compressor limited warranty, 5-year parts limited warranty

| Header Unit Model                             | MMY-MAP1686HT9P |               |
|---|-----------------|---------------|
| <b>PERFORMANCE</b>                            |                 |               |
| Nominal Cooling Capacity                      | Btu/h           | 168,000       |
| Nominal Heating Capacity                      | Btu/h           | 189,000       |
| Maximum Total Connected Indoor Unit Capacity* |                 | Up to 150%    |
| <b>COOLING EFFICIENCY†</b>                    |                 |               |
| EER/IEER, Ducted FCUs                         |                 | 11.20/21.00   |
| EER/IEER, Ductless FCUs                       |                 | 11.00/23.80   |
| <b>HEATING EFFICIENCY†</b>                    |                 |               |
| COP at 47 F, Ducted FCUs                      |                 | 3.70          |
| COP at 47 F, Ductless FCUs                    |                 | 3.74          |
| Fan Type (Qty)                                |                 | Propeller (2) |
| Airflow, Standard Range                       | CFM             | 10080         |
| Sound Pressure, Cooling/Heating               | dBA             | 64/65         |
| External Static Pressure**                    | in. wg          | 0.16          |
| <b>ELECTRICAL</b>                             |                 |               |
| Power Supply                                  | V/Ph/Hz         | 208-230/3/60  |
| Minimum Circuit Amps (MCA)                    | A               | 69            |
| Recommended Fuse Size                         | A               | 80            |

| <b>COMPRESSORS</b>                            |                             |                |
|---|-----------------------------|----------------|
| Type (Number)                                 | Inverter Twin Rotary (2)    |                |
| Motor Output                                  | kW                          | 2 x 6.5        |
| <b>FAN MOTOR</b>                              |                             |                |
| Motor Type (Steps)                            | Inverter Direct Driven (64) |                |
| Motor Output                                  | kW                          | 1.0 + 1.0      |
| <b>PHYSICAL DATA</b>                          |                             |                |
| Pipe Connection Size - Liquid (High Pressure) | in.                         | 5/8 (Flare)    |
| Pipe Connection Size - Gas (Low Pressure)     | in.                         | 1-1/8 (Brazed) |
| Balance                                       | in.                         | 3/8 (Flare)    |
| Refrigerant                                   | R-410A                      |                |
| Factory Charge††                              | lb                          | 25.4           |
| External Finish                               | Munsell 1Y8.5/0.5           |                |
| Header Unit/Follower Unit Width               | in.                         | 63             |
| Header Unit/Follower Unit Height              | in.                         | 72-7/8         |
| Header Unit/Follower Unit Depth               | in.                         | 30-11/16       |
| Header Unit/Follower Unit Net Weight          | lb                          | 838            |

#### LEGEND

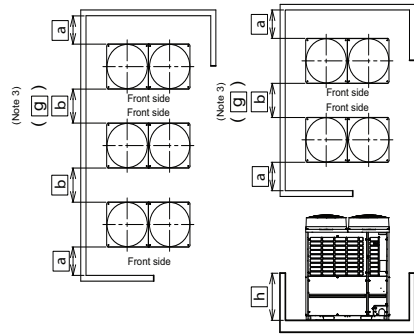
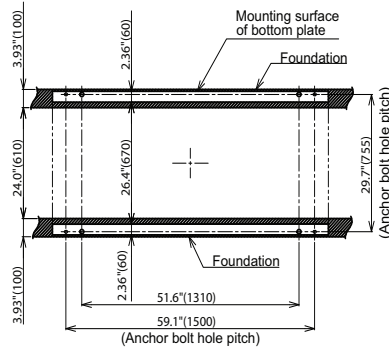
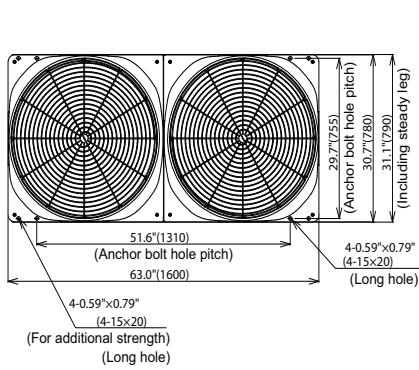
db — Dry Bulb  
 COP — Coefficient of Performance  
 EER — Energy Efficiency Ratio  
 FCU — Fan Coil Unit  
 IEER — Integrated Energy Efficiency Ratio  
 wb — Wet Bulb

\*When total connected indoor unit capacity exceeds 135%, number and types of indoor units are limited.  
 †Rated per AHRI (Air-Conditioning, Heating and Refrigeration Institute) 1230 Standard.  
 Cooling: Indoor 80 F (27 C) db/67 F (20 C) wb; Outdoor 95 F (35 C) db  
 Heating: Indoor 70 F (21 C) db; Outdoor 47 F (8 C) db/43 F (6 C) wb  
 \*\*Requires setting by DIP switches.  
 ††Additional charge required.  
 NOTE: Unit cabinet and coil slab shall be capable of withstanding 500-hour salt spray test in accordance with the ASTM (American Society for Testing and Materials, U.S.A.) B-117 Standard.

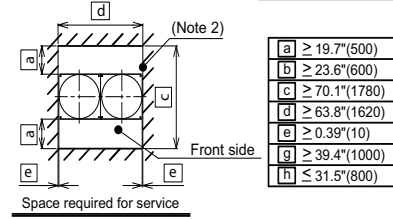
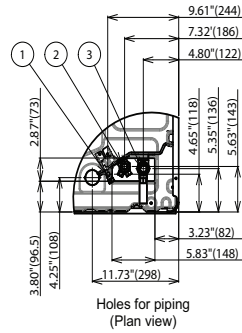
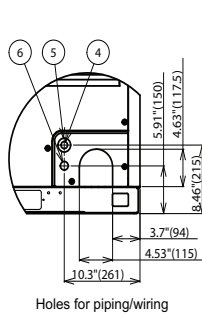
Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

# DIMENSIONAL DRAWING

## OUTDOOR UNIT: HEAT PUMP/SINGLE UNIT MMY-MAP1686HT9P-UL



| No | Parts name                         | Remarks                 |
|----|------------------------------------|-------------------------|
| ①  | Balance pipe connection port       | Φ3/8"(9.5)              |
| ②  | Liquid pipe connection port        | Φ3/4"(19.1)             |
| ③  | Discharge gas pipe connection port | Φ1"(25.4)               |
| ④  | Knockout hole for power wiring 1   | Φ0.87"(22.2)            |
| ⑤  | Knockout hole for power wiring 2   | Φ1.72"(43.7)            |
| ⑥  | Knockout hole for control wiring   | Φ1.06"(27)              |
| ⑦  | Square hole (for freight handling) | 4-2.36"x7.87"(4-60x200) |
| ⑧  | Square hole (for hanging)          | 4-1.58"x2.17"(4-40x55)  |



**NOTES:**

- A minimum clearance of 78.7 in. (2000 mm) is required above the unit.
- Any wall or barrier should not exceed 31.5 in. (800 mm) from the bottom of the unit.
- The main pipe in front of the unit must extend at least a minimum of 19.7 in. (500 mm) before it can turn 90 degrees in either left or right direction.
- Dimensions in parentheses are in millimeters.

