TOSHIBA

Leading Innovation

E13-3Y1

**Model name:**

***MMY-MAP__4FT8***

***MMY-MAP__4FT7***

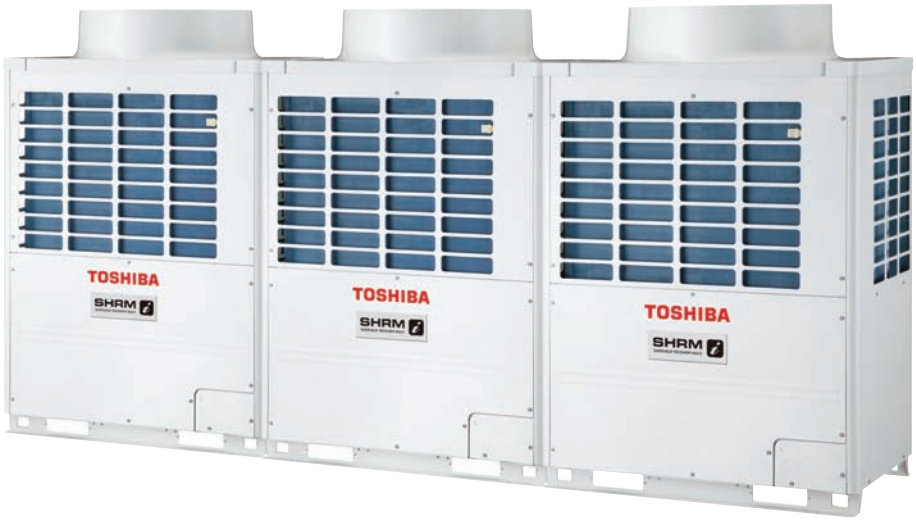
***MMY-MAP__4FT5***

SHRM

SUPER HEAT RECOVERY MULTI

# Engineering Data Book

## Outdoor units

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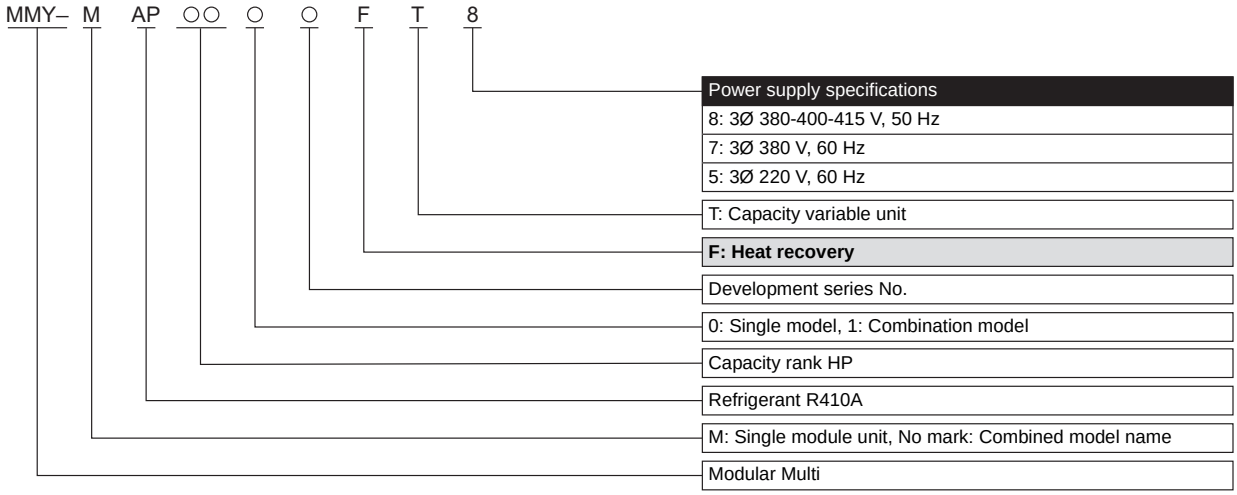
# Contents

## 1-1. Allocation standard of model name

### SHRM-i



# 1-2. Summary of system equipments

## Equipment

## 1-2-1. Outdoor units

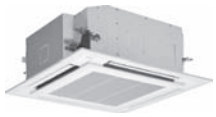
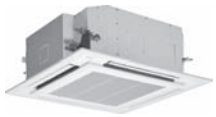
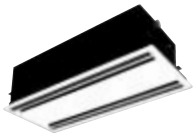
| Corresponding HP | Inverter unit | | | | Appearance |
|---|---|---|---|---|---|
| | 8HP | 10HP | 12HP | 14HP | |
| Model name MMY- | MAP0804FT8 | MAP1004FT8 | MAP1204FT8 | MAP1404FT8 | 8HP, 10HP  12HP, 14HP  |
| | MAP0804FT7 | MAP1004FT7 | MAP1204FT7 | MAP1404FT7 | |
| | MAP0804FT5 | MAP1004FT5 | MAP1204FT5 | MAP1404FT5 | |
| Cooling capacity (kW) | 22.4 | 28.0 | 33.5 | 40.0 | |
| Heating capacity (kW) | 25.0 | 31.5 | 37.5 | 45.0 | |
| Power supply | 3 phase 50Hz 400V (380-415V) | | | | |
| Number of connectable indoor units | 13 | 16 | 20 | 23 | |

### Combination of outdoor units

| Corresponding HP | 16HP | 18HP | 20HP | 22HP | 24HP | 26HP | 28HP |
|---|---|---|---|---|---|---|---|
| Model name MMY- | AP1614FT8 | AP1814FT8 | AP2014FT8 | AP2214FT8 | AP2414FT8 | AP2614FT8 | AP2814FT8 |
| | AP1614FT7 | AP1814FT7 | AP2014FT7 | AP2214FT7 | AP2414FT7 | AP2614FT7 | AP2814FT7 |
| | AP1614FT5 | AP1814FT5 | AP2014FT5 | AP2214FT5 | AP2414FT5 | AP2614FT5 | AP2814FT5 |
| Cooling capacity (kW) | 45.0 | 50.4 | 56.0 | 61.5 | 68.0 | 73.0 | 78.5 |
| Heating capacity (kW) | 50.0 | 56.5 | 63.0 | 69.0 | 76.5 | 81.5 | 88.0 |
| Power supply | 3 phase 50Hz 400V (380-415V) | | | | | | |
| Combined outdoor units | 8HP | 10HP | 10HP | 12HP | 14HP | 14HP | 14HP |
| | 8HP | 8HP | 10HP | 10HP | 10HP | 12HP | 14HP |
| | – | – | – | – | – | – | – |
| Number of connectable indoor units | 27 | 30 | 33 | 37 | 40 | 43 | 47 |

| Corresponding HP | 30HP | 32HP | 34HP | 36HP | 38HP | 40HP | 42HP |
|---|---|---|---|---|---|---|---|
| Model name MMY- | AP3014FT8 | AP3214FT8 | AP3414FT8 | AP3614FT8 | AP3814FT8 | AP4014FT8 | AP4214FT8 |
| | AP3014FT7 | AP3214FT7 | AP3414FT7 | AP3614FT7 | AP3814FT7 | AP4014FT7 | AP4214FT7 |
| | AP3014FT5 | AP3214FT5 | AP3414FT5 | AP3614FT5 | AP3814FT5 | AP4014FT5 | AP4214FT5 |
| Cooling capacity (kW) | 85.0 | 90.0 | 96.0 | 101.0 | 106.5 | 112.0 | 118.0 |
| Heating capacity (kW) | 95.0 | 100.0 | 108.0 | 113.0 | 119.5 | 127.0 | 132.0 |
| Power supply | 3 phase 50Hz 400V (380-415V) | | | | | | |
| Combined outdoor units | 10HP | 12HP | 14HP | 12HP | 14HP | 14HP | 14HP |
| | 10HP | 10HP | 10HP | 12HP | 12HP | 14HP | 14HP |
| | 10HP | 10HP | 10HP | 12HP | 12HP | 12HP | 14 |
| Number of connectable indoor units | 48 | 48 | 48 | 48 | 48 | 48 | 48 |

## 1-2-2. Indoor unit

| Type | Appearance | Model name | Capacity rank | Capacity code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|---|---|---|
| 4-way Air Discharge Cassette Type |  | **MMU-AP0092H** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMU-AP0122H** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMU-AP0152H** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMU-AP0182H** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMU-AP0242H** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMU-AP0272H** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMU-AP0302H** | 030 type | 3.20 | 9.0 | 10.0 |
| | | **MMU-AP0362H** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMU-AP0482H** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMU-AP0562H** | 056 type | 6.00 | 16.0 | 18.0 |
| |  | **MMU-AP0094HP-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMU-AP0124HP-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMU-AP0154HP-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMU-AP0184HP-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMU-AP0244HP-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMU-AP0274HP-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMU-AP0304HP-E** | 030 type | 3.20 | 9.0 | 10.0 |
| | | **MMU-AP0364HP-E** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMU-AP0484HP-E** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMU-AP0564HP-E** | 056 type | 6.00 | 16.0 | 18.0 |
| Compact 4-way Cassette (600 × 600) Type |  | **MMU-AP0054MH-E** | 005 type | 0.80 | 1.7 | 1.9 |
| | | **MMU-AP0074MH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMU-AP0094MH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMU-AP0124MH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMU-AP0154MH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMU-AP0184MH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| 2-way Air Discharge Cassette Type |  | **MMU-AP0072WH** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMU-AP0092WH** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMU-AP0122WH** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMU-AP0152WH** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMU-AP0182WH** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMU-AP0242WH** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMU-AP0272WH** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMU-AP0302WH** | 030 type | 3.20 | 9.0 | 10.0 |
| | | **MMU-AP0362WH** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMU-AP0482WH** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMU-AP0562WH** | 056 type | 6.00 | 16.0 | 18.0 |
| 1-way Air Discharge Cassette Type |  | **MMU-AP0074YH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMU-AP0094YH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMU-AP0124YH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMU-AP0154SH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMU-AP0184SH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMU-AP0244SH-E** | 024 type | 2.50 | 7.1 | 8.0 |

| Type | Appearance | Model name | Capacity rank | Capacity code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|---|---|---|
| Concealed Duct Type |  | **MMD-AP0074BH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMD-AP0094BH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMD-AP0124BH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMD-AP0154BH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMD-AP0184BH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMD-AP0244BH-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMD-AP0274BH-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMD-AP0304BH-E** | 030 type | 3.20 | 9.0 | 10.0 |
| | | **MMD-AP0364BH-E** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMD-AP0484BH-E** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMD-AP0564BH-E** | 056 type | 6.00 | 16.0 | 18.0 |
| | | **MMD-AP0096BH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMD-AP0126BH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMD-AP0156BH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMD-AP0186BH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMD-AP0246BH-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMD-AP0276BH-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMD-AP0306BH-E** | 030 type | 3.20 | 9.0 | 10.0 |
| | | **MMD-AP0366BH-E** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMD-AP0486BH-E** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMD-AP0566BH-E** | 056 type | 6.00 | 16.0 | 18.0 |
| Concealed Duct High Static Pressure Type |  | **MMD-AP0184H-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMD-AP0244H-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMD-AP0274H-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMD-AP0364H-E** | 036 type | 4.00 | 11.2 | 10.0 |
| | | **MMD-AP0484H-E** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMD-AP0724H-E** | 072 type | 8.00 | 22.4 | 25.0 |
| | | **MMD-AP0964H-E** | 096 type | 10.00 | 28.0 | 31.5 |
| Slim Duct Type |  | **MMD-AP0054SPH-E** | 005 type | 0.60 | 1.7 | 1.9 |
| | | **MMD-AP0074SPH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMD-AP0094SPH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMD-AP0124SPH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMD-AP0154SPH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMD-AP0184SPH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMD-AP0244SPH-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMD-AP0274SPH-E** | 027 type | 3.00 | 8.0 | 9.0 |
| Ceiling Type |  | **MMC-AP0154H-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMC-AP0184H-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMC-AP0244H-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMC-AP0274H-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMC-AP0364H-E** | 036 type | 4.00 | 11.2 | 12.5 |
| | | **MMC-AP0484H-E** | 048 type | 5.00 | 14.0 | 16.0 |
| High-wall Type 3 series |  | **MMK-AP0073H** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MMK-AP0093H** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MMK-AP0123H** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MMK-AP0153H** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMK-AP0183H** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMK-AP0243H** | 024 type | 2.50 | 7.1 | 8.0 |
| Floor Standing Concealed Type |  | **MML-AP0074BH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MML-AP0094BH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MML-AP0124BH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MML-AP0154BH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MML-AP0184BH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MML-AP0244BH-E** | 024 type | 2.50 | 7.1 | 8.0 |

| Type | Appearance | Model name | Capacity rank | Capacity code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|---|---|---|
| Floor Standing Cabinet Type |  | **MML-AP0074H-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MML-AP0094H-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MML-AP0124H-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MML-AP0154H-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MML-AP0184H-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MML-AP0244H-E** | 024 type | 2.50 | 7.1 | 8.0 |
| Floor Standing Type |  | **MMF-AP0154H-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MMF-AP0184H-E** | 018 type | 2.00 | 5.6 | 6.3 |
| | | **MMF-AP0244H-E** | 024 type | 2.50 | 7.1 | 8.0 |
| | | **MMF-AP0274H-E** | 027 type | 3.00 | 8.0 | 9.0 |
| | | **MMF-AP0364H-E** | 036 type | 4.00 | 11.2 | 10.0 |
| | | **MMF-AP0484H-E** | 048 type | 5.00 | 14.0 | 16.0 |
| | | **MMF-AP0564H-E** | 056 type | 6.00 | 16.0 | 18.0 |
| Console Type |  | **MML-AP0074NH-E** | 007 type | 0.80 | 2.2 | 2.5 |
| | | **MML-AP0094NH-E** | 009 type | 1.00 | 2.8 | 3.2 |
| | | **MML-AP0124NH-E** | 012 type | 1.25 | 3.6 | 4.0 |
| | | **MML-AP0154NH-E** | 015 type | 1.70 | 4.5 | 5.0 |
| | | **MML-AP0184NH-E** | 018 type | 2.00 | 5.6 | 6.3 |
| Air to Air Heat exchanger with DX-coil Type |  | **MMD-VN502HEXE** | 009 type | 1.00 | 4.10(1.30) * | 5.53(2.33) * |
| | | **MMD-VN802HEXE** | 015 type | 1.70 | 6.56(2.06) * | 8.61(3.61) * |
| | | **MMD-VN1002HEXE** | 018 type | 2.00 | 8.25(2.32) * | 10.92(4.32) * |

* : The figures in ( ) indicate the heat reclaimed from the heat recovery ventilator.

## 1-2-3. FS units (Flow selector units)

| Model name | Appearance | Remarks |
|---|---|---|
| RBM-Y1123FE |  | |
| RBM-Y1803FE | | |
| RBM-Y2803FE | | |

## 1-2-4. Branching joints and headers

| Name | Model name | Appearance | Remarks |
|---|---|---|---|
| Y-shape branching joint | RBM-BY55FE |  | For 3 piping |
| | RBM-BY105FE | | |
| | RBM-BY205FE | | |
| | RBM-BY305FE | | |
| | RBM-BY55E |  | For 2 piping |
| | RBM-BY105E | | |
| | RBM-BY205E | | |
| | RBM-BY305E | | |
| 4-branching header | RBM-HY1043FE |  | For 3 piping |
| | RBM-HY2043FE | | |
| | RBM-HY1043E | | For 2 piping |
| | RBM-HY2043E | | |
| 8-branching header | RBM-HY1083FE |  | For 3 piping |
| | RBM-HY2083FE | | |
| | RBM-HY1083E | | For 2 piping |
| | RBM-HY2083E | | |
| Branching joint for connection of outdoor units | RBM-BT14FE |  | |
| | RBM-BT24FE | | |

## 1-2-5. Remote controllers

| Name | Model Name | Remarks |
|---|---|---|
| Wired remote controller | RBC-AMT32E | |
| Simple wired remote controller | RBC-AS21E2, RBC-AS41E | |
| Wireless remote controller kit | RBC-AX32U(W)-E<br>RBC-AX32U(WS)-E | For 4-way Air Discharge Cassette |
| | RBC-AX32CE2 | For Under Ceiling, 1-way Air Discharge Cassette SH |
| | TCB-AX32E | For Compact 4-way Cassette, 1-way Air Discharge Cassette YH, Concealed Duct Standard, Slim Duct, Floor Standing Cabinet, Floor Standing |
| | RBC-AX23UW(W)-E | For 2-way Air Discharge Cassette |
| ON-OFF controller | TCB-CC163TLE2 | |
| Central remote controller | TCB-SC642TLE2 | |
| | BMS-CM1280TLE | |
| Schedule timer | TCB-EXS21TLE | |
| Remote controller with schedule timer (7-day timer function) | RBC-AMS41E | |
| Lite-Vision plus Remote Controller | RBC-AMS51E-EN/ES | -EN : English, Italian, Polish, Greece, Russian, Turkish<br>-ES : English, Spanish, Portuguese, French, Dutch, German |
| Wired remote controller for Air to Air Heat Exchanger with DX coil unit | NRC-01HE | |

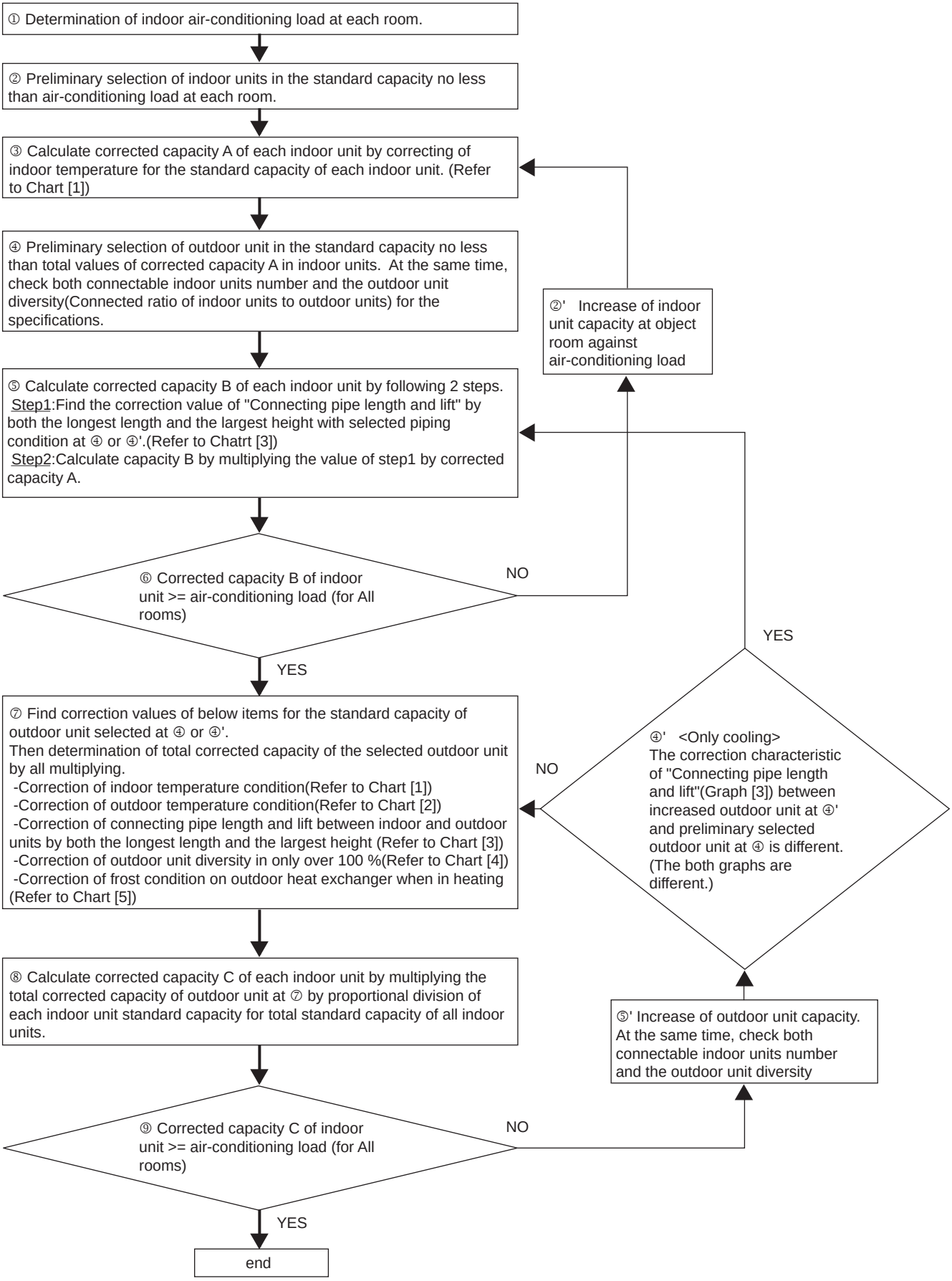
## 1-2-6. Optional PCB of outdoor unit

| Name | Model Name | Remarks |
|---|---|---|
| Power peak-cut control board | TCB-PCDM4E | |
| External master ON/OFF control board | TCB-PCMO4E | |
| Output control board | TCB-PCIN4E | |

## 1-2-7. Controls

| Name | Model Name | Remarks |
|---|---|---|
| Touch Screen Controller | BMS-TP0641ACE<br>BMS-TP5121ACE<br>BMS-TP0641PWE<br>BMS-TP5121PWE | ACE: Without energy monitoring function<br>PWE:With energy monitoring function<br>0641:Maximum 64 indoor units connectable<br>5121:Maximum 512 indoor units connectable |
| Smart BMS manager | BMS-SM1280HTLE | |
| Smart BMS manager with data analyzer | BMS-SM1280ETLE | |
| WEB Based Controller | BMS-WB2561PWE<br>BMS-WB01GTE | |
| TCS-NET Relay Interface | BMS-IFLSV4E | |
| Energy Monitoring Relay Interface | BMS-IFWH5E | |
| Digital I/O Relay Interface | BMS-IFDD03E | |
| LonWorks LN Interface | TCB-IFLN642TLE | |
| BACnet Server | BMS-LSV6E<br>BMS-STBN08E | |
| Modbus Interface | TCB-IFMB641TLE | |
| Analog Interface | TCB-IFCB640TLE | |

## 2-1. Selection flow chart



## 2-2. Combination conditions for indoor unit and outdoor unit

### 2-2-1. For indoor unit, the capacity code is decided for each capacity rank.

| Capacity rank type | 005 | 007 | 009 | 012 | 015 | 018 | 024 | 027 | 030 | 036 | 048 | 056 | 072 | 096 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity code | 0.8 | 0.8 | 1 | 1.25 | 1.7 | 2 | 2.5 | 3 | 3.2 | 4 | 5 | 6 | 8 | 10 |

**NOTE:**
Capacity rank: Correspondence to Btu/h. Capacity code: Correspondence to Horsepower.

### 2-2-2. For outdoor unit, maximum No. of connectable indoor units and total capacity code of indoor units are decided.

| Outdoor unit (Heat recovery) | Capacity code of outdoor unit | Max. number of indoor units | Total capacity code of indoor units |
|---|---|---|---|
| MMY-MAP0804FT8-E | 8 | 13 | 5.6 to 10.8 |
| MMY-MAP1004FT8-E | 10 | 16 | 7.0 to 13.5 |
| MMY-MAP1204FT8-E | 12 | 20 | 8.4 to 16.2 |
| MMY-MAP1404FT8-E | 14 | 23 | 9.8 to 18.9 |
| MMY-AP1604FT8-E | 16 | 27 | 11.2 to 21.6 |
| MMY-AP1814FT8-E | 18 | 30 | 12.6 to 24.3 |
| MMY-AP2014FT8-E | 20 | 33 | 14.0 to 27.0 |
| MMY-AP2214FT8-E | 22 | 37 | 15.4 to 29.7 |
| MMY-AP2414FT8-E | 24 | 40 | 16.8 to 32.4 |
| MMY-AP2614FT8-E | 26 | 43 | 18.2 to 35.1 |
| MMY-AP2814FT8-E | 28 | 47 | 19.6 to 37.8 |
| MMY-AP3014FT8-E | 30 | 48 | 21.0 to 40.5 |
| MMY-AP3214FT8-E | 32 | 48 | 22.4 to 43.2 |
| MMY-AP3414FT8-E | 34 | 48 | 23.8 to 45.9 |
| MMY-AP3614FT8-E | 36 | 48 | 25.2 to 48.6 |
| MMY-AP3814FT8-E | 38 | 48 | 26.6 to 51.3 |
| MMY-AP4014FT8-E | 40 | 48 | 28.0 to 54.0 |
| MMY-AP4214FT8-E | 42 | 48 | 29.4 to 56.7 |

70 to 135 % of outdoor unit capacity

### 2-2-3. Combination ratio between indoor units and outdoor units.

Compared with the capacity code of the outdoor unit, the total value of capacity code of the connectable indoor units differs based on the height difference between the indoor units.

- When the height difference between the indoor units is 15 m or less : Up to 70 to 135 % of the combination ratio of indoor units to outdoor units
- When the height difference between the indoor units is over 15 m : Up to 70 to 105 % of the combination ratio of indoor units to outdoor units

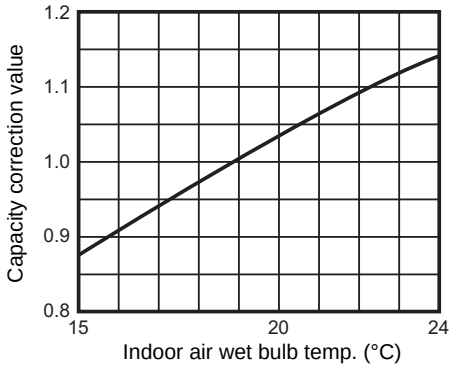
**NOTE:**
The case of “Air to Air Heat exchanger with DX-coil” Type is below.

- When the height difference between the indoor units is 15 m or less: Up to 80 to 135 % of the combination ratio of all indoor units to outdoor units
  When the height difference between the indoor units is over 15 m: Up to 80 to 105 % of the combination ratio of all indoor units to outdoor units
- Up to 30 % of the internal ratio with total capacity codes of the connecting indoor units
  (The connection only of this type with SHRM-i is not allowed.)

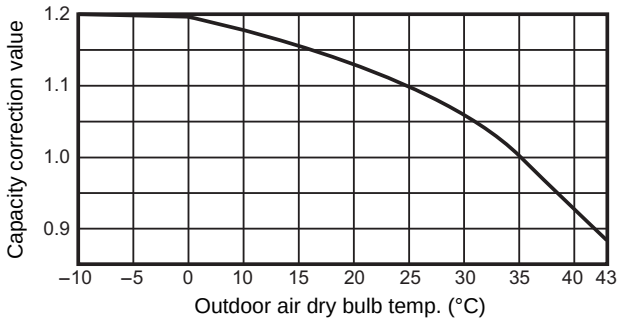
# 2-3. Cooling/heating capacity characteristics

## 2-3-1. Correction charts for cooling capacity calculation

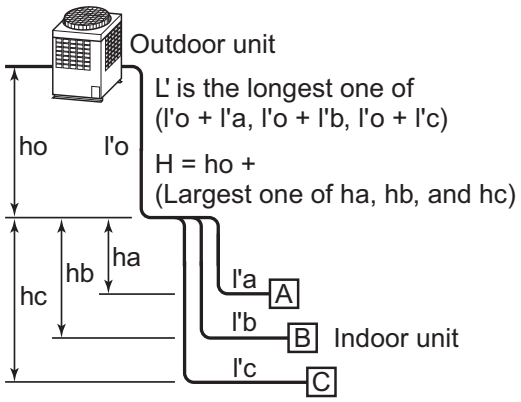
[1] Indoor air wet bulb temperature vs. capacity correction value




[2] Outdoor air dry bulb temperature vs.capacity correction value

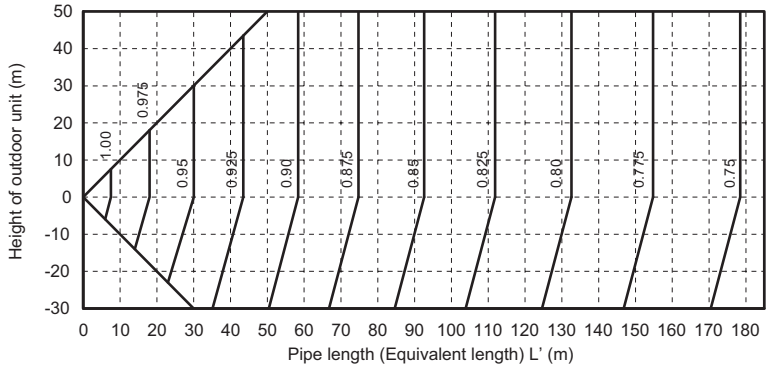



[3] Connecting pipe length and lift difference between indoor and outdoor units vs. capacity correction value

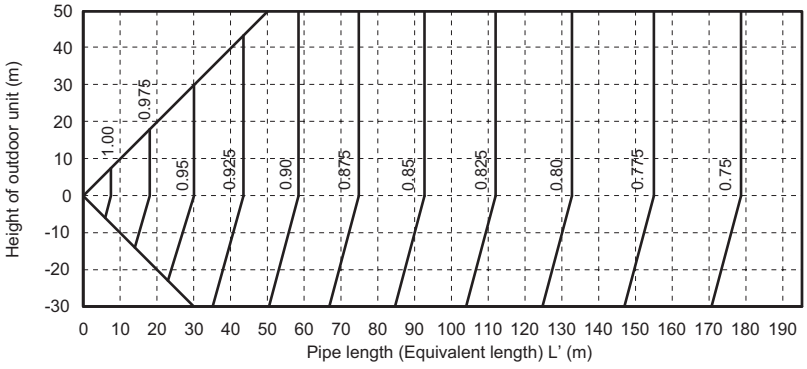



| HP | Cooling | | Heating |
|---|---|---|---|
| | Pipe length | Graph | |
| 8 | 185 | A1 | H |
| 10 | 185 | B1 | |
| 12 | 185 | A1 | |
| 14 | 185 | A1 | |
| 16 | 195 | A2 | |
| 18 | 195 | B2 | |
| 20 | 195 | B2 | |
| 22 | 195 | A2 | |
| 24 | 195 | A2 | |
| 26 | 195 | B2 | |
| 28 | 195 | B2 | |
| 30 | 200 | B3 | |
| 32 | 200 | B3 | |
| 34 | 200 | B3 | |
| 36 | 200 | A3 | |
| 38 | 200 | B3 | |
| 40 | 200 | B3 | |
| 42 | 200 | B3 | |

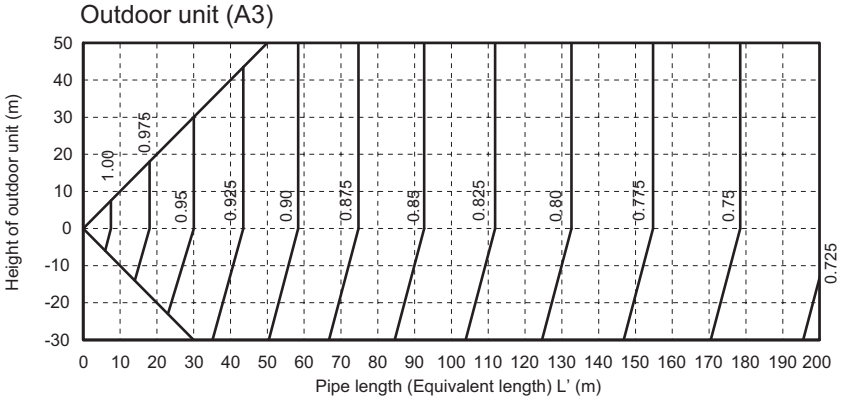
Outdoor unit (A1)



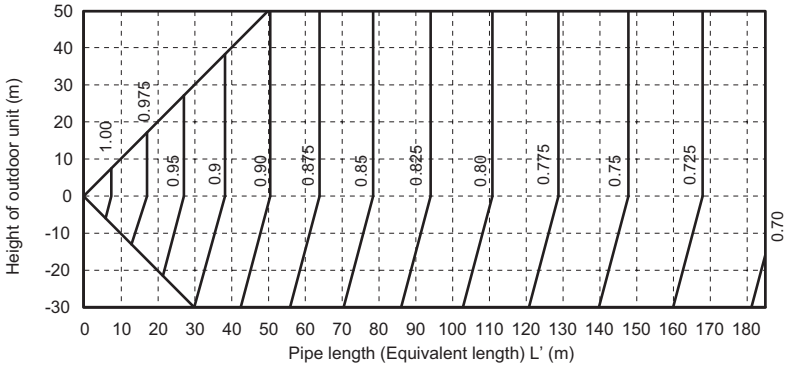

Outdoor unit (A2)



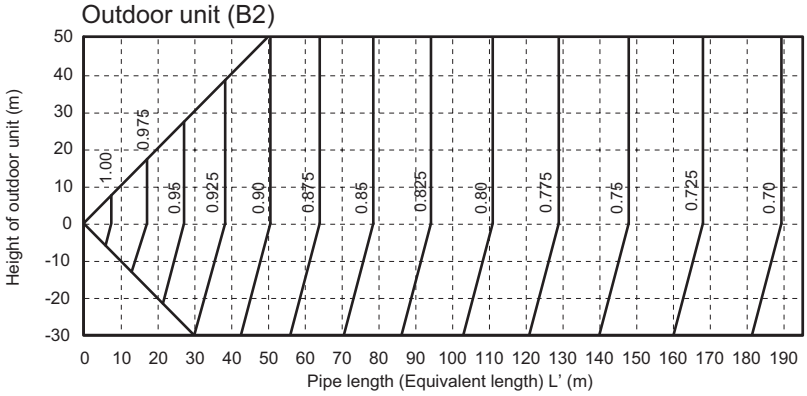

Outdoor unit (A3)



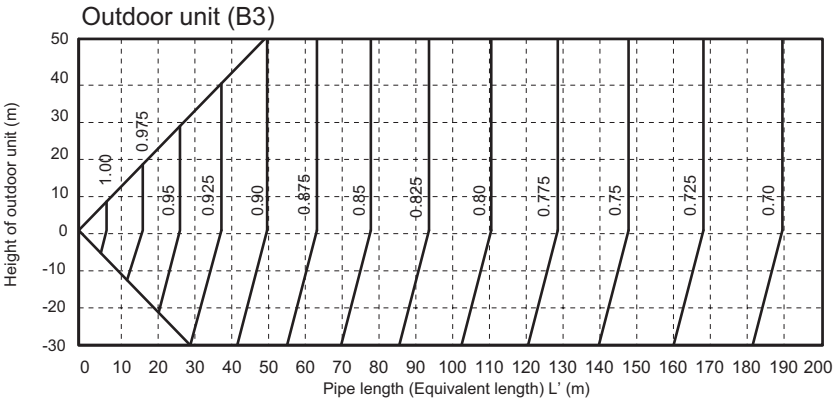
Outdoor unit (B1)



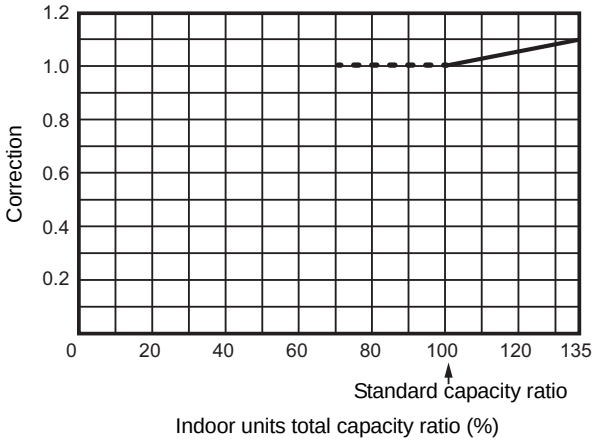

Outdoor unit (B2)




Outdoor unit (B3)



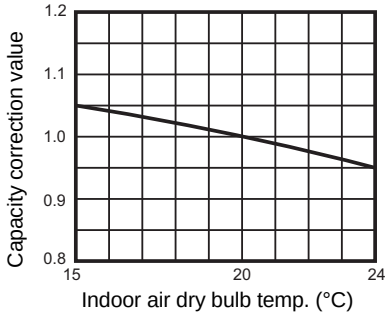
[4]* Correction of outdoor unit diversity



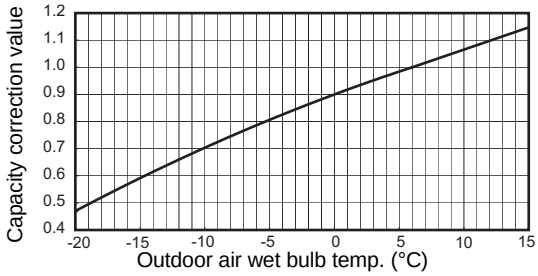

*: Coefficient to use for the correction of the outdoor unit capacity when the total capacity of the indoor units are not equal to the outdoor unit capacity.

## 2-3-2. Correction charts for heating capacity calculation

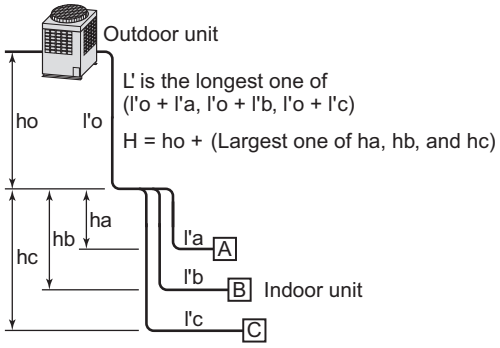
[1] Indoor air dry bulb temperature vs. capacity correction value

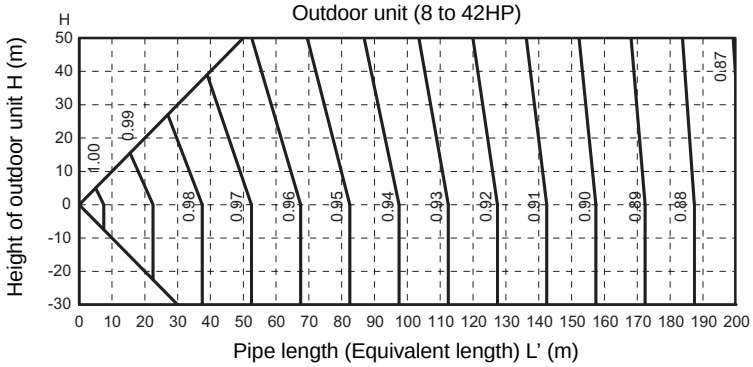



[2] Outdoor air wet bulb temperature vs. capacity correction value

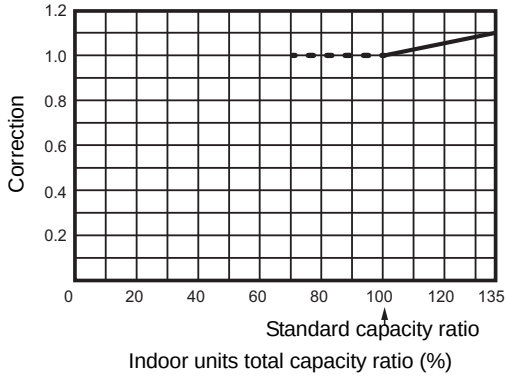



[3] Connecting pipe length and lift difference between indoor and outdoor units vs. capacity correction value



[4]* Correction of outdoor unit diversity

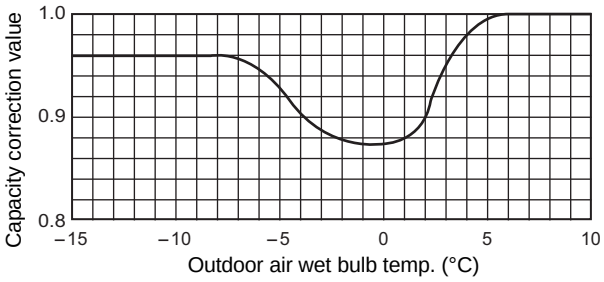



*: Coefficient to use for the correction of the outdoor unit capacity when the total capacity of the indoor units are not equal to the outdoor unit capacity.

### 2-3-3. Capacity correction in case of frost on the outdoor heat exchanger when in heating

Correct the heating capacity when frost can be found on the outdoor heat exchanger.
Heating capacity = Capacity after correction of outdoor unit x Correction value of capacity resulted from frost (Capacity after correction of outdoor unit: Heating capacity calculated in the above item 2.)

[5] Capacity correction in case of frost on the outdoor heat exchanger

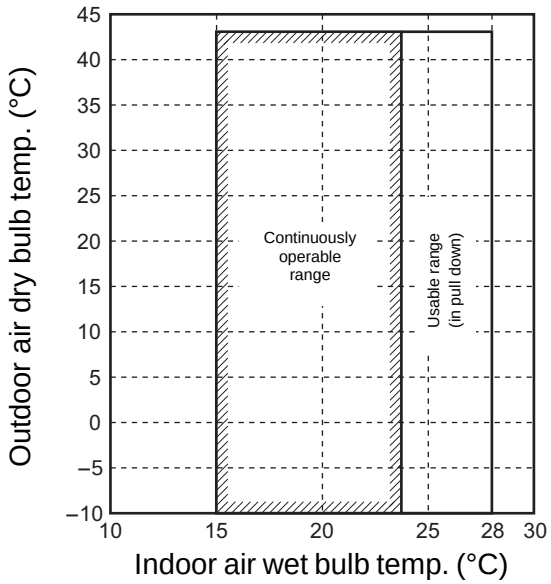



### 2-3-4. Rated conditions

Cooling: Indoor air temperature 27 °C DB / 19 °C WB, Outdoor air temperature 35 °C DB
Heating: Indoor air temperature 20 °C DB, Outdoor air temperature 7 °C DB / 6 °C WB

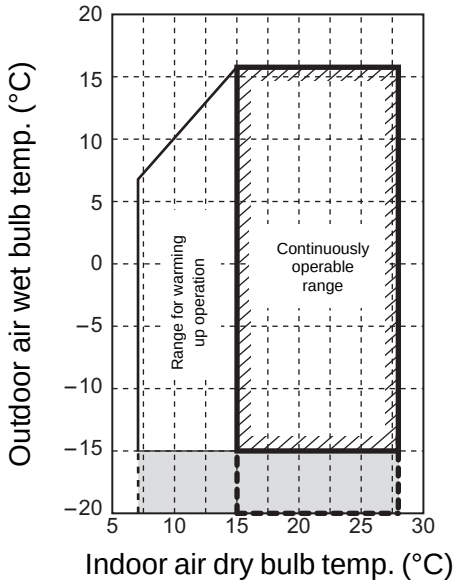
## 2-4. Operational temperature range

**Cooling**




The cooling performance may decline considerably when total operating capacity of cooling indoor units is less than 4HP while ambient temperature is below 0 °C.

**Heating**



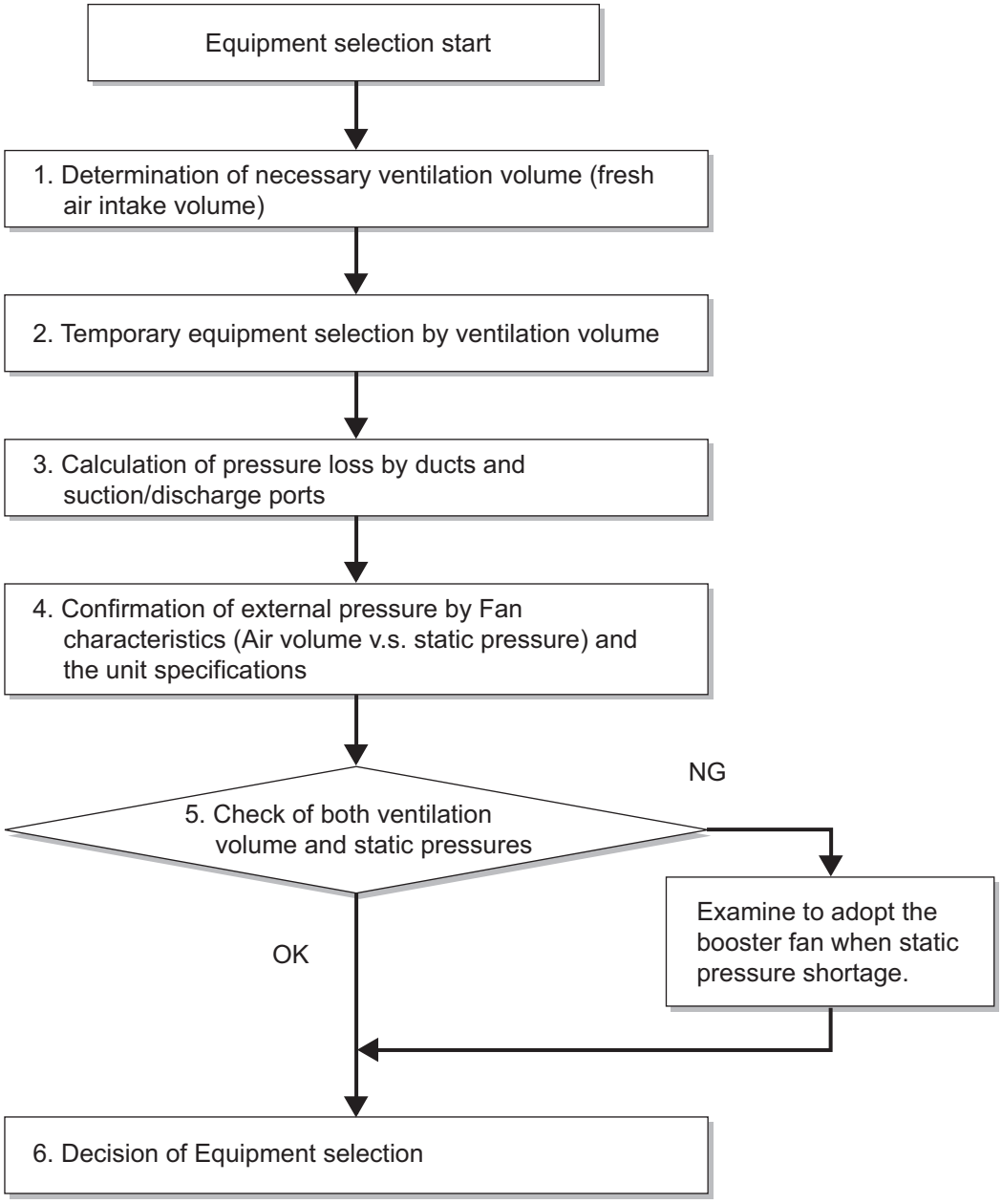

The unit will operate down to an outdoor temperature of -20 °C, however considerable performance decrease will be expected below -15 °C.
Therefore please consider installation location/surroundings and system design when expected to operate between -15 °C and -20 °C.

**Avoid the following place**

Places where ambient temperature falls below -15 °C for more than 72 hours running.
The outdoor heat exchanger may be damaged by the frost.

## 2-5. Selection procedure for Air to Air Heat exchanger with DX-coil Type

### 2-5-1. Selection flow chart




Note : Air to Air Heat exchanger with DX-coil Type is selected by necessary ventilation volume (fresh air intake volume). And this type operates to bring fresh air close to the room temperature, but is not to control the room temperature. For control of room temperature, it is necessary to set the other air-conditioners.

### 2-5-2. Example of equipment selection

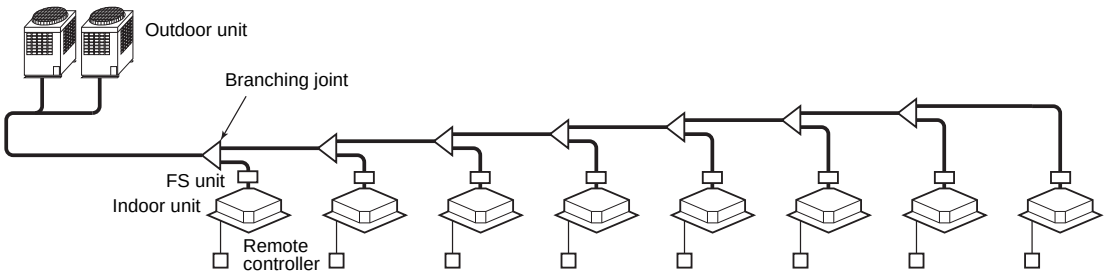
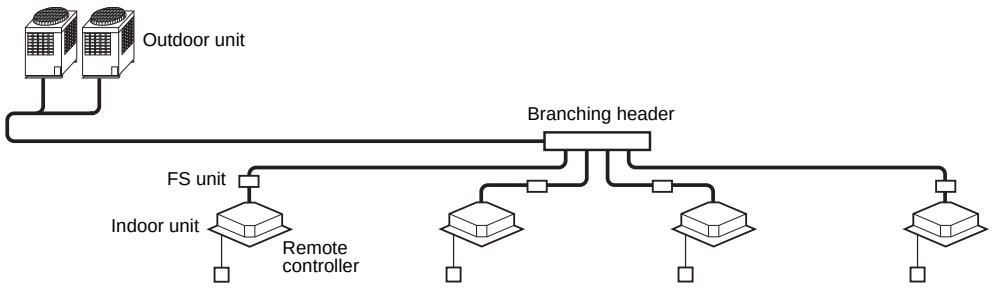
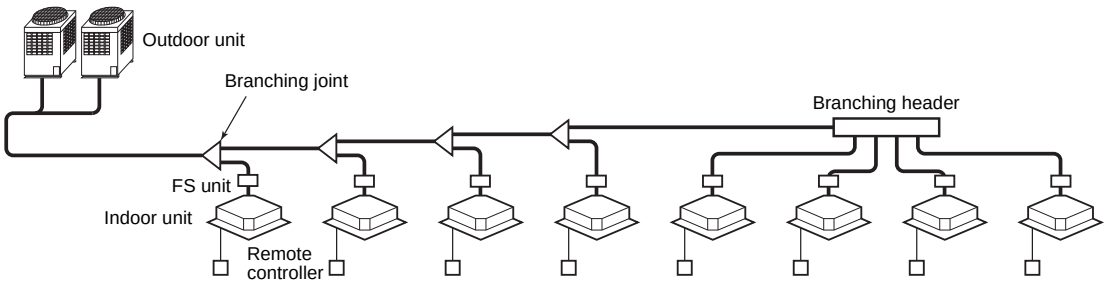
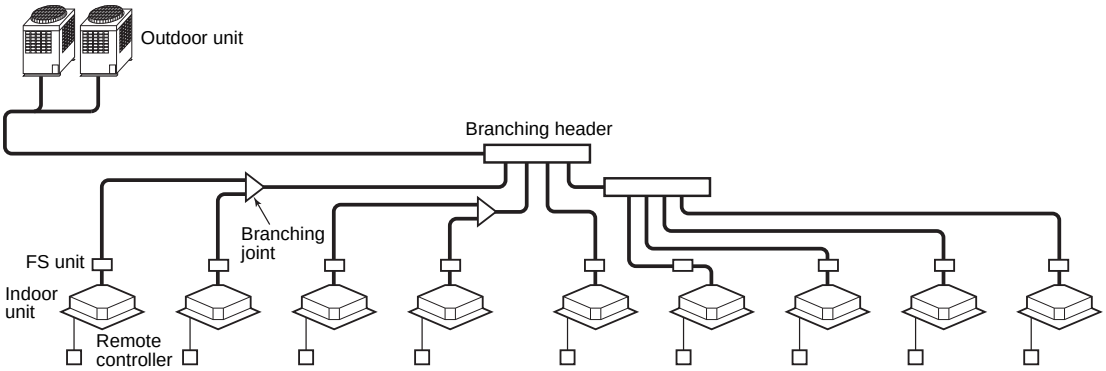
**<Condition>**
Necessary ventilation volume : 1000 $m^3/h$
Pressure loss by ducts (including suction/discharge ports) : 100 Pa

**<Selection>**
MMD-VN1002HEXE(High) is selected by the Fan characteristics.

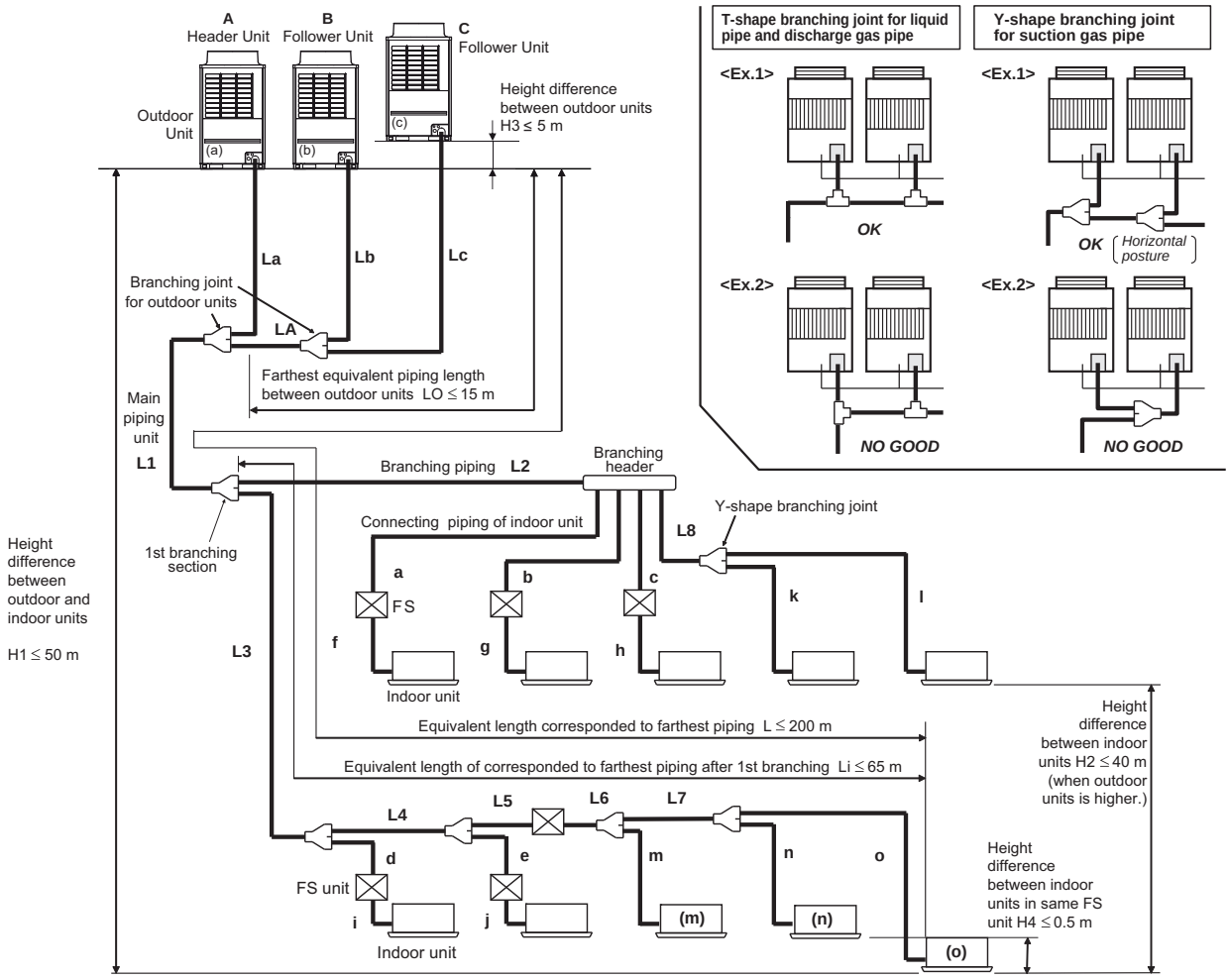
## 3-1. Free branching system

[1] Line branching system
[2] Header branching system
[3] Header branching system after line branching
[4] Line branching system after header branching
[5] Header branching system after header branching

The above five branching systems enable to dramatically increase the flexibility of refrigerant piping design.

| | |
|---|---|
| Line branching system |  |
| Header branching system |  |
| Header branching system after line branching |  |
| Line branching system after header branching<br><br>Header branching system after header branching |  |

# 3-2. Allowable length/height difference of refrigerant piping




**System restrictions**

| | | |
|---|---|---|
| Max. No. of combined outdoor units | | 3 units |
| Max. capacity of combined outdoor units | | 42 HP |
| Max. No. of connected indoor units | | 48 units |
| Max. capacity of combined indoor units | H2 ≤ 15 m | 135 % |
| | H2 > 15 m | 105 % |

**Cautions for installation**

- Set the outdoor unit first connected to the bridging pipe to the indoor units as the header unit.
- Install the outdoor units in order of their capacity codes: A (header unit) ≥ B ≥ C
- When connecting gas pipes to indoor units, use Y-shaped branching joints to keep pipes level.
- In T-shape branching joint of outdoor unit for liquid pipe, piping to indoor units shall be perpendicular to piping to the header outdoor unit like as <Ex.1>. Do not connect piping like as <Ex.2>.

**Farthest piping length L by capacity of outdoor units**

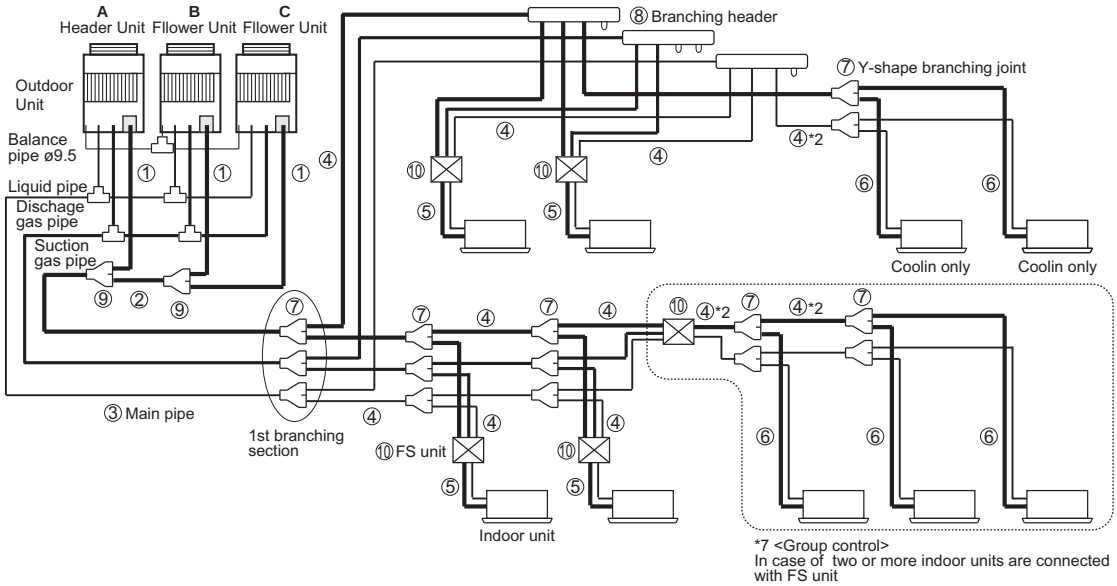
| Capacity | (HP) | 8 ~ 14 | 16 ~ 28 | 30 ~ 42 |
|---|---|---|---|---|
| Equivalent length | (m) | 185 | 195 | 200 |
| Real length | (m) | 165 | 175 | 180 |

**Allowable length and height difference of refrigerant piping**

| | | | | Allowable value | Piping section |
|---|---|---|---|---|---|
| Piping length | Total extension of pipe (Liquid pipe, real length) | Below 34HP | | 300 m | LA + La + Lb + Lc + L1 + L2 + L3 + L4 + L5 + L6 + L7 + L8 + a + b + c + d + e + f + g + h + i + j + k + l + m + n + o |
| | | 34HP or more | | 500 m | |
| | Farthest piping Length L (*1)(*3) | Equivalent length | | 200 m | LA + Lc + L1 + L3 + L4 + L5 + L6 + L7 + o |
| | | Real length | | 180 m | |
| | Max. equivalent length of main piping | H2 > 3 m | Equivalent length | 100 m | L1 |
| | | | Real length | 85 m | |
| | | H2 ≤ 3 m | Equivalent length | 120 m | |
| | | | Real length | 100 m | |
| | Equivalent length of farthest piping from 1st branching Li (*1) | H1 > 3 m | | 50 m | L3 + L4 + L5 + L6 + L7 + o |
| | | H1 ≤ 3 m | | 65 m | |
| | Farthest equivalent piping length between outdoor units LO (*1) | | | 15 m | LA + Lc (LA + Lb) |
| | Max. equivalent length of outdoor unit connecting piping | | | 10 m | La, Lb, Lc |
| | Max. real length of indoor unit connecting piping | | | 30 m | a + f, b + g, c + h, d + i, e + j, k, l |
| | Max. real length between FS unit and indoor unit | | | 15 m | f, g, h, i, j |
| | Max. equivalent length between branching joints | | | 50 m | L2, L3, L4, L8 |
| Height difference | Height between indoor and outdoor units H1 | | Upper outdoor unit | 50 m | – |
| | | | Lower outdoor unit | 30 m | – |
| | Height between indoor units H2 | | Upper outdoor unit | 40 m | – |
| | | | Lower outdoor unit (*4) | 15 m | – |
| | Height between outdoor units H3 (*5) | | | 5 m | – |
| <In case of two or more indoor units are connected with FS unit> | | | | | |
| | Max. equivalent piping length in group of the FS unit | | | 30 m | L5 + L6 + m, L5 + L6 + L7 + n, L5 + L6 + L7 + o |
| | Max. real length between FS unit and the wired indoor unit (*2) | | | 15 m | L6 + m, L6 + L7 + n, L6 + L7 + o |
| | Height difference between indoor units in same FS unit H4 | | | 0.5 m | – |

*1: Farthest outdoor unit from the first branch: (C), farthest indoor unit: (o)
*2: Run wires to one indoor unit and flow selector unit linked with one of those remote controllers if flow selector unit is connected to multiple indoor units.
*3: Allowable values for length equivalent to furthest pipe are shown below and they vary according to performance rank of outdoor unit.
22.4 to 40.0: 185 m, 45.0 to 78.5: 195 m, 85.0 to 118.0: 200 m
*4: When system capacity is greater than 28 HP, height difference between indoor units is limited to 3 m. If the piping exceeds 3 m with a capacity greater than 28 HP there may be a case of capacity shortage in cooling.
*5: Ensure that the header unit is installed below all connected follower outdoor unit(s). Possible product failure may occur if header unit is installed above any follower unit(s).

# 3-3. Selection of refrigerant piping




### ① Pipe size of outdoor unit (Table 1)

| Model name MMY- | Suction gas side | Discharge gas side | Liquid side |
|---|---|---|---|
| MAP0804FT✻ | ø22.2 | ø19.1 | ø12.7 |
| MAP1004FT✻ | ø22.2 | ø19.1 | ø12.7 |
| MAP1204FT✻ | ø28.6 | ø19.1 | ø12.7 |
| MAP1404FT✻ | ø28.6 | ø22.2 | ø15.9 |

### ② Connecting pipe size between outdoor units (Table 2)

<Balance pipe ø9.5>

| Total capacity code of outdoor units at downstream side *1 *6 | Suction gas side | Discharge gas side | Liquid side |
|---|---|---|---|
| 16 to below 22 | ø28.6 | ø22.2 | ø15.9 |
| 22 or more | ø34.9 | ø28.6 | ø19.1 |

### ③ Size of main pipe (Table 3)

| Total capacity code of all outdoor units *1 | Suction gas side | Discharge gas side | Liquid side |
|---|---|---|---|
| 8 to below 12 | ø22.2 | ø19.1 | ø12.7 |
| 12 to below 14 | ø28.6 | ø19.1 | ø12.7 |
| 14 to below 16 | ø28.6 | ø22.2 | ø15.9 |
| 16 to below 22 | ø28.6 | ø22.2 | ø19.1 |
| 22 to below 26 | ø34.9 | ø28.6 | ø19.1 |
| 26 to below 36 | ø34.9 | ø28.6 | ø22.2 |
| 36 or more | ø41.3 | ø34.9 | ø22.2 |

Determine thickness of main pipe according to capacity of the outdoor units.

### ④ Pipe size between branching sections (Table 4)*2 *8

| Total capacity code of indoor units at downstream side *1 | Suction gas side | Discharge gas side | Liquid side |
|---|---|---|---|
| 6.4 or less | ø15.9 | ø12.7 | ø9.5 |
| 6.4 to below 12.2 | ø22.2 | ø19.1 | ø12.7 |
| 12.2 to below 16.2 | ø28.6 | ø22.2 | ø15.9 |
| 16.2 to below 20.2 | ø28.6 | ø22.2 | ø19.1 |
| 20.2 to below 25.2 | ø34.9 | ø28.6 | ø19.1 |
| 25.2 to below 35.2 | ø34.9 | ø28.6 | ø22.2 |
| 35.2 or more | ø41.3 | ø34.9 | ø22.2 |

### ⑤ Pipe size between FS unit and indoor unit (Table 5)

| Capacity rank of indoor unit | Gas side | Liquid side |
|---|---|---|
| 007 type to 012 type | ø9.5 | ø6.4 |
| 015 type to 018 type | ø12.7 | ø6.4 |
| 024 type to 056 type | ø15.9 | ø9.5 |
| 072 type to 096 type | ø22.2 | ø12.7 |

### ⑥ Pipe size between branching and indoor unit (Table 6)

| Capacity rank of indoor unit | | Gas side | Liquid side |
|---|---|---|---|
| 007 type to 012 type | Actual length 15 m or less | ø9.5 | ø6.4 |
| | Actual length exceeds 15 m | ø12.7 | ø9.5 |
| 015 type to 018 type | Actual length 15 m or less | ø12.7 | ø6.4 |
| | Actual length exceeds 15 m | ø15.9 | ø9.5 |
| 024 type to 056 type | | ø15.9 | ø9.5 |
| 072 type to 096 type | | ø22.2 | ø12.7 |

### ⑦ Selection of Y branching joint (Table 7)*3 *4

| | Capacity rank of indoor unit | Model name | |
|---|---|---|---|
| | | For 3 pipes | For 2 pipes |
| Y-shape branching joint | Below 6.4 | RBM-BY55FE | RBM-BY55E |
| | 6.4 to below 14.2 | RBM-BY105FE | RBM-BY105E |
| | 14.2 to below 25.2 | RBM-BY205FE | RBM-BY205E |
| | 25.2 or more | RBM-BY305FE | RBM-BY305E |

### ⑧ Selection of branching header (Table 8)*3 *4 *5

| | Capacity rank of indoor unit | | Model name | |
|---|---|---|---|---|
| | | | For 3 pipes | For 2 pipes |
| Branching header | For 4 branching | Below 14.2 | RBM-HY1043FE | RBM-HY1043E |
| | | 14.2 to below 25.2 | RBM-HY2043FE | RBM-HY2043E |
| | For 8 branching | Below 14.2 | RBM-HY1083FE | RBM-HY1083E |
| | | 14.2 to below 25.2 | RBM-HY2083FE | RBM-HY2083E |

### ⑨ Selection of branching joint for outdoor unit (Table 9)

| Total capacity code of outdoor units at downstream side*1*6 | Joints | | | | Model name |
|---|---|---|---|---|---|
| | Suction gas (Y-shape) | Discharge gas (T-shape) | Liquid (T-shape) | Balance (T-shape) | |
| Below 26 | ø31.8 ø28.6 ø25.4 | ø25.4 ø25.4 ø25.4 | ø19.1 ø19.1 ø19.1 | ø9.5 ø9.5 ø9.5 | RBM-BT14FE |
| 26 or more | ø38.1 ø38.1 ø28.6 | ø31.8 ø31.8 ø31.8 | ø22.2 ø22.2 ø22.2 | ø9.5 ø9.5 ø9.5 | RBM-BT24FE |

### ⑩ Selection of FS unit (Table 10)

| Total capacity of indoor units | Max. number of connectable indoor units | Model name |
|---|---|---|
| Below 4.0HP | 5 | RBM-Y1123FE |
| 4.0 to below 6.4HP | 8 | RBM-Y1803FE |
| 6.4 to 10.0HP or less | 8 | RBM-Y2803FE |

### Note

*1 Code is determined according to the capacity rank.
*2 If the piping size becomes over main piping size, select the size same as main piping.
*3 Branching pipe on the 1st branch should be selected according to the capacity code of the outdoor unit
*4 In case total capacity code of indoor units exceeds the capacity code of the outdoor unit, the pipe size should be selected based on the capacity of the outdoor unit.
*5 For 1 line after header branching, indoor units with a total maximum capacity code of 6.0 in total can be connected.
When the 1st branch is a header with the outdoor total capacity codes of 12 to 26, apply the model RBM-HY2043FE/E(4-branch) or RBM-HY2083FE/E(8-branch) regardless of the total capacity code of the down-stream indoor units.
And when 26 or more, branching header cannot be used as first branch.
*6 Starting point is main pipe in downstream side
*7 When two or more indoor units are connected with one FS unit, the operation is group control with one remote controller.
*8 Two piping between branching sections in cooling only and downstream of FS unit uses liquid pipe and suction gas pipe.

## 3-4. Charging requirement with additional refrigerant

### Calculating the amount of additional refrigerant required

**Refrigerant in the system when shipped from the factory**

| | | 8HP | 10HP | 12HP | 14HP |
|---|---|---|---|---|---|
| Refrigerant amount charged in factory | Heat recovery model | 11.0 kg | 11.0 kg | 11.0 kg | 11.0 kg |

When the system is charged with refrigerant at the factory, the amount of refrigerant needed for the pipes at the site is not included. Therefore, calculate the additional amount needed and add the required amount to the system.

**(Calculation)**
Additional refrigerant charge amount is calculated based on the size of liquid pipe at site and its real length.

[Additional refrigerant charge amount at site] =

[Real length of liquid pipe] × [Additional refrigerant charge amount per liquid pipe 1 m **(Table 1)**] × 1.3 + [Compensation by system HP **(Table 2)**]

Example : Additional charge amount R (kg) = {(L1 × 0.025 kg/m) + (L2 × 0.055 kg/m) + (L3 × 0.105 kg/m) + (L4 × 0.160 kg/m) + (L5 × 0.250 kg/m)} x 1.3 + (2.5 kg)

L1 : Real total length of liquid pipe ø6.4 (m)
L2 : Real total length of liquid pipe ø9.5 (m)
L3 : Real total length of liquid pipe ø12.7 (m)
L4 : Real total length of liquid pipe ø15.9 (m)
L5 : Real total length of liquid pipe ø19.1 (m)
System : 30HP

**Table 1**

| Pipe dia. at liquid side | ø6.4 | ø9.5 | ø12.7 | ø15.9 | ø19.1 | ø22.2 |
|---|---|---|---|---|---|---|
| Additional refrigerant amount / 1 m | 0.025 kg | 0.055 kg | 0.105 kg | 0.160 kg | 0.250 kg | 0.350 kg |

**Table 2**

| Combinated horse power (HP) | Outdoor combination (HP) | | | Compensation by system HP (kg) |
|---|---|---|---|---|
| 8 | 8 | | | 2 |
| 10 | 10 | | | 3 |
| 12 | 12 | | | 8 |
| 14 | 14 | | | 10 |
| 16 | 8 | 8 | | 0 |
| 18 | 10 | 8 | | 1.5 |
| 20 | 10 | 10 | | 3.5 |
| 22 | 12 | 10 | | 7.5 |
| 24 | 14 | 10 | | 8.5 |
| 26 | 14 | 12 | | 11 |
| 28 | 14 | 14 | | 12 |
| 30 | 10 | 10 | 10 | 2.5 |
| 32 | 12 | 10 | 10 | 5 |
| 34 | 14 | 10 | 10 | 6 |
| 36 | 12 | 12 | 12 | 8 |
| 38 | 14 | 12 | 12 | 9.5 |
| 40 | 14 | 14 | 12 | 11 |
| 42 | 14 | 14 | 14 | 12.5 |

## 4-1. General

- Perform wiring of the power supply in conformance with the regulations of the local electric company.
- For cabling of the power supply of the indoor unit and the inter-unit cabling between indoor and outdoor units, refer to the Installation Manual of indoor unit.
- Never connect power supply to the terminal block (U1, U2, U3, U4, U5, U6) for control wiring. (The equipment breaks down.)
- Arrange the cables so that the electric wires do not come to contact with high-temperature part of the pipe; otherwise coating melts and an accident may be caused.
- After connecting cable to the terminal block, take off the trap and then fix the cable with cable clamp.
- Do not turn on power of the indoor unit until vacuuming of the refrigerant pipe will finish.

## 4-2. Summary of wiring design

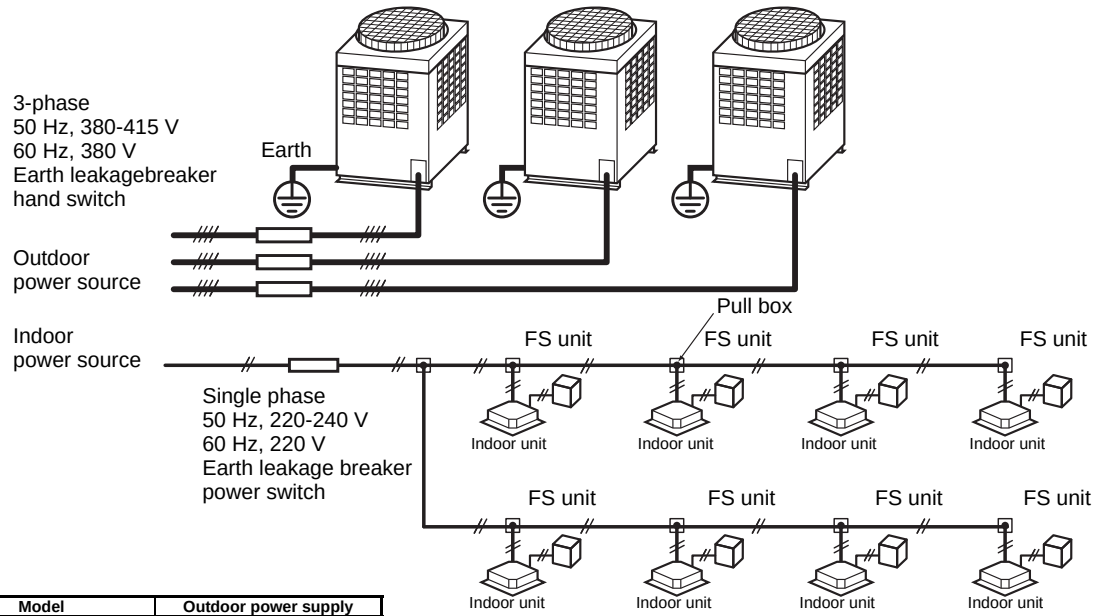
**Design of outdoor unit power supply**
- Select the wiring depending on MCA.
- Be sure to set the earth leakage breaker from the viewpoint of safety.

**Design of indoor unit power supply**
- Select the wiring depending on total current of indoor units.
- Determine the wire size for the length rules.
- Be sure to set the earth leakage breaker from the viewpoint of safety.

**Design of control wiring**
- Design each control wiring.
  - Between outdoor and indoor units,
  - Between indoor units/outdoor units
  - Between indoor unit and remote controller, central control, BMS
- Select the wire size and type depending on the length rules.

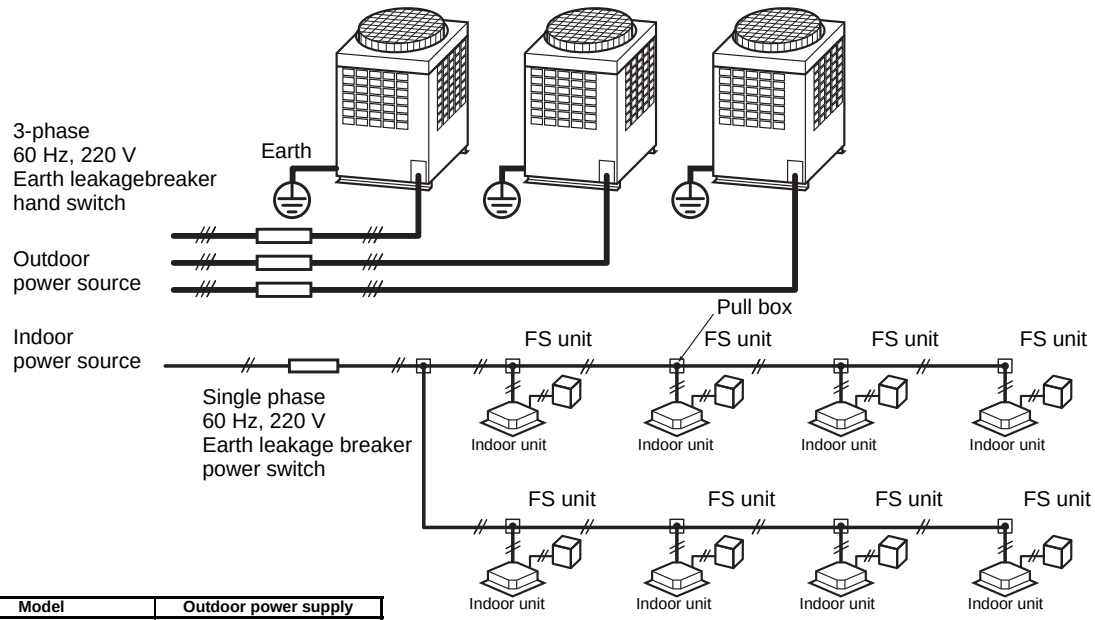
## 4-3. Electrical wiring design

### 4-3-1.




| Model | Outdoor power supply |
|---|---|
| MMY-MAP***4FT8 | 3-phase, 380-415 V, 50 Hz |
| MMY-MAP***4FT7 | 3-phase, 380 V, 60 Hz |

**4-3-2.**




| Model | Outdoor power supply |
|---|---|
| MMY-MAP***4FT5 | 3-phase, 220 V, 60 Hz |

- Wiring size must comply with the applicable local and national code.
- Determine the wire size for the indoor unit according to the number of connected indoor units downstream.

**NOTE:**
Control wire and power supply wire between the FS unit and the indoor unit are supplied as an accessory complete with the FS unit. (Wire length : 6 m)
If the length between indoor and FS unit exceeds 5 m, connect by using the connection cable kit sold separately (RBC-CBK15FE).

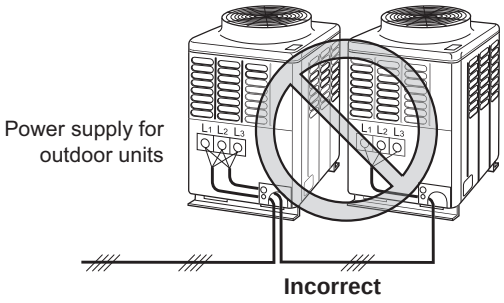
## 4-4. Outdoor unit power supply

**4-4-1.**

- Select the power supply cabling and fuse of each outdoor unit from the following specifications: cable 4-core, in conformance with Design 60245 IEC 66
- Do not connect the outdoor units by crossing outside of them, but connect them via the terminal block (L1, L2, L3, N).

| Model | Outdoor power supply |
|---|---|
| MMY-MAP***4FT8 | 3-phase, 380-415 V, 50 Hz |
| MMY-MAP***4FT7 | 3-phase, 380 V, 60 Hz |

Every outdoor unit must have a dedicated power supply.



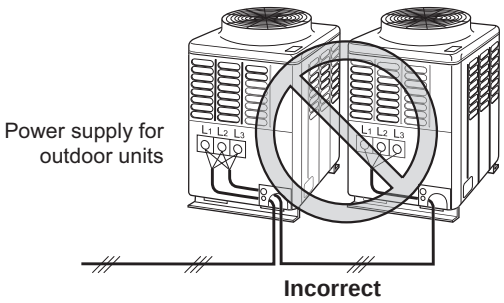

**Incorrect**

**4-4-2.**

- Select the power supply cabling and fuse of each outdoor unit from the following specifications: cable 4-core, in conformance with Design 60245 IEC 66
- Do not connect the outdoor units by crossing outside of them, but connect them via the terminal block (L1, L2, L3).

| Model | Outdoor power supply |
|---|---|
| MMY-MAP***4FT5 | 3-phase, 220 V, 60 Hz |

Every outdoor unit must have a dedicated power supply.




**Incorrect**

# Outdoor unit data

**[50 Hz, 380/400/415 V]**

## Single outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 8 | MAP0804FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 2.3 x 2 | | | 1.0 | 24.5 | 32 |
| 10 | MAP1004FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 2 | | | 1.0 | 27.1 | 32 |
| 12 | MAP1204FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 2.6 x 3 | | | 1.0 | 31.2 | 40 |
| 14 | MAP1404FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | | | 1.0 | 36.4 | 50 |

## Combination of outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 16 | AP1614FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 2.3 x 2 | 2.3 x 2 | | 1.0 x 2 | 49.0 | 63 |
| 18 | AP1814FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 2 | 2.3 x 2 | | 1.0 x 2 | 51.6 | 63 |
| 20 | AP2014FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 2 | 3.1 x 2 | | 1.0 x 2 | 54.2 | 63 |
| 22 | AP2214FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 2.6 x 3 | 3.1 x 2 | | 1.0 x 2 | 58.3 | 80 |
| 24 | AP2414FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 2 | | 1.0 x 2 | 63.5 | 80 |
| 26 | AP2614FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 2.6 x 3 | | 1.0 x 2 | 67.6 | 80 |
| 28 | AP2814FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 3 | | 1.0 x 2 | 72.8 | 100 |
| 30 | AP3014FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 2 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 81.3 | 100 |
| 32 | AP3214FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 2.6 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 85.4 | 100 |
| 34 | AP3414FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 90.6 | 125 |
| 36 | AP3614FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 2.6 x 3 | 3.1 x 2 | 1.0 x 3 | 93.6 | 125 |
| 38 | AP3814FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 3 | 3.1 x 2 | 1.0 x 3 | 98.8 | 125 |
| 40 | AP4014FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 3 | 2.6 x 3 | 1.0 x 3 | 104 | 125 |
| 42 | AP4214FT8 | 3N~ 50 Hz | 380-400-415 V | 342 | 456 | 3.1 x 3 | 3.1 x 3 | 3.1 x 3 | 1.0 x 3 | 109 | 125 |

Notes MCA : Minimum Circuit Amps
MOCP : Maximum Overcurrent Protection (Amps)

**[60 Hz, 380 V]**

## Single outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 8 | MAP0804FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.3 x 2 | | | 1.0 | 24.5 | 32 |
| 10 | MAP1004FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 2 | | | 1.0 | 27.1 | 32 |
| 12 | MAP1204FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.6 x 3 | | | 1.0 | 31.2 | 40 |
| 14 | MAP1404FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | | | 1.0 | 36.4 | 50 |

## Combination of outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 16 | AP1614FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.3 x 2 | 2.3 x 2 | | 1.0 x 2 | 49.0 | 63 |
| 18 | AP1814FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 2 | 2.3 x 2 | | 1.0 x 2 | 51.6 | 63 |
| 20 | AP2014FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 2 | 3.1 x 2 | | 1.0 x 2 | 54.2 | 63 |
| 22 | AP2214FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.6 x 3 | 3.1 x 2 | | 1.0 x 2 | 58.3 | 80 |
| 24 | AP2414FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 3.1 x 2 | | 1.0 x 2 | 63.5 | 80 |
| 26 | AP2614FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 2.6 x 3 | | 1.0 x 2 | 67.6 | 80 |
| 28 | AP2814FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 3.1 x 3 | | 1.0 x 2 | 72.8 | 100 |
| 30 | AP3014FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 2 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 81.3 | 100 |
| 32 | AP3214FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.6 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 85.4 | 100 |
| 34 | AP3414FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 90.6 | 125 |
| 36 | AP3614FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 2.6 x 3 | 2.6 x 3 | 2.6 x 2 | 1.0 x 3 | 93.6 | 125 |
| 38 | AP3814FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 2.6 x 3 | 2.6 x 2 | 1.0 x 3 | 98.8 | 125 |
| 40 | AP4014FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 3.1 x 3 | 2.6 x 3 | 1.0 x 3 | 104 | 125 |
| 42 | AP4214FT7 | 3N~ 60 Hz | 380 V | 342 | 418 | 3.1 x 3 | 3.1 x 3 | 3.1 x 3 | 1.0 x 3 | 109 | 125 |

**[60 Hz, 220 V]**

## Single outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 8 | MAP0804FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.3 x 2 | | | 1.0 | 37 | 50 |
| 10 | MAP1004FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 2 | | | 1.0 | 45 | 63 |
| 12 | MAP1204FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.6 x 3 | | | 1.0 | 52 | 63 |
| 14 | MAP1404FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | | | 1.0 | 65 | 80 |

## Combination of outdoor unit

| HP | Heat Pump Model MMY- | Power Supply | | Voltage Range | | Output | | | | MCA | MOCP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Compressor | | | Fan Motor | | |
| | | Phase and frequency | Nominal Voltage | Min | Max | Unit No.1 | Unit No.2 | Unit No.3 | | | |
| | | | | (V) | (V) | (kW) | (kW) | (kW) | (kW) | (A) | (A) |
| 16 | AP1614FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.3 x 2 | 2.3 x 2 | | 1.0 x 2 | 73 | 100 |
| 18 | AP1814FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 2 | 2.3 x 2 | | 1.0 x 2 | 81 | 100 |
| 20 | AP2014FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 2 | 3.1 x 2 | | 1.0 x 2 | 89 | 100 |
| 22 | AP2214FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.6 x 3 | 3.1 x 2 | | 1.0 x 2 | 97 | 125 |
| 24 | AP2414FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 3.1 x 2 | | 1.0 x 2 | 109 | 125 |
| 26 | AP2614FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 2.6 x 3 | | 1.0 x 2 | 117 | 150 |
| 28 | AP2814FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 3.1 x 3 | | 1.0 x 2 | 130 | 150 |
| 30 | AP3014FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 2 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 134 | 160 |
| 32 | AP3214FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.6 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 142 | 160 |
| 34 | AP3414FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 3.1 x 2 | 3.1 x 2 | 1.0 x 3 | 154 | 175 |
| 36 | AP3614FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 2.6 x 3 | 2.6 x 3 | 2.6 x 3 | 1.0 x 3 | 157 | 175 |
| 38 | AP3814FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 2.6 x 3 | 2.6 x 3 | 1.0 x 3 | 169 | 200 |
| 40 | AP4014FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 3.1 x 3 | 2.6 x 3 | 1.0 x 3 | 182 | 225 |
| 42 | AP4214FT5 | 3 ~ 60 Hz | 220 V | 198 | 242 | 3.1 x 3 | 3.1 x 3 | 3.1 x 3 | 1.0 x 3 | 194 | 225 |

Notes MCA : Minimum Circuit Amps
MOCP : Maximum Overcurrent Protection (Amps)

## 4-5. Indoor unit power supply

### • Electrical characteristics for 50 Hz outdoor units

| Type | Model | Nominal Voltage (V-Ph-Hz) | Voltage Range | | Fan Motor | | Power Supply | |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Max | kW | FLA | MCA | MOCP |
| 4-Way Air Discharge Cassette Type | MMU-AP0092H | 230-1-50 | 198 | 264 | 0.014 | 0.63 | 0.79 | 15 |
| | MMU-AP0122H | 230-1-50 | 198 | 264 | 0.014 | 0.63 | 0.79 | 15 |
| | MMU-AP0152H | 230-1-50 | 198 | 264 | 0.014 | 0.80 | 1.00 | 15 |
| | MMU-AP0182H | 230-1-50 | 198 | 264 | 0.014 | 0.80 | 1.00 | 15 |
| | MMU-AP0242H | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0272H | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0302H | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0362H | 230-1-50 | 198 | 264 | 0.068 | 1.15 | 1.44 | 15 |
| | MMU-AP0482H | 230-1-50 | 198 | 264 | 0.072 | 1.15 | 1.44 | 15 |
| | MMU-AP0562H | 230-1-50 | 198 | 264 | 0.072 | 1.15 | 1.44 | 15 |
| | MMU-AP0094HP-E | 230-1-50 | 198 | 264 | 0.014 | 0.63 | 0.79 | 15 |
| | MMU-AP0124HP-E | 230-1-50 | 198 | 264 | 0.014 | 0.63 | 0.79 | 15 |
| | MMU-AP0154HP-E | 230-1-50 | 198 | 264 | 0.014 | 0.80 | 1.00 | 15 |
| | MMU-AP0184HP-E | 230-1-50 | 198 | 264 | 0.014 | 0.80 | 1.00 | 15 |
| | MMU-AP0244HP-E | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0274HP-E | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0304HP-E | 230-1-50 | 198 | 264 | 0.020 | 0.87 | 1.09 | 15 |
| | MMU-AP0364HP-E | 230-1-50 | 198 | 264 | 0.068 | 1.15 | 1.44 | 15 |
| | MMU-AP0484HP-E | 230-1-50 | 198 | 264 | 0.072 | 1.15 | 1.44 | 15 |
| | MMU-AP0564HP-E | 230-1-50 | 198 | 264 | 0.072 | 1.15 | 1.44 | 15 |
| Compact 4-way Cassette (600 x 600) Type | MMU-AP0054MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.32 | 0.40 | 15 |
| | MMU-AP0074MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.32 | 0.40 | 15 |
| | MMU-AP0094MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.35 | 0.44 | 15 |
| | MMU-AP0124MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.36 | 0.45 | 15 |
| | MMU-AP0154MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.48 | 0.60 | 15 |
| | MMU-AP0184MH-E | 230-1-50 | 198 | 264 | 0.060 | 0.48 | 0.60 | 15 |
| 2-Way Air Discharge Cassette Type | MMU-AP0072WH | 230-1-50 | 198 | 264 | 0.020 | 0.32 | 0.40 | 15 |
| | MMU-AP0092WH | 230-1-50 | 198 | 264 | 0.020 | 0.32 | 0.40 | 15 |
| | MMU-AP0122WH | 230-1-50 | 198 | 264 | 0.020 | 0.32 | 0.40 | 15 |
| | MMU-AP0152WH | 230-1-50 | 198 | 264 | 0.020 | 0.32 | 0.40 | 15 |
| | MMU-AP0182WH | 230-1-50 | 198 | 264 | 0.030 | 0.70 | 0.88 | 15 |
| | MMU-AP0242WH | 230-1-50 | 198 | 264 | 0.040 | 0.81 | 1.01 | 15 |
| | MMU-AP0272WH | 230-1-50 | 198 | 264 | 0.040 | 0.81 | 1.01 | 15 |
| | MMU-AP0302WH | 230-1-50 | 198 | 264 | 0.050 | 0.81 | 1.01 | 15 |
| | MMU-AP0362WH | 230-1-50 | 198 | 264 | 0.070 | 0.87 | 1.09 | 15 |
| | MMU-AP0485WH | 230-1-50 | 198 | 264 | 0.070 | 0.87 | 1.09 | 15 |
| | MMU-AP0562WH | 230-1-50 | 198 | 264 | 0.070 | 0.87 | 1.09 | 15 |
| 1-Way Air Discharge Cassette Type | MMU-AP0074YH-E | 230-1-50 | 198 | 264 | 0.022 | 0.28 | 0.35 | 15 |
| | MMU-AP0094YH-E | 230-1-50 | 198 | 264 | 0.022 | 0.28 | 0.35 | 15 |
| | MMU-AP0124YH-E | 230-1-50 | 198 | 264 | 0.022 | 0.28 | 0.35 | 15 |
| | MMU-AP0154SH-E | 230-1-50 | 198 | 264 | 0.030 | 0.40 | 0.49 | 15 |
| | MMU-AP0184SH-E | 230-1-50 | 198 | 264 | 0.030 | 0.42 | 0.53 | 15 |
| | MMU-AP0244SH-E | 230-1-50 | 198 | 264 | 0.030 | 0.71 | 0.88 | 15 |

| Type | Model | Nominal Voltage (V-Ph-Hz) | Voltage Range | | Fan Motor | | Power Supply | |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Max | kW | FLA | MCA | MOCP |
| Concealed Duct Type | MMD-AP0074BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.33 | 0.41 | 15 |
| | MMD-AP0094BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.33 | 0.41 | 15 |
| | MMD-AP0124BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.39 | 0.49 | 15 |
| | MMD-AP0154BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.39 | 0.49 | 15 |
| | MMD-AP0184BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.50 | 0.62 | 15 |
| | MMD-AP0244BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.60 | 0.75 | 15 |
| | MMD-AP0274BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.60 | 0.75 | 15 |
| | MMD-AP0304BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.70 | 0.88 | 15 |
| | MMD-AP0364BH-E | 230-1-50 | 198 | 264 | 0.120 | 0.96 | 1.20 | 15 |
| | MMD-AP0484BH-E | 230-1-50 | 198 | 264 | 0.120 | 1.13 | 1.41 | 15 |
| | MMD-AP0564BH-E | 230-1-50 | 198 | 264 | 0.120 | 1.13 | 1.41 | 15 |
| | MMD-AP0076BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.30 | 0.37 | 15 |
| | MMD-AP0096BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.34 | 0.42 | 15 |
| | MMD-AP0126BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.34 | 0.42 | 15 |
| | MMD-AP0156BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.48 | 0.61 | 15 |
| | MMD-AP0186BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.48 | 0.61 | 15 |
| | MMD-AP0246BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.60 | 0.75 | 15 |
| | MMD-AP0276BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.60 | 0.75 | 15 |
| | MMD-AP0306BH-E | 230-1-50 | 198 | 264 | 0.150 | 0.70 | 0.88 | 15 |
| | MMD-AP0366BH-E | 230-1-50 | 198 | 264 | 0.250 | 1.23 | 1.54 | 15 |
| | MMD-AP0486BH-E | 230-1-50 | 198 | 264 | 0.250 | 1.41 | 1.77 | 15 |
| | MMD-AP0566BH-E | 230-1-50 | 198 | 264 | 0.250 | 1.41 | 1.77 | 15 |
| Concealed Duct High Static Pressure Type | MMD-AP0184H-E | 230-1-50 | 198 | 264 | 0.160 | 0.93 | 1.16 | 15 |
| | MMD-AP0244H-E | 230-1-50 | 198 | 264 | 0.160 | 1.55 | 1.94 | 15 |
| | MMD-AP0274H-E | 230-1-50 | 198 | 264 | 0.160 | 1.55 | 1.94 | 15 |
| | MMD-AP0364H-E | 230-1-50 | 198 | 264 | 0.260 | 1.87 | 2.34 | 15 |
| | MMD-AP0484H-E | 230-1-50 | 198 | 264 | 0.260 | 2.12 | 2.65 | 15 |
| | MMD-AP0724H-E | 230-1-50 | 198 | 264 | 0.370 x 3 | 6.04 | 7.55 | 15 |
| | MMD-AP0964H-E | 230-1-50 | 198 | 264 | 0.370 x 3 | 6.35 | 7.94 | 15 |
| Slim Duct Type | MMD-AP0054SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.35 | 0.44 | 15 |
| | MMD-AP0074SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.35 | 0.44 | 15 |
| | MMD-AP0094SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.35 | 0.44 | 15 |
| | MMD-AP0124SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.37 | 0.47 | 15 |
| | MMD-AP0154SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.38 | 0.48 | 15 |
| | MMD-AP0184SPH-E | 230-1-50 | 198 | 264 | 0.060 | 0.47 | 0.59 | 15 |
| | MMD-AP0244SPH-E | 230-1-50 | 198 | 264 | 0.120 | 0.86 | 1.08 | 15 |
| | MMD-AP0274SPH-E | 230-1-50 | 198 | 264 | 0.120 | 0.86 | 1.08 | 15 |
| Ceiling Type | MMC-AP0154H-E | 230-1-50 | 198 | 264 | 0.030 | 0.33 | 0.41 | 15 |
| | MMC-AP0184H-E | 230-1-50 | 198 | 264 | 0.030 | 0.37 | 0.46 | 15 |
| | MMC-AP0244H-E | 230-1-50 | 198 | 264 | 0.040 | 0.48 | 0.60 | 15 |
| | MMC-AP0274H-E | 230-1-50 | 198 | 264 | 0.040 | 0.48 | 0.60 | 15 |
| | MMC-AP0364H-E | 230-1-50 | 198 | 264 | 0.080 | 0.90 | 1.13 | 15 |
| | MMC-AP0484H-E | 230-1-50 | 198 | 264 | 0.080 | 0.96 | 1.20 | 15 |
| High-wall Type (3 series) | MMK-AP0073H | 230-1-50 | 198 | 264 | 0.030 | 0.20 | 0.22 | 15 |
| | MMK-AP0093H | 230-1-50 | 198 | 264 | 0.030 | 0.22 | 0.24 | 15 |
| | MMK-AP0123H | 230-1-50 | 198 | 264 | 0.030 | 0.22 | 0.24 | 15 |
| | MMK-AP0153H | 230-1-50 | 198 | 264 | 0.030 | 0.37 | 0.40 | 15 |
| | MMK-AP0183H | 230-1-50 | 198 | 264 | 0.030 | 0.37 | 0.40 | 15 |
| | MMK-AP0243H | 230-1-50 | 198 | 264 | 0.030 | 0.43 | 0.47 | 15 |
| Floor Standing Cabinet Type | MML-AP0074H-E | 230-1-50 | 198 | 264 | 0.045 | 0.30 | 0.37 | 15 |
| | MML-AP0094H-E | 230-1-50 | 198 | 264 | 0.045 | 0.30 | 0.37 | 15 |
| | MML-AP0124H-E | 230-1-50 | 198 | 264 | 0.045 | 0.49 | 0.62 | 15 |
| | MML-AP0154H-E | 230-1-50 | 198 | 264 | 0.045 | 0.49 | 0.62 | 15 |
| | MML-AP0184H-E | 230-1-50 | 198 | 264 | 0.070 | 0.54 | 0.68 | 15 |
| | MML-AP0244H-E | 230-1-50 | 198 | 264 | 0.070 | 0.54 | 0.68 | 15 |
| Floor Standing Concealed Type | MML-AP0074BH-E | 230-1-50 | 198 | 264 | 0.019 | 0.29 | 0.36 | 15 |
| | MML-AP0094BH-E | 230-1-50 | 198 | 264 | 0.019 | 0.29 | 0.36 | 15 |
| | MML-AP0124BH-E | 230-1-50 | 198 | 264 | 0.019 | 0.29 | 0.36 | 15 |
| | MML-AP0154BH-E | 230-1-50 | 198 | 264 | 0.070 | 0.52 | 0.65 | 15 |
| | MML-AP0184BH-E | 230-1-50 | 198 | 264 | 0.070 | 0.52 | 0.65 | 15 |
| | MML-AP0244BH-E | 230-1-50 | 198 | 264 | 0.070 | 0.53 | 0.66 | 15 |

| Type | Model | Nominal Voltage (V-Ph-Hz) | Voltage Range | | Fan Motor | | Power Supply | |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Max | kW | FLA | MCA | MOCP |
| Floor Standing Type | MMF-AP0154H-E | 230-1-50 | 198 | 264 | 0.037 | 0.77 | 0.96 | 15 |
| | MMF-AP0184H-E | 230-1-50 | 198 | 264 | 0.037 | 0.77 | 0.96 | 15 |
| | MMF-AP0244H-E | 230-1-50 | 198 | 264 | 0.063 | 1.01 | 1.27 | 15 |
| | MMF-AP0274H-E | 230-1-50 | 198 | 264 | 0.063 | 1.01 | 1.27 | 15 |
| | MMF-AP0364H-E | 230-1-50 | 198 | 264 | 0.110 | 1.48 | 1.85 | 15 |
| | MMF-AP0484H-E | 230-1-50 | 198 | 264 | 0.160 | 1.84 | 2.30 | 15 |
| | MMF-AP0564H-E | 230-1-50 | 198 | 264 | 0.160 | 1.84 | 2.30 | 15 |
| Console Type | MML-AP0074NH-E | 230-1-50 | 198 | 264 | 0.041 | 0.21 | 0.26 | 15 |
| | MML-AP0094NH-E | 230-1-50 | 198 | 264 | 0.041 | 0.21 | 0.26 | 15 |
| | MML-AP0124NH-E | 230-1-50 | 198 | 264 | 0.041 | 0.25 | 0.31 | 15 |
| | MML-AP0154NH-E | 230-1-50 | 198 | 264 | 0.041 | 0.32 | 0.40 | 15 |
| | MML-AP0184NH-E | 230-1-50 | 198 | 264 | 0.041 | 0.46 | 0.58 | 15 |
| Air to Air Heat exchanger with DX-coil Type | MMD-VN502HEXE | 230-1-50 | 198 | 264 | 0.248 | 1.5 | 1.7 | 15 |
| | MMD-VN802HEXE | 230-1-50 | 198 | 264 | 0.254 | 2.6 | 3.0 | 15 |
| | MMD-VN1002HEXE | 230-1-50 | 198 | 264 | 0.568 | 2.9 | 3.5 | 15 |

## • Electrical characteristics for 60 Hz outdoor units

| Type | Model | Nominal Voltage (V-Ph-Hz) | Voltage Range | | Fan Motor | | Power Supply | |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Max | kW | FLA | MCA | MOCP |
| 4-Way Air Discharge Cassette Type | MMU-AP0092H | 220-1-60 | 198 | 242 | 0.014 | 0.66 | 0.83 | 15 |
| | MMU-AP0122H | 220-1-60 | 198 | 242 | 0.014 | 0.66 | 0.83 | 15 |
| | MMU-AP0152H | 220-1-60 | 198 | 242 | 0.014 | 0.84 | 1.05 | 15 |
| | MMU-AP0182H | 220-1-60 | 198 | 242 | 0.014 | 0.84 | 1.05 | 15 |
| | MMU-AP0242H | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0272H | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0302H | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0362H | 220-1-60 | 198 | 242 | 0.068 | 1.21 | 1.51 | 15 |
| | MMU-AP0482H | 220-1-60 | 198 | 242 | 0.072 | 1.21 | 1.51 | 15 |
| | MMU-AP0562H | 220-1-60 | 198 | 242 | 0.072 | 1.21 | 1.51 | 15 |
| | MMU-AP0094HP-E | 220-1-60 | 198 | 242 | 0.014 | 0.66 | 0.83 | 15 |
| | MMU-AP0124HP-E | 220-1-60 | 198 | 242 | 0.014 | 0.66 | 0.83 | 15 |
| | MMU-AP0154HP-E | 220-1-60 | 198 | 242 | 0.014 | 0.84 | 1.05 | 15 |
| | MMU-AP0184HP-E | 220-1-60 | 198 | 242 | 0.014 | 0.84 | 1.05 | 15 |
| | MMU-AP0244HP-E | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0274HP-E | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0304HP-E | 220-1-60 | 198 | 242 | 0.020 | 0.91 | 1.14 | 15 |
| | MMU-AP0364HP-E | 220-1-60 | 198 | 242 | 0.068 | 1.21 | 1.51 | 15 |
| | MMU-AP0484HP-E | 220-1-60 | 198 | 242 | 0.072 | 1.21 | 1.51 | 15 |
| | MMU-AP0564HP-E | 220-1-60 | 198 | 242 | 0.072 | 1.21 | 1.51 | 15 |
| Compact 4-way Cassette (600 x 600) Type | MMU-AP0074MH-E | 220-1-60 | 198 | 242 | 0.060 | 0.31 | 0.39 | 15 |
| | MMU-AP0094MH-E | 220-1-60 | 198 | 242 | 0.060 | 0.33 | 0.41 | 15 |
| | MMU-AP0124MH-E | 220-1-60 | 198 | 242 | 0.060 | 0.35 | 0.44 | 15 |
| | MMU-AP0154MH-E | 220-1-60 | 198 | 242 | 0.060 | 0.47 | 0.59 | 15 |
| | MMU-AP0184MH-E | 220-1-60 | 198 | 242 | 0.060 | 0.47 | 0.59 | 15 |
| 2-Way Air Discharge Cassette Type | MMU-AP0072WH | 220-1-60 | 198 | 242 | 0.020 | 0.30 | 0.38 | 15 |
| | MMU-AP0092WH | 220-1-60 | 198 | 242 | 0.020 | 0.30 | 0.38 | 15 |
| | MMU-AP0122WH | 220-1-60 | 198 | 242 | 0.020 | 0.30 | 0.38 | 15 |
| | MMU-AP0152WH | 220-1-60 | 198 | 242 | 0.020 | 0.30 | 0.38 | 15 |
| | MMU-AP0182WH | 220-1-60 | 198 | 242 | 0.030 | 0.67 | 0.84 | 15 |
| | MMU-AP0242WH | 220-1-60 | 198 | 242 | 0.040 | 0.77 | 0.96 | 15 |
| | MMU-AP0272WH | 220-1-60 | 198 | 242 | 0.040 | 0.77 | 0.96 | 15 |
| | MMU-AP0302WH | 220-1-60 | 198 | 242 | 0.050 | 0.77 | 0.96 | 15 |
| | MMU-AP0362WH | 220-1-60 | 198 | 242 | 0.070 | 0.83 | 1.04 | 15 |
| | MMU-AP0485WH | 220-1-60 | 198 | 242 | 0.070 | 0.83 | 1.04 | 15 |
| | MMU-AP0562WH | 220-1-60 | 198 | 242 | 0.070 | 0.83 | 1.04 | 15 |
| 1-Way Air Discharge Cassette Type | MMU-AP0074YH-E | 220-1-60 | 198 | 242 | 0.022 | 0.30 | 0.37 | 15 |
| | MMU-AP0094YH-E | 220-1-60 | 198 | 242 | 0.022 | 0.30 | 0.37 | 15 |
| | MMU-AP0124YH-E | 220-1-60 | 198 | 242 | 0.022 | 0.30 | 0.37 | 15 |
| | MMU-AP0154SH-E | 220-1-60 | 198 | 242 | 0.030 | 0.40 | 0.50 | 15 |
| | MMU-AP0184SH-E | 220-1-60 | 198 | 242 | 0.030 | 0.45 | 0.57 | 15 |
| | MMU-AP0244SH-E | 220-1-60 | 198 | 242 | 0.030 | 0.75 | 0.94 | 15 |
| Concealed Duct Type | MMD-AP0074BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.35 | 0.43 | 15 |
| | MMD-AP0094BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.35 | 0.43 | 15 |
| | MMD-AP0124BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.41 | 0.51 | 15 |
| | MMD-AP0154BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.41 | 0.51 | 15 |
| | MMD-AP0184BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.52 | 0.65 | 15 |
| | MMD-AP0244BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.63 | 0.78 | 15 |
| | MMD-AP0274BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.63 | 0.78 | 15 |
| | MMD-AP0304BH-E | 220-1-60 | 198 | 242 | 0.120 | 0.73 | 0.91 | 15 |
| | MMD-AP0364BH-E | 220-1-60 | 198 | 242 | 0.120 | 1.00 | 1.25 | 15 |
| | MMD-AP0484BH-E | 220-1-60 | 198 | 242 | 0.120 | 1.18 | 1.48 | 15 |
| | MMD-AP0564BH-E | 220-1-60 | 198 | 242 | 0.120 | 1.18 | 1.48 | 15 |
| | MMD-AP0076BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.31 | 0.39 | 15 |
| | MMD-AP0096BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.35 | 0.44 | 15 |
| | MMD-AP0126BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.35 | 0.44 | 15 |
| | MMD-AP0156BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.51 | 0.63 | 15 |
| | MMD-AP0186BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.51 | 0.63 | 15 |
| | MMD-AP0246BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.63 | 0.79 | 15 |
| | MMD-AP0276BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.63 | 0.79 | 15 |
| | MMD-AP0306BH-E | 220-1-60 | 198 | 242 | 0.150 | 0.74 | 0.92 | 15 |
| | MMD-AP0366BH-E | 220-1-60 | 198 | 242 | 0.250 | 1.28 | 1.61 | 15 |
| | MMD-AP0486BH-E | 220-1-60 | 198 | 242 | 0.250 | 1.48 | 1.85 | 15 |
| | MMD-AP0566BH-E | 220-1-60 | 198 | 242 | 0.250 | 1.48 | 1.85 | 15 |

| Type | Model | Nominal Voltage (V-Ph-Hz) | Voltage Range | | Fan Motor | | Power Supply | |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Max | kW | FLA | MCA | MOCP |
| Concealed Duct High Static Pressure Type | MMD-AP0184H-E | 220-1-60 | 198 | 242 | 0.160 | 1.06 | 1.32 | 15 |
| | MMD-AP0244H-E | 220-1-60 | 198 | 242 | 0.160 | 2.07 | 2.59 | 15 |
| | MMD-AP0274H-E | 220-1-60 | 198 | 242 | 0.160 | 2.07 | 2.59 | 15 |
| | MMD-AP0364H-E | 220-1-60 | 198 | 242 | 0.260 | 2.38 | 2.98 | 15 |
| | MMD-AP0484H-E | 220-1-60 | 198 | 242 | 0.260 | 2.60 | 3.25 | 15 |
| | MMD-AP0724H-E | 220-1-60 | 198 | 242 | 0.370 x 3 | 8.17 | 10.2 | 15 |
| | MMD-AP0964H-E | 220-1-60 | 198 | 242 | 0.370 x 3 | 8.53 | 10.7 | 15 |
| Slim Duct Type | MMD-AP0074SPH-E | 220-1-60 | 198 | 242 | 0.060 | 0.32 | 0.41 | 15 |
| | MMD-AP0094SPH-E | 220-1-60 | 198 | 242 | 0.060 | 0.32 | 0.41 | 15 |
| | MMD-AP0124SPH-E | 220-1-60 | 198 | 242 | 0.060 | 0.36 | 0.45 | 15 |
| | MMD-AP0154SPH-E | 220-1-60 | 198 | 242 | 0.060 | 0.37 | 0.47 | 15 |
| | MMD-AP0184SPH-E | 220-1-60 | 198 | 242 | 0.060 | 0.44 | 0.56 | 15 |
| | MMD-AP0244SPH-E | 220-1-60 | 198 | 242 | 0.120 | 0.90 | 1.12 | 15 |
| | MMD-AP0274SPH-E | 220-1-60 | 198 | 242 | 0.120 | 0.90 | 1.12 | 15 |
| Ceiling Type | MMC-AP0154H-E | 220-1-60 | 198 | 242 | 0.030 | 0.35 | 0.43 | 15 |
| | MMC-AP0184H-E | 220-1-60 | 198 | 242 | 0.030 | 0.39 | 0.48 | 15 |
| | MMC-AP0244H-E | 220-1-60 | 198 | 242 | 0.040 | 0.50 | 0.63 | 15 |
| | MMC-AP0274H-E | 220-1-60 | 198 | 242 | 0.040 | 0.50 | 0.63 | 15 |
| | MMC-AP0364H-E | 220-1-60 | 198 | 242 | 0.080 | 0.94 | 1.18 | 15 |
| | MMC-AP0484H-E | 220-1-60 | 198 | 242 | 0.080 | 1.00 | 1.25 | 15 |
| High-wall Type (3 series) | MMK-AP0073H | 220-1-60 | 198 | 242 | 0.030 | 0.20 | 0.22 | 15 |
| | MMK-AP0093H | 220-1-60 | 198 | 242 | 0.030 | 0.22 | 0.24 | 15 |
| | MMK-AP0123H | 220-1-60 | 198 | 242 | 0.030 | 0.22 | 0.24 | 15 |
| | MMK-AP0153H | 220-1-60 | 198 | 242 | 0.030 | 0.37 | 0.40 | 15 |
| | MMK-AP0183H | 220-1-60 | 198 | 242 | 0.030 | 0.37 | 0.40 | 15 |
| | MMK-AP0243H | 220-1-60 | 198 | 242 | 0.030 | 0.43 | 0.47 | 15 |
| Floor Standing Cabinet Type | MML-AP0074H-E | 220-1-60 | 198 | 242 | 0.045 | 0.29 | 0.36 | 15 |
| | MML-AP0094H-E | 220-1-60 | 198 | 242 | 0.045 | 0.29 | 0.36 | 15 |
| | MML-AP0124H-E | 220-1-60 | 198 | 242 | 0.045 | 0.51 | 0.63 | 15 |
| | MML-AP0154H-E | 220-1-60 | 198 | 242 | 0.045 | 0.51 | 0.63 | 15 |
| | MML-AP0184H-E | 220-1-60 | 198 | 242 | 0.070 | 0.61 | 0.76 | 15 |
| | MML-AP0244H-E | 220-1-60 | 198 | 242 | 0.070 | 0.61 | 0.76 | 15 |
| Floor Standing Concealed Type | MML-AP0074BH-E | 220-1-60 | 198 | 242 | 0.019 | 0.31 | 0.39 | 15 |
| | MML-AP0094BH-E | 220-1-60 | 198 | 242 | 0.019 | 0.31 | 0.39 | 15 |
| | MML-AP0124BH-E | 220-1-60 | 198 | 242 | 0.019 | 0.31 | 0.39 | 15 |
| | MML-AP0154BH-E | 220-1-60 | 198 | 242 | 0.070 | 0.53 | 0.66 | 15 |
| | MML-AP0184BH-E | 220-1-60 | 198 | 242 | 0.070 | 0.53 | 0.66 | 15 |
| | MML-AP0244BH-E | 220-1-60 | 198 | 242 | 0.070 | 0.59 | 0.73 | 15 |
| Floor Standing Type | MMF-AP0154H-E | 220-1-60 | 198 | 242 | 0.037 | 0.77 | 0.96 | 15 |
| | MMF-AP0184H-E | 220-1-60 | 198 | 242 | 0.037 | 0.77 | 0.96 | 15 |
| | MMF-AP0244H-E | 220-1-60 | 198 | 242 | 0.063 | 1.04 | 1.29 | 15 |
| | MMF-AP0274H-E | 220-1-60 | 198 | 242 | 0.063 | 1.04 | 1.29 | 15 |
| | MMF-AP0364H-E | 220-1-60 | 198 | 242 | 0.110 | 1.58 | 1.97 | 15 |
| | MMF-AP0484H-E | 220-1-60 | 198 | 242 | 0.160 | 2.01 | 2.52 | 15 |
| | MMF-AP0564H-E | 220-1-60 | 198 | 242 | 0.160 | 2.01 | 2.52 | 15 |
| Console Type | MML-AP0074NH-E | 220-1-60 | 198 | 242 | 0.041 | 0.18 | 0.23 | 15 |
| | MML-AP0094NH-E | 220-1-60 | 198 | 242 | 0.041 | 0.18 | 0.23 | 15 |
| | MML-AP0124NH-E | 220-1-60 | 198 | 242 | 0.041 | 0.21 | 0.26 | 15 |
| | MML-AP0154NH-E | 220-1-60 | 198 | 242 | 0.041 | 0.27 | 0.34 | 15 |
| | MML-AP0184NH-E | 220-1-60 | 198 | 242 | 0.041 | 0.38 | 0.48 | 15 |
| Air to Air Heat exchanger with DX-coil Type | MMD-VN502HEXE | 220-1-60 | 198 | 242 | 0.142 x 2 | 2.0 | 2.3 | 15 |
| | MMD-VN802HEXE | 220-1-60 | 198 | 242 | 0.250 x 2 | 3.0 | 3.6 | 15 |
| | MMD-VN1002HEXE2 | 220-1-60 | 198 | 242 | 0.330 x 2 | 3.7 | 4.3 | 15 |

- **Wiring size**

**Must be independent from the outdoor unit power supply**

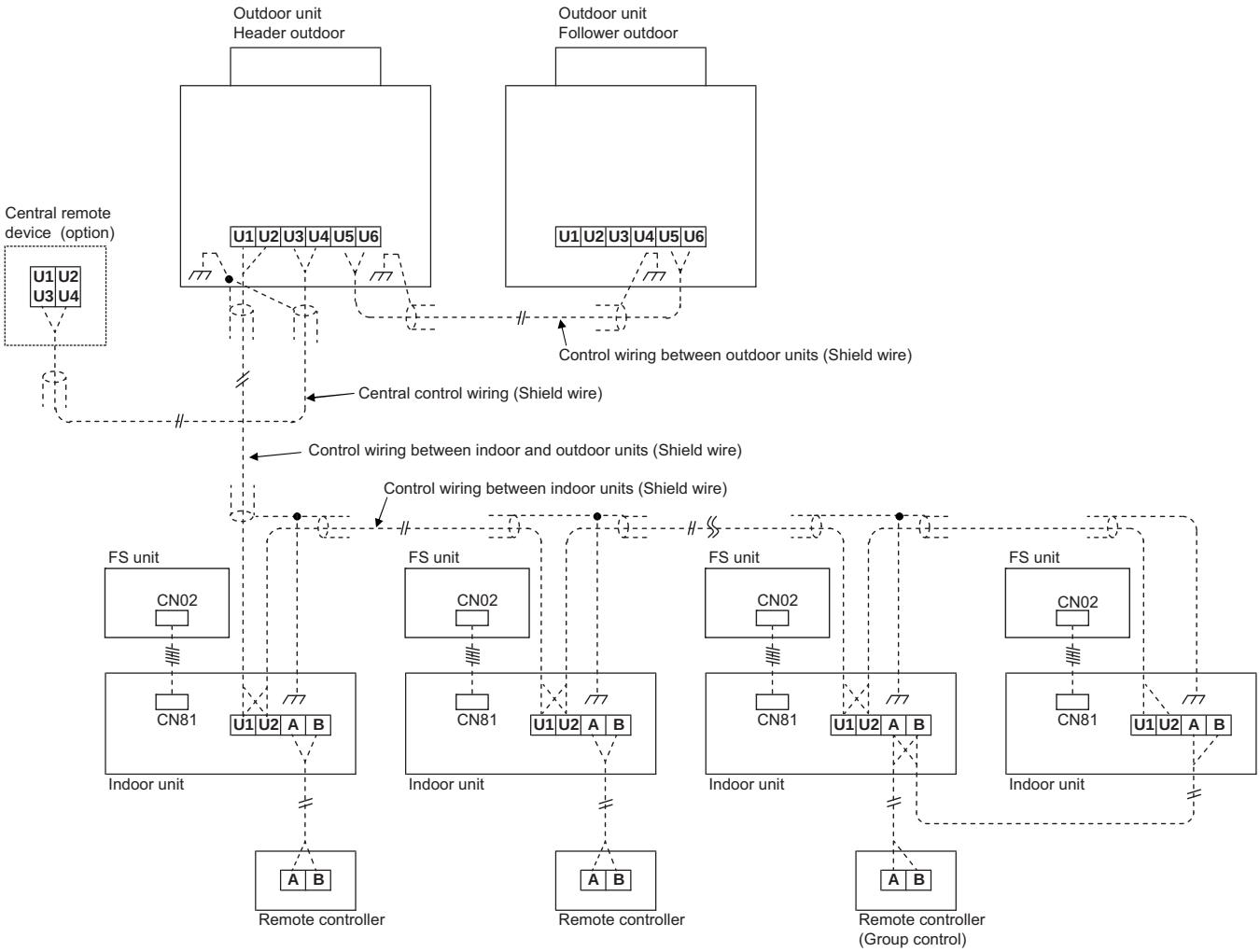
| Item / Model | Power supply wiring | | | |
|---|---|---|---|---|
| | Wire size | | | |
| All models of indoor units | 2.0 mm$^2$ (AWG#14) | Max. 20 m | 3.5 mm$^2$ (AWG#12) | Max. 50 m |

**NOTE:**

The above connecting lengths stated in the table, indicate the length from the isolator to the outdoor unit. When the power supply of the indoor units are connected in parallel, it is assumed that no more than a 2 % voltage drop will occur. If the connecting length is to exceed the stated lengths, select a suitable wire in accordance with the local wiring standards.

# 4-6. Design of control wiring

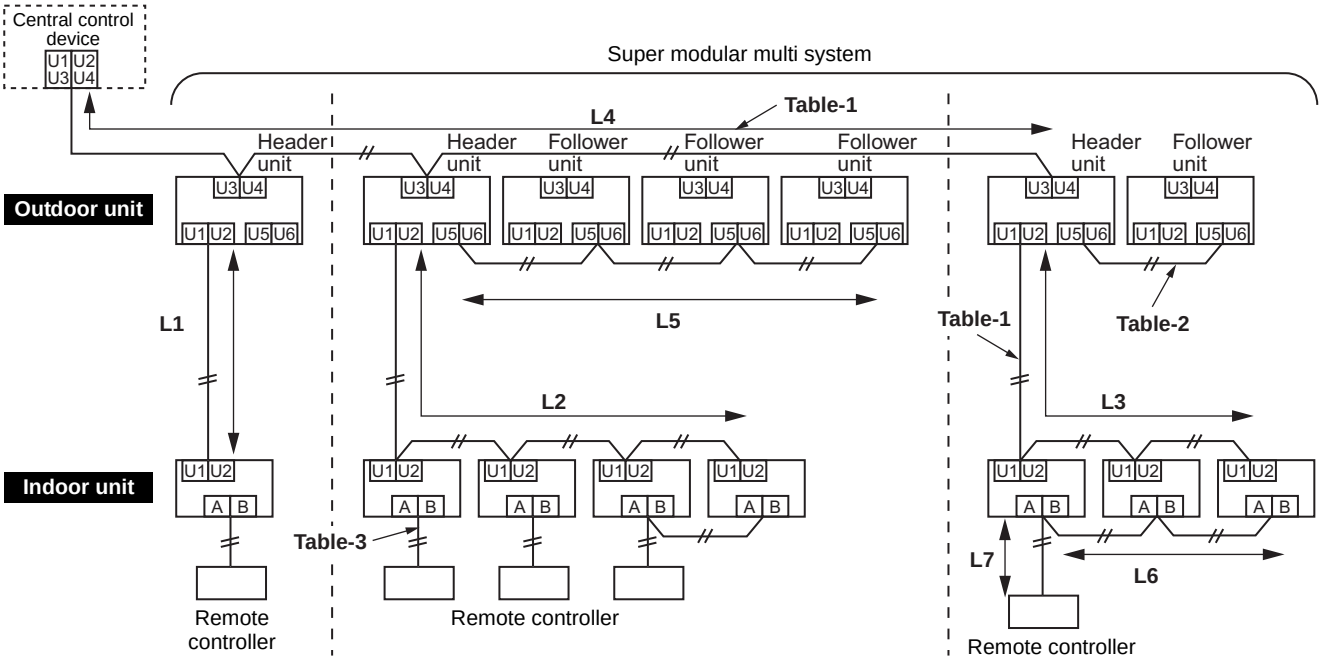
## • Summary of control wiring




- Communication wiring and central control wiring use 2-core non-polarity wires.
  Use 2-core shield wires to prevent noise trouble.
- Connecting the closed end terminal of shield wire.
  (Conneted to all connecting sections in each unit)
- Use 2-core non-polarity wire for remote controller. (A, B terminals)
  Use 2-core non-polarity wire for wiring of group control. (A, B terminals)
- Control wire and power line wire between FS unit and indoor unit are the accesory parts of FS unit. (Wire length : 6 m)
  If the length between indoor unit and FS unit exceeds 5 m, connect by using the connection cable kit sold separately (RBC-CBK15FE).

## • Restriction of control wiring

Be sure to keep the rule of below tables about size and length of control wiring.




### Table-1 Control wiring between indoor and outdoor units (L1, L2, L3), Central control wiring (L4)

| | |
|---|---|
| **Wiring** | 2-core, non-polarity |
| **Type** | Shield wire |
| **Size/Length** | 1.25 $mm^2$: Up to 1000 m/2.0 $mm^2$: Up to 2000 m (*1) |

Note (*1): Total length of control wiring length for all refrigerant circuits (L1 + L2 + L3 + L4)

### Table-2 Control wiring between outdoor units (L5)

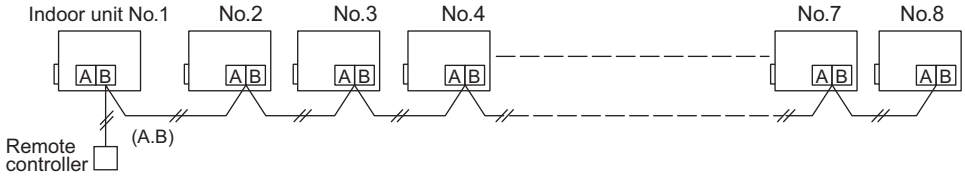
| | |
|---|---|
| **Wiring** | 2-core, non-polarity |
| **Type** | Shield wire |
| **Size/Length** | 1.25 $mm^2$ to 2.0 $mm^2$/Up to 100 m (L5) |

### Table-3 Remote controller wiring (L6, L7)

| | |
|---|---|
| **Wire** | 2-core |
| **Size** | 0.5 $mm^2$ to 2.0 $mm^2$ |
| **Length** | • Up to 500 m (L6 + L7)<br>• Up 400 m in case of wireless remote controller in group control.<br>• Up to 200 m total length of control wiring between indoor units (L6) |

## • Group Operation through a Remote Controller

Group operation of multiple indoor units (8 units) through a single remote controller switch



## 5-1. Specifications

[50 Hz, 380/400/415 V]

| Model name | | | MMY- | MAP0804FT8 | MAP1004FT8 | MAP1204FT8 | MAP1404FT8 |
|---|---|---|---|---|---|---|---|
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 22.4 | 28.0 | 33.5 | 40.0 |
| Heating capacity (*1) | | | kW | 25.0 | 31.5 | 37.5 | 45.0 |
| Capacity range | | | HP | 8 | 10 | 12 | 14 |
| Power supply | | | | 3 phase 4 wires 50 Hz 380 / 400 / 415 V | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | |
| | | Maximum | V | 456 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 8.3 | 11.4 | 13.4 | 17.8 |
| | | Power input | kW | 5.17 | 7.28 | 8.38 | 11.30 |
| | | EER | kW/kW | 4.33 | 3.85 | 4.00 | 3.54 |
| | Heating | Running current | A | 9.1 | 12.0 | 14.5 | 19.9 |
| | | Power input | kW | 5.68 | 7.50 | 9.05 | 12.70 |
| | | COP | kW/kW | 4.40 | 4.20 | 4.14 | 3.54 |
| | Starting current | | A | Soft start | | | |
| Dimension | Packing | Height | mm | 1,887 | 1,887 | 1,887 | 1,887 |
| | | Width | mm | 1,062 | 1,062 | 1,282 | 1,282 |
| | | Depth | mm | 828 | 828 | 828 | 828 |
| | Unit | Height | mm | 1,800 | 1,800 | 1,800 | 1,800 |
| | | Width | mm | 990 | 990 | 1,210 | 1,210 |
| | | Depth | mm | 780 | 780 | 780 | 780 |
| Weight | Packing | | kg | 274 | 274 | 351 | 351 |
| | Unit | | kg | 259 | 259 | 334 | 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | | Type | | Hermetic twin rotary compressor | | | |
| | | Motor output | kW | 2.3 × 2 | 3.1 × 2 | 2.6 × 3 | 3.1 × 3 |
| Fan unit | | Fan | | Propeller fan | | | |
| | | Motor output | kW | 1.0 | | | |
| | | Air volume | $m^3/h$ | 8,700 | 9,400 | 12,000 | 13,000 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 | | | |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 24.5 | 27.1 | 31.2 | 36.4 |
| | | MOCP (*5) | A | 32 | | 40 | 50 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 12.7 | | | 15.9 |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 22.2 | | 28.6 | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 19.1 | | | 22.2 |
| | Balance | Type | | Flare | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 13 | 16 | 20 | 23 |
| Sound pressure level | | Cooling | dB(A) | 55.0 | 57.0 | 60.0 | 61.0 |
| | | Heating | dB(A) | 57.0 | 59.0 | 62.0 | 63.0 |
| Sound power level | | Cooling | dB(A) | 77 | 78 | 81 | 82 |
| | | Heating | dB(A) | 79 | 80 | 83 | 84 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[50 Hz, 380/400/415 V]

| Model | Name | | MMY- | AP1614FT8 | AP1814FT8 | AP2014FT8 | AP2214FT8 | AP2414FT8 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP0804FT8 MAP0804FT8 | MAP1004FT8 MAP0804FT8 | MAP1004FT8 MAP1004FT8 | MAP1204FT8 MAP1004FT8 | MAP1404FT8 MAP1004FT8 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 45.0 | 50.4 | 56.0 | 61.5 | 68.0 |
| Heating capacity (*1) | | | kW | 50.0 | 56.5 | 63.0 | 69.0 | 76.5 |
| Capacity range | | | HP | 16 | 18 | 20 | 22 | 24 |
| Power supply | | | | 3 phase 4 wires 50 Hz 380 / 400 / 415 V | | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | | |
| | | Maximum | V | 456 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 16.7 | 19.7 | 22.8 | 24.8 | 29.1 |
| | | Power input | kW | 10.42 | 12.45 | 14.56 | 15.66 | 18.58 |
| | | EER | kW/kW | 4.32 | 4.05 | 3.85 | 3.93 | 3.66 |
| | Heating | Running current | A | 18.2 | 21.1 | 24.0 | 26.5 | 31.9 |
| | | Power input | kW | 11.36 | 13.18 | 15.00 | 16.55 | 20.20 |
| | | COP | kW/kW | 4.40 | 4.29 | 4.20 | 4.17 | 3.79 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 259 + 259 | 259 + 259 | 259 + 259 | 334 + 259 | 334 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 2.3 × 2 + 2.3 × 2 | 3.1 × 2 + 2.3 × 2 | 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 8,700 + 8,700 | 9,400 + 8,700 | 9,400 + 9,400 | 12,000 + 9,400 | 13,000 + 9,400 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 49.0 | 51.6 | 54.2 | 58.3 | 63.5 |
| | | MOCP (*5) | A | 63 | 63 | 63 | 80 | 80 |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 19.1 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 28.6 | | | 34.9 | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | 28.6 | |
| | Balance | Type | | Flare | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 27 | 30 | 33 | 37 | 40 |
| Sound pressure level | | Cooling | dB(A) | 58.0 | 59.5 | 60.0 | 62.0 | 62.5 |
| | | Heating | dB(A) | 60.0 | 61.5 | 62.0 | 64.0 | 64.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[50 Hz, 380/400/415 V]

| Model | Name | | MMY- | AP2614FT8 | AP2814FT8 | AP3014FT8 | AP3214FT8 | AP3414FT8 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1404FT8<br>MAP1204FT8 | MAP1404FT8<br>MAP1404FT8 | MAP1004FT8<br>MAP1004FT8<br>MAP1004FT8 | MAP1204FT8<br>MAP1004FT8<br>MAP1004FT8 | MAP1404FT8<br>MAP1004FT8<br>MAP1004FT8 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 73.0 | 78.5 | 85.0 | 90.0 | 96.0 |
| Heating capacity (*1) | | | kW | 81.5 | 88.0 | 95.0 | 100.0 | 108.0 |
| Capacity range | | | HP | 26 | 28 | 30 | 32 | 34 |
| Power supply | | | | 3 phase 4 wires 50 Hz 380 / 400 / 415 V | | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | | |
| | | Maximum | V | 456 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 30.9 | 34.5 | 34.9 | 36.6 | 40.6 |
| | | Power input | kW | 19.48 | 21.98 | 22.26 | 23.15 | 25.86 |
| | | EER | kW/kW | 3.75 | 3.57 | 3.82 | 3.89 | 3.71 |
| | Heating | Running current | A | 33.8 | 38.6 | 36.4 | 38.2 | 44.0 |
| | | Power input | kW | 21.35 | 24.60 | 22.70 | 23.85 | 27.70 |
| | | COP | kW/kW | 3.82 | 3.58 | 4.19 | 4.19 | 3.90 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 334 + 334 | 334 + 334 | 259 + 259 + 259 | 334 + 259 + 259 | 334 + 259 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 | 3.1 × 2 + 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 13,000 + 12,000 | 13,000 + 13,000 | 9,400 + 9,400 + 9,400 | 12,000 + 9,400 + 9,400 | 13,000 + 9,400 + 9,400 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 67.6 | 72.8 | 81.3 | 85.4 | 90.6 |
| | | MOCP (*5) | A | 80 | 100 | 100 | 100 | 125 |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 34.9 | | | | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 28.6 | | | | |
| | Balance | Type | | Brazing | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 43 | 47 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 63.5 | 64.0 | 62.0 | 63.0 | 63.5 |
| | | Heating | dB(A) | 65.5 | 66.0 | 64.0 | 65.0 | 65.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[50 Hz, 380/400/415 V]

| Model | Name | | MMY- | AP3614FT8 | AP3814FT8 | AP4014FT8 | AP4214FT8 |
|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1204FT8<br>MAP1204FT8<br>MAP1204FT8 | MAP1404FT8<br>MAP1204FT8<br>MAP1204FT8 | MAP1404FT8<br>MAP1404FT8<br>MAP1204FT8 | MAP1404FT8<br>MAP1404FT8<br>MAP1404FT8 |
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 101.0 | 106.5 | 112.0 | 118.0 |
| Heating capacity (*1) | | | kW | 113.0 | 119.5 | 127.0 | 132.0 |
| Capacity range | | | HP | 36 | 38 | 40 | 42 |
| Power supply | | | | 3 phase 4 wires 50 Hz 380 / 400 / 415 V | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | |
| | | Maximum | V | 456 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 40.6 | 44.2 | 48.2 | 51.9 |
| | | Power input | kW | 25.35 | 27.85 | 30.40 | 33.10 |
| | | EER | kW/kW | 3.98 | 3.82 | 3.68 | 3.56 |
| | Heating | Running current | A | 43.8 | 48.6 | 54.1 | 57.9 |
| | | Power input | kW | 27.35 | 30.60 | 34.25 | 36.90 |
| | | COP | kW/kW | 4.13 | 3.91 | 3.71 | 3.58 |
| | Starting current | | A | Soft start | | | |
| Weight | | | kg | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | |
| | Motor output | | kW | 2.6 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 3.1 × 3 |
| Fan unit | Fan | | | Propeller fan | | | |
| | Motor output | | kW | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 12,000 + 12,000 + 12,000 | 13,000 + 12,000 + 12,000 | 13,000 + 13,000 + 12,000 | 13,000 + 13,000 + 13,000 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 93.6 | 98.8 | 104.0 | 109.0 |
| | | MOCP (*5) | A | 125 | 125 | 125 | 125 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 22.2 | | | |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 41.3 | | | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 34.9 | | | |
| | Balance | Type | | Brazing | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 48 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 65.0 | 65.5 | 65.5 | 66.0 |
| | | Heating | dB(A) | 67.0 | 67.5 | 67.5 | 68.0 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 380 V]

| Model name | | | MMY- | MAP0804FT7 | MAP1004FT7 | MAP1204FT7 | MAP1404FT7 |
|---|---|---|---|---|---|---|---|
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 22.4 | 28.0 | 33.5 | 40.0 |
| Heating capacity (*1) | | | kW | 25.0 | 31.5 | 37.5 | 45.0 |
| Capacity range | | | HP | 8 | 10 | 12 | 14 |
| Power supply | | | | 3 phase 4 wires 60 Hz 380 V | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | |
| | | Maximum | V | 418 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 8.7 | 12.0 | 14.1 | 18.6 |
| | | Power input | kW | 5.17 | 7.28 | 8.38 | 11.30 |
| | | EER | kW/kW | 4.33 | 3.85 | 4.00 | 3.54 |
| | Heating | Running current | A | 9.5 | 12.6 | 15.2 | 21.0 |
| | | Power input | kW | 5.68 | 7.50 | 9.05 | 12.70 |
| | | COP | kW/kW | 4.40 | 4.20 | 4.14 | 3.54 |
| | Starting current | | A | Soft start | | | |
| Dimension | Packing | Height | mm | 1,887 | 1,887 | 1,887 | 1,887 |
| | | Width | mm | 1,062 | 1,062 | 1,282 | 1,282 |
| | | Depth | mm | 828 | 828 | 828 | 828 |
| | Unit | Height | mm | 1,800 | 1,800 | 1,800 | 1,800 |
| | | Width | mm | 990 | 990 | 1,210 | 1,210 |
| | | Depth | mm | 780 | 780 | 780 | 780 |
| Weight | Packing | | kg | 274 | 274 | 351 | 351 |
| | Unit | | kg | 259 | 259 | 334 | 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | | Type | | Hermetic twin rotary compressor | | | |
| | | Motor output | kW | 2.3 × 2 | 3.1 × 2 | 2.6 × 3 | 3.1 × 3 |
| Fan unit | | Fan | | Propeller fan | | | |
| | | Motor output | kW | 1.0 | | | |
| | | Air volume | $m^3/h$ | 8,700 | 9,400 | 12,000 | 13,000 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 | | | |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 24.5 | 27.1 | 31.2 | 36.4 |
| | | MOCP (*5) | A | 32 | | 40 | 50 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 12.7 | | | 15.9 |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 22.2 | | 28.6 | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 19.1 | | | 22.2 |
| | Balance | Type | | Flare | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 13 | 16 | 20 | 23 |
| Sound pressure level | | Cooling | dB(A) | 55.0 | 57.0 | 60.0 | 61.0 |
| | | Heating | dB(A) | 57.0 | 59.0 | 62.0 | 63.0 |
| Sound power level | | Cooling | dB(A) | 77 | 78 | 81 | 82 |
| | | Heating | dB(A) | 79 | 80 | 83 | 84 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 380 V]

| Model | Name | | MMY- | AP1614FT7 | AP1814FT7 | AP2014FT7 | AP2214FT7 | AP2414FT7 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP0804FT7 MAP0804FT7 | MAP1004FT7 MAP0804FT7 | MAP1004FT7 MAP1004FT7 | MAP1204FT7 MAP1004FT7 | MAP1404FT7 MAP1004FT7 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 45.0 | 50.4 | 56.0 | 61.5 | 68.0 |
| Heating capacity (*1) | | | kW | 50.0 | 56.5 | 63.0 | 69.0 | 76.5 |
| Capacity range | | | HP | 16 | 18 | 20 | 22 | 24 |
| Power supply | | | | 3 phase 4 wires 60 Hz 380 V | | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | | |
| | | Maximum | V | 418 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 17.5 | 20.8 | 24.0 | 26.1 | 30.7 |
| | | Power input | kW | 10.42 | 12.45 | 14.56 | 15.66 | 18.58 |
| | | EER | kW/kW | 4.32 | 4.05 | 3.85 | 3.93 | 3.66 |
| | Heating | Running current | A | 19.1 | 22.2 | 25.3 | 27.9 | 33.7 |
| | | Power input | kW | 11.36 | 13.18 | 15.00 | 16.55 | 20.20 |
| | | COP | kW/kW | 4.40 | 4.29 | 4.20 | 4.17 | 3.79 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 259 + 259 | 259 + 259 | 259 + 259 | 334 + 259 | 334 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 2.3 × 2 + 2.3 × 2 | 3.1 × 2 + 2.3 × 2 | 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 8,700 + 8,700 | 9,400 + 8,700 | 9,400 + 9,400 | 12,000 + 9,400 | 13,000 + 9,400 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 49.0 | 51.6 | 54.2 | 58.3 | 63.5 |
| | | MOCP (*5) | A | 63 | 63 | 63 | 80 | 80 |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 19.1 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 28.6 | | | 34.9 | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | 28.6 | |
| | Balance | Type | | Flare | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 27 | 30 | 33 | 37 | 40 |
| Sound pressure level | | Cooling | dB(A) | 58.0 | 59.5 | 60.0 | 62.0 | 62.5 |
| | | Heating | dB(A) | 60.0 | 61.5 | 62.0 | 64.0 | 64.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 380 V]

| Model | Name | | MMY- | AP2614FT7 | AP2814FT7 | AP3014FT7 | AP3214FT7 | AP3414FT7 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1404FT7<br>MAP1204FT7 | MAP1404FT7<br>MAP1404FT7 | MAP1004FT7<br>MAP1004FT7<br>MAP1004FT7 | MAP1204FT7<br>MAP1004FT7<br>MAP1004FT7 | MAP1404FT7<br>MAP1004FT7<br>MAP1004FT7 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 73.0 | 78.5 | 85.0 | 90.0 | 96.0 |
| Heating capacity (*1) | | | kW | 81.5 | 88.0 | 95.0 | 100.0 | 108.0 |
| Capacity range | | | HP | 26 | 28 | 30 | 32 | 34 |
| Power supply | | | | 3 phase 4 wires 60 Hz 380 V | | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | | |
| | | Maximum | V | 418 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 32.5 | 36.3 | 36.7 | 38.5 | 42.7 |
| | | Power input | kW | 19.48 | 21.98 | 22.26 | 23.15 | 25.86 |
| | | EER | kW/kW | 3.75 | 3.57 | 3.82 | 3.89 | 3.71 |
| | Heating | Running current | A | 35.6 | 40.6 | 38.3 | 40.2 | 46.3 |
| | | Power input | kW | 21.35 | 24.60 | 22.70 | 23.85 | 27.70 |
| | | COP | kW/kW | 3.82 | 3.58 | 4.19 | 4.19 | 3.90 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 334 + 334 | 334 + 334 | 259 + 259 + 259 | 334 + 259 + 259 | 334 + 259 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 | 3.1 × 2 + 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 13,000 + 12,000 | 13,000 + 13,000 | 9,400 + 9,400 + 9,400 | 12,000 + 9,400 + 9,400 | 13,000 + 9,400 + 9,400 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 67.6 | 72.8 | 81.3 | 85.4 | 90.6 |
| | | MOCP (*5) | A | 80 | 100 | 100 | 100 | 125 |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 34.9 | | | | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 28.6 | | | | |
| | Balance | Type | | Brazing | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 43 | 47 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 63.5 | 64.0 | 62.0 | 63.0 | 63.5 |
| | | Heating | dB(A) | 65.5 | 66.0 | 64.0 | 65.0 | 65.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 380 V]

| Model | Name | | MMY- | AP3614FT7 | AP3814FT7 | AP4014FT7 | AP4214FT7 |
|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1204FT7<br>MAP1204FT7<br>MAP1204FT7 | MAP1404FT7<br>MAP1204FT7<br>MAP1204FT7 | MAP1404FT7<br>MAP1404FT7<br>MAP1204FT7 | MAP1404FT7<br>MAP1404FT7<br>MAP1404FT7 |
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 101.0 | 106.5 | 112.0 | 118.0 |
| Heating capacity (*1) | | | kW | 113.0 | 119.5 | 127.0 | 132.0 |
| Capacity range | | | HP | 36 | 38 | 40 | 42 |
| Power supply | | | | 3 phase 4 wires 60 Hz 380 V | | | |
| Voltage range (*2) | | Minimum | V | 342 | | | |
| | | Maximum | V | 418 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 42.7 | 46.5 | 50.6 | 54.7 |
| | | Power input | kW | 25.35 | 27.85 | 30.40 | 33.10 |
| | | EER | kW/kW | 3.98 | 3.82 | 3.68 | 3.56 |
| | Heating | Running current | A | 46.1 | 51.1 | 57.0 | 60.9 |
| | | Power input | kW | 27.35 | 30.60 | 34.25 | 36.90 |
| | | COP | kW/kW | 4.13 | 3.91 | 3.71 | 3.58 |
| | Starting current | | A | Soft start | | | |
| Weight | | | kg | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | |
| | Motor output | | kW | 2.6 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 3.1 × 3 |
| Fan unit | Fan | | | Propeller fan | | | |
| | Motor output | | kW | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 12,000 + 12,000 + 12,000 | 13,000 + 12,000 + 12,000 | 13,000 + 13,000 + 12,000 | 13,000 + 13,000 + 13,000 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 93.6 | 98.8 | 104.0 | 109.0 |
| | | MOCP (*5) | A | 125 | 125 | 125 | 125 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 22.2 | | | |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 41.3 | | | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 34.9 | | | |
| | Balance | Type | | Brazing | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 48 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 65.0 | 65.5 | 65.5 | 66.0 |
| | | Heating | dB(A) | 67.0 | 67.5 | 67.5 | 68.0 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 220 V]

| Model name | | | MMY- | MAP0804FT5 | MAP1004FT5 | MAP1204FT5 | MAP1404FT5 |
|---|---|---|---|---|---|---|---|
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 22.4 | 28.0 | 33.5 | 40.0 |
| Heating capacity (*1) | | | kW | 25.0 | 31.5 | 37.5 | 45.0 |
| Capacity range | | | HP | 8 | 10 | 12 | 14 |
| Power supply | | | | 3 phase 3 wires 60 Hz 220 V | | | |
| Voltage range (*2) | | Minimum | V | 198 | | | |
| | | Maximum | V | 242 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 15.0 | 20.8 | 24.4 | 32.2 |
| | | Power input | kW | 5.17 | 7.28 | 8.38 | 11.30 |
| | | EER | kW/kW | 4.33 | 3.85 | 4.00 | 3.54 |
| | Heating | Running current | A | 16.5 | 21.8 | 26.3 | 36.2 |
| | | Power input | kW | 5.68 | 7.50 | 9.05 | 12.70 |
| | | COP | kW/kW | 4.40 | 4.20 | 4.14 | 3.54 |
| | Starting current | | A | Soft start | | | |
| Dimension | Packing | Height | mm | 1,887 | 1,887 | 1,887 | 1,887 |
| | | Width | mm | 1,062 | 1,062 | 1,282 | 1,282 |
| | | Depth | mm | 828 | 828 | 828 | 828 |
| | Unit | Height | mm | 1,800 | 1,800 | 1,800 | 1,800 |
| | | Width | mm | 990 | 990 | 1,210 | 1,210 |
| | | Depth | mm | 780 | 780 | 780 | 780 |
| Weight | Packing | | kg | 274 | 274 | 351 | 351 |
| | Unit | | kg | 259 | 259 | 334 | 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | | Type | | Hermetic twin rotary compressor | | | |
| | | Motor output | kW | 2.3 × 2 | 3.1 × 2 | 2.6 × 3 | 3.1 × 3 |
| Fan unit | | Fan | | Propeller fan | | | |
| | | Motor output | kW | 1.0 | | | |
| | | Air volume | $m^3/h$ | 8,700 | 9,400 | 12,000 | 13,000 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 | | | |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 37 | 45 | 52 | 65 |
| | | MOCP (*5) | A | 50 | 63 | | 80 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 12.7 | | | 15.9 |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 22.2 | | 28.6 | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 19.1 | | | 22.2 |
| | Balance | Type | | Flare | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 13 | 16 | 20 | 23 |
| Sound pressure level | | Cooling | dB(A) | 55.0 | 57.0 | 60.0 | 61.0 |
| | | Heating | dB(A) | 57.0 | 59.0 | 62.0 | 63.0 |
| Sound power level | | Cooling | dB(A) | 77 | 78 | 81 | 82 |
| | | Heating | dB(A) | 79 | 80 | 83 | 84 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 220 V]

| Model | Name | | MMY- | AP1614FT5 | AP1814FT5 | AP2014FT5 | AP2214FT5 | AP2414FT5 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP0804FT5 MAP0804FT5 | MAP1004FT5 MAP0804FT5 | MAP1004FT5 MAP1004FT5 | MAP1204FT5 MAP1004FT5 | MAP1404FT5 MAP1004FT5 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 45.0 | 50.4 | 56.0 | 61.5 | 68.0 |
| Heating capacity (*1) | | | kW | 50.0 | 56.5 | 63.0 | 69.0 | 76.5 |
| Capacity range | | | HP | 16 | 18 | 20 | 22 | 24 |
| Power supply | | | | 3 phase 3 wires 60 Hz 220 V | | | | |
| Voltage range (*2) | | Minimum | V | 198 | | | | |
| | | Maximum | V | 242 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 30.3 | 35.9 | 41.5 | 45.2 | 53.0 |
| | | Power input | kW | 10.42 | 12.45 | 14.56 | 15.66 | 18.58 |
| | | EER | kW/kW | 4.32 | 4.05 | 3.85 | 3.93 | 3.66 |
| | Heating | Running current | A | 33.1 | 38.4 | 43.7 | 48.2 | 58.2 |
| | | Power input | kW | 11.36 | 13.18 | 15.00 | 16.55 | 20.20 |
| | | COP | kW/kW | 4.40 | 4.29 | 4.20 | 4.17 | 3.79 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 259 + 259 | 259 + 259 | 259 + 259 | 334 + 259 | 334 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 2.3 × 2 + 2.3 × 2 | 3.1 × 2 + 2.3 × 2 | 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 8,700 + 8,700 | 9,400 + 8,700 | 9,400 + 9,400 | 12,000 + 9,400 | 13,000 + 9,400 |
| Max. external static pressure | | | Pa | 50 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 73 | 81 | 89 | 97 | 109 |
| | | MOCP (*5) | A | 100 | | | 125 | |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 19.1 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 28.6 | | | 34.9 | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | 28.6 | |
| | Balance | Type | | Flare | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 27 | 30 | 33 | 37 | 40 |
| Sound pressure level | | Cooling | dB(A) | 58.0 | 59.5 | 60.0 | 62.0 | 62.5 |
| | | Heating | dB(A) | 60.0 | 61.5 | 62.0 | 64.0 | 64.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 220 V]

| Model | Name | | MMY- | AP2614FT5 | AP2814FT5 | AP3014FT5 | AP3214FT5 | AP3414FT5 |
|---|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1404FT5 MAP1204FT5 | MAP1404FT5 MAP1404FT5 | MAP1004FT5 MAP1004FT5 MAP1004FT5 | MAP1204FT5 MAP1004FT5 MAP1004FT5 | MAP1404FT5 MAP1004FT5 MAP1004FT5 |
| Outdoor unit type | | | | Inverter unit | | | | |
| Cooling capacity (*1) | | | kW | 73.0 | 78.5 | 85.0 | 90.0 | 96.0 |
| Heating capacity (*1) | | | kW | 81.5 | 88.0 | 95.0 | 100.0 | 108.0 |
| Capacity range | | | HP | 26 | 28 | 30 | 32 | 34 |
| Power supply | | | | 3 phase 3 wires 60 Hz 220 V | | | | |
| Voltage range (*2) | | Minimum | V | 198 | | | | |
| | | Maximum | V | 242 | | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 56.2 | 62.7 | 63.5 | 66.5 | 73.8 |
| | | Power input | kW | 19.48 | 21.98 | 22.26 | 23.15 | 25.86 |
| | | EER | kW/kW | 3.75 | 3.57 | 3.82 | 3.89 | 3.71 |
| | Heating | Running current | A | 61.6 | 70.2 | 66.1 | 69.5 | 79.9 |
| | | Power input | kW | 21.35 | 24.60 | 22.70 | 23.85 | 27.70 |
| | | COP | kW/kW | 3.82 | 3.58 | 4.19 | 4.19 | 3.90 |
| | Starting current | | A | Soft start | | | | |
| Weight | | | kg | 334 + 334 | 334 + 334 | 259 + 259 + 259 | 334 + 259 + 259 | 334 + 259 + 259 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | | |
| | Motor output | | kW | 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 | 3.1 × 2 + 3.1 × 2 + 3.1 × 2 | 2.6 × 3 + 3.1 × 2 + 3.1 × 2 | 3.1 × 3 + 3.1 × 2 + 3.1 × 2 |
| Fan unit | Fan | | | Propeller fan | | | | |
| | Motor output | | kW | 1.0 + 1.0 | 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 13,000 + 12,000 | 13,000 + 13,000 | 9,400 + 9,400 + 9,400 | 12,000 + 9,400 + 9,400 | 13,000 + 9,400 + 9,400 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | | |
| Refrigerant | Name | | | R410A | | | | |
| | Charge | | kg | 11.0 + 11.0 | 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | | |
| Protective devices | | | | (*3) | | | | |
| Power supply wiring | | MCA (*4) | A | 117 | 130 | 134 | 142 | 154 |
| | | MOCP (*5) | A | 150 | | 160 | | 175 |
| Piping connections | Liquid | Type | | Flare | | | | |
| | | Diameter | mm | 22.2 | | | | |
| | Suction gas | Type | | Brazing | | | | |
| | | Diameter | mm | 34.9 | | | | |
| | Discharge gas | Type | | Flare | | | | |
| | | Diameter | mm | 28.6 | | | | |
| | Balance | Type | | Brazing | | | | |
| | | Diameter | mm | 9.5 | | | | |
| Max. number of connected indoor units | | | | 43 | 47 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 63.5 | 64.0 | 62.0 | 63.0 | 63.5 |
| | | Heating | dB(A) | 65.5 | 66.0 | 64.0 | 65.0 | 65.5 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | | |
| | | Heating | CWB | -20 to 15.5 | | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

[60 Hz, 220 V]

| Model | Name | | MMY- | AP3614FT5 | AP3814FT5 | AP4014FT5 | AP4214FT5 |
|---|---|---|---|---|---|---|---|
| | Combination | | MMY- | MAP1204FT5 MAP1204FT5 MAP1204FT5 | MAP1404FT5 MAP1204FT5 MAP1204FT5 | MAP1404FT5 MAP1404FT5 MAP1204FT5 | MAP1404FT5 MAP1404FT5 MAP1404FT5 |
| Outdoor unit type | | | | Inverter unit | | | |
| Cooling capacity (*1) | | | kW | 101.0 | 106.5 | 112.0 | 118.0 |
| Heating capacity (*1) | | | kW | 113.0 | 119.5 | 127.0 | 132.0 |
| Capacity range | | | HP | 36 | 38 | 40 | 42 |
| Power supply | | | | 3 phase 3 wires 60 Hz 220 V | | | |
| Voltage range (*2) | | Minimum | V | 198 | | | |
| | | Maximum | V | 242 | | | |
| Electrical characteristic (*1) | Cooling | Running current | A | 73.9 | 80.4 | 87.4 | 94.4 |
| | | Power input | kW | 25.35 | 27.85 | 30.40 | 33.10 |
| | | EER | kW/kW | 3.98 | 3.82 | 3.68 | 3.56 |
| | Heating | Running current | A | 79.7 | 88.4 | 98.5 | 105.2 |
| | | Power input | kW | 27.35 | 30.60 | 34.25 | 36.90 |
| | | COP | kW/kW | 4.13 | 3.91 | 3.71 | 3.58 |
| | Starting current | | A | Soft start | | | |
| Weight | | | kg | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 | 334 + 334 + 334 |
| Colour | | | | Silky shade (Munsell 1Y8.5/0.5) | | | |
| Compressor | Type | | | Hermetic twin rotary compressor | | | |
| | Motor output | | kW | 2.6 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 2.6 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 2.6 × 3 | 3.1 × 3 + 3.1 × 3 + 3.1 × 3 |
| Fan unit | Fan | | | Propeller fan | | | |
| | Motor output | | kW | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 | 1.0 + 1.0 + 1.0 |
| | Air volume | | $m^3/h$ | 12,000 + 12,000 + 12,000 | 13,000 + 12,000 + 12,000 | 13,000 + 13,000 + 12,000 | 13,000 + 13,000 + 13,000 |
| Max. external static pressure | | | Pa | 40 | 40 | 40 | 40 |
| Heat exchanger | | | | Finned tube | | | |
| Refrigerant | Name | | | R410A | | | |
| | Charge | | kg | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 | 11.0 + 11.0 + 11.0 |
| High-pressure switch | | | Pa | OFF:2.9 ON:3.73 | | | |
| Protective devices | | | | (*3) | | | |
| Power supply wiring | | MCA (*4) | A | 157 | 169 | 182 | 194 |
| | | MOCP (*5) | A | 175 | 200 | 225 | 225 |
| Piping connections | Liquid | Type | | Flare | | | |
| | | Diameter | mm | 22.2 | | | |
| | Suction gas | Type | | Brazing | | | |
| | | Diameter | mm | 41.3 | | | |
| | Discharge gas | Type | | Flare | | | |
| | | Diameter | mm | 34.9 | | | |
| | Balance | Type | | Brazing | | | |
| | | Diameter | mm | 9.5 | | | |
| Max. number of connected indoor units | | | | 48 | 48 | 48 | 48 |
| Sound pressure level | | Cooling | dB(A) | 65.0 | 65.5 | 65.5 | 66.0 |
| | | Heating | dB(A) | 67.0 | 67.5 | 67.5 | 68.0 |
| Operation temperature range | | Cooling | CDB | -5 to 43 | | | |
| | | Heating | CWB | -20 to 15.5 | | | |

Note
(*1) Rated conditions Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb, Outdoor 35 degC Dry Bulb.
Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb.
Based on equivalent piping length of 7.5 m and piping height difference of 0 m.
(*2) Voltage range : Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
(*3) Discharge temp. sensor / Suction temp. sensor / High-pressure sensor / Low-pressure sensor / High-pressure switch / P.C. board fuse
(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps
(*5) MOCP : Maximum Overcurrent Protection (Amps)

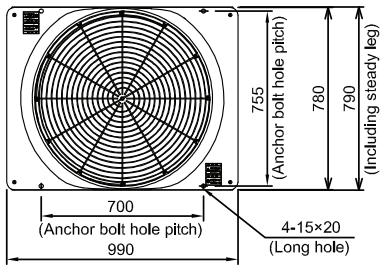
# 5-2. Dimensional drawing

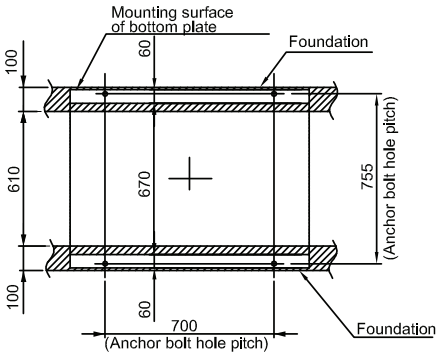
## Outdoor unit (Single)

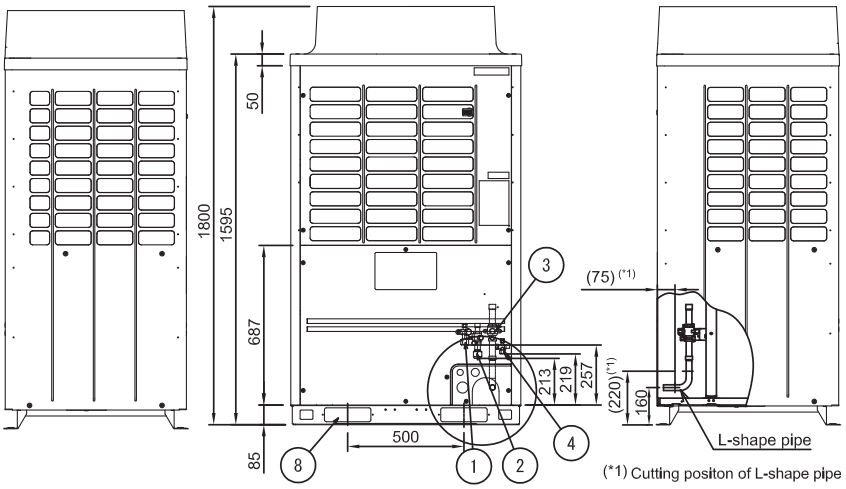
### Model : MMY-MAP0804FT8/FT7/FT5
### MMY-MAP1004FT8/FT7/FT5

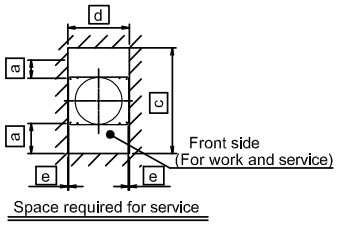
(Note)

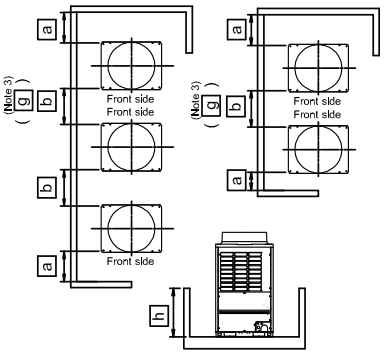
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

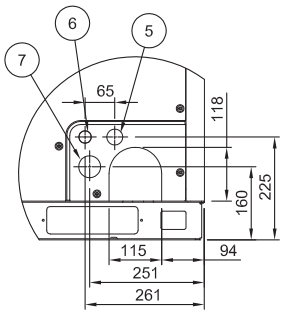


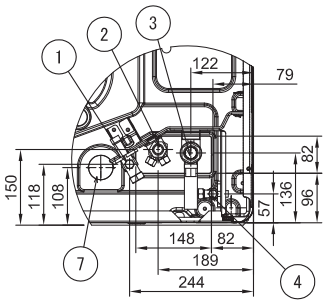




Holes for piping/wiring




Holes for piping/wiring
(Plan view)

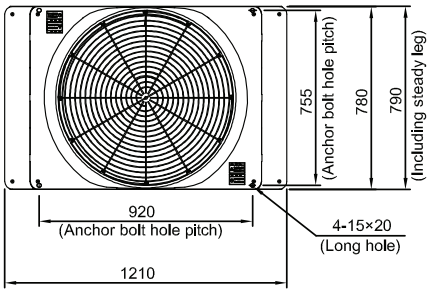
| No | Parts name | Remarks |
|---|---|---|
| ① | Liquid pipe connection port | ϕ12.7 |
| ② | Discharge gas pipe connection port | ϕ19.1 |
| ③ | Suction gas pipe connection port | ϕ22.2 |
| ④ | Balance pipe connection port | ϕ9.5 |
| ⑤ | Knockout hole for power wiring 1 | ϕ35 |
| ⑥ | Knockout hole for control wiring | ϕ27 |
| ⑦ | Knockout hole for power wiring 2 | ϕ48 |
| ⑧ | Square hole (for freight handling) | 2-60X200 |

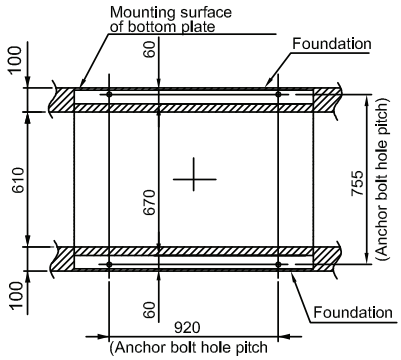
| | |
|---|---|
| a | ≥ 500mm |
| b | ≥ 600mm |
| c | ≥ 1780mm |
| d | ≥ 1010mm |
| e | ≥ 10mm |
| g | ≥ 1000mm |
| h | ≤ 800mm |

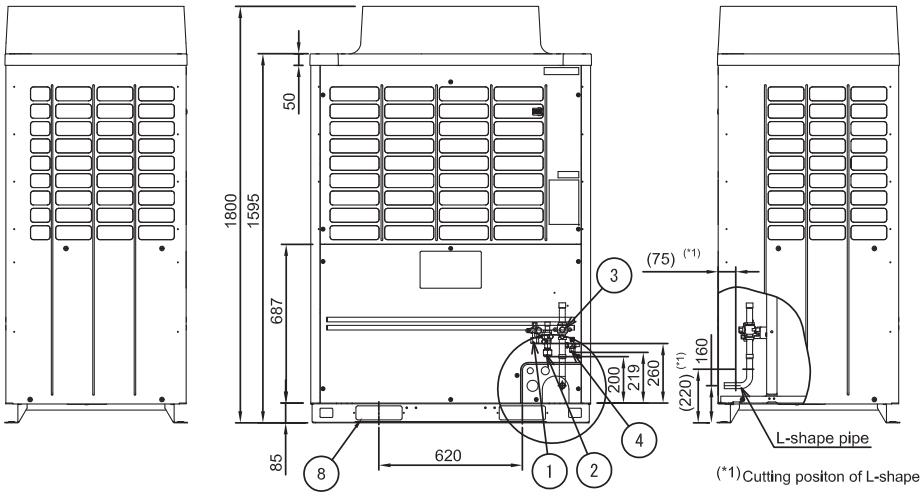
**(Unit : mm)**

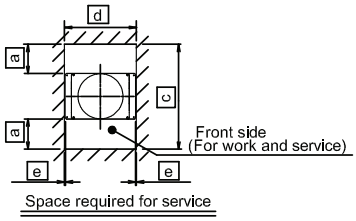
## Model : MMY-MAP1204FT8/FT7/FT5
## MMY-MAP1404FT8/FT7/FT5

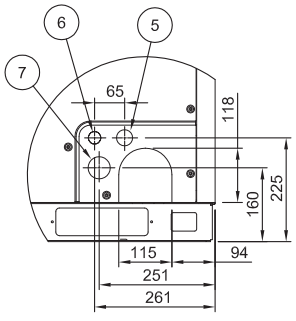
(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.



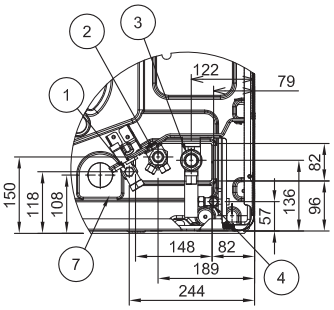



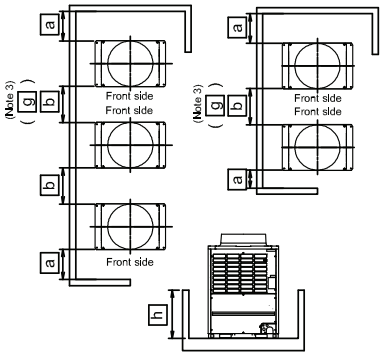




Holes for piping/wiring




Holes for piping/wiring
(Plan view)




| No | Parts name | Remarks |
|---|---|---|
| ① | Liquid pipe connection port | ϕA |
| ② | Discharge gas pipe connection port | ϕB |
| ③ | Suction gas pipe connection port | ϕ28.6 |
| ④ | Balance pipe connection port | ϕ9.5 |
| ⑤ | Knockout hole for power wiring 1 | ϕ35 |
| ⑥ | Knockout hole for control wiring | ϕ27 |
| ⑦ | Knockout hole for power wiring 2 | ϕ48 |
| ⑧ | Square hole (for freight handling) | 2-60X200 |

| Model Name | ϕA | ϕB |
|---|---|---|
| MAP1204type | ϕ12.7 | ϕ19.1 |
| MAP1404type | ϕ15.9 | ϕ22.2 |

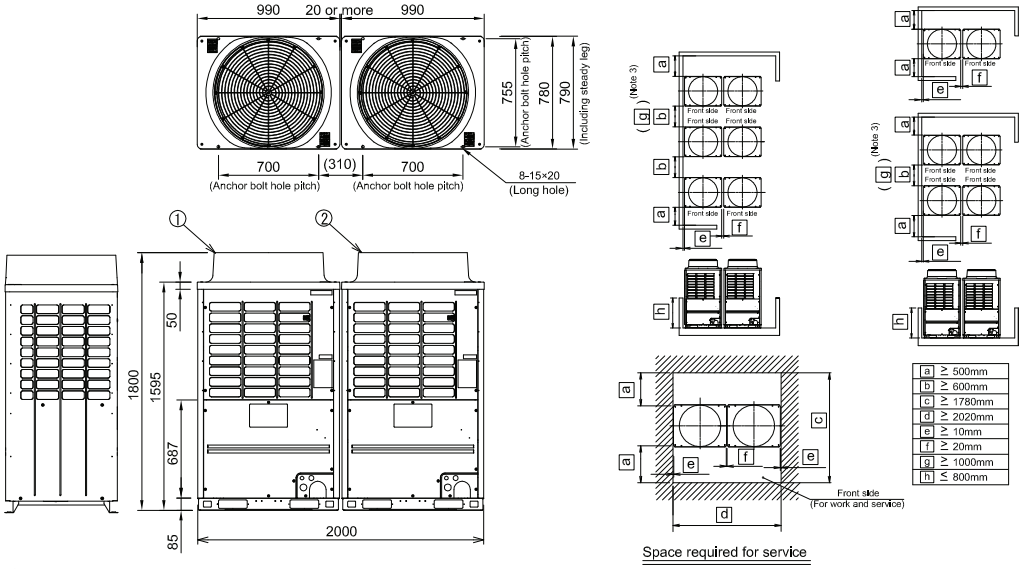
| | |
|---|---|
| a | ≥ 500mm |
| b | ≥ 600mm |
| c | ≥ 1780mm |
| d | ≥ 1230mm |
| e | ≥ 10mm |
| g | ≥ 1000mm |
| h | ≤ 800mm |

**(Unit : mm)**

## Outdoor unit (Combination)

| Model | Outdoor unit | |
|---|---|---|
| | ① Header unit | ② Follower unit |
| MMY-AP1614FT8/FT7/FT5 | MMY-MAP0804FT8/FT7/FT5 | MMY-MAP0804FT8/FT7/FT5 |
| MMY-AP1814FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP0804FT8/FT7/FT5 |
| MMY-AP2014FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |

Two units connected

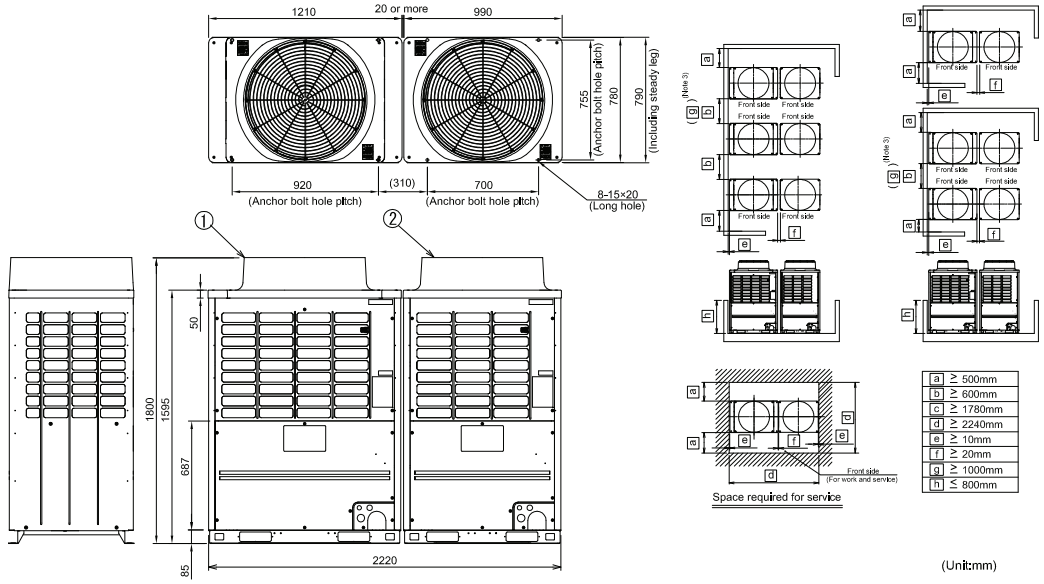



(Unit:mm)

(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
(Header unit ① ≥ Follower unit ② )
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

| Model | Outdoor unit | |
|---|---|---|
| | ① Header unit | ② Follower unit |
| MMY-AP2214FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |
| MMY-AP2414FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |

Two units connected

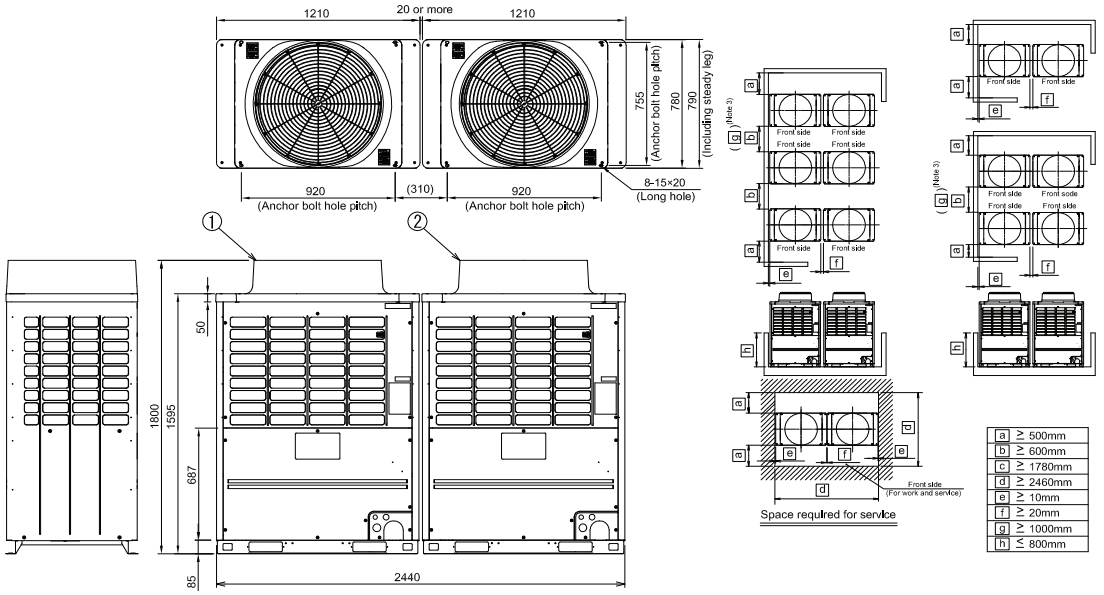



(Unit:mm)

(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
(Header unit ① ≥ Follower unit ② )
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

Two units connected

| Model | Outdoor unit | |
|---|---|---|
| | ① Header unit | ② Follower unit |
| MMY-AP2614FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 |
| MMY-AP2814FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 |

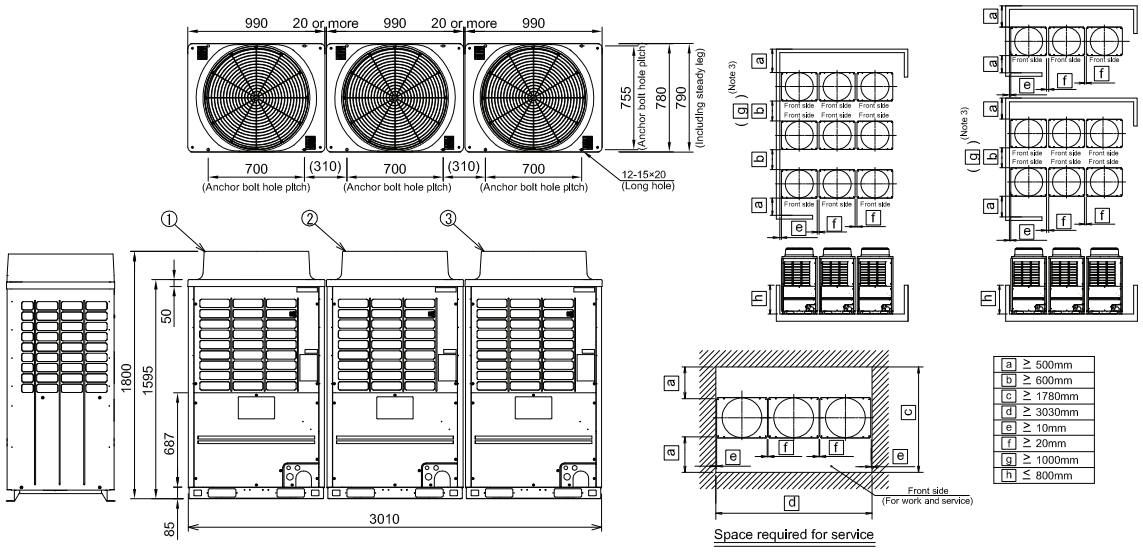



(Unit:mm)

(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe. If placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
(Header unit ① ≥ Follower unit ② )
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

Three units connected

| Model | Outdoor unit | | |
|---|---|---|---|
| | ① Header unit | ② Follower unit | ③ Follower unit |
| MMY-AP3014FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |

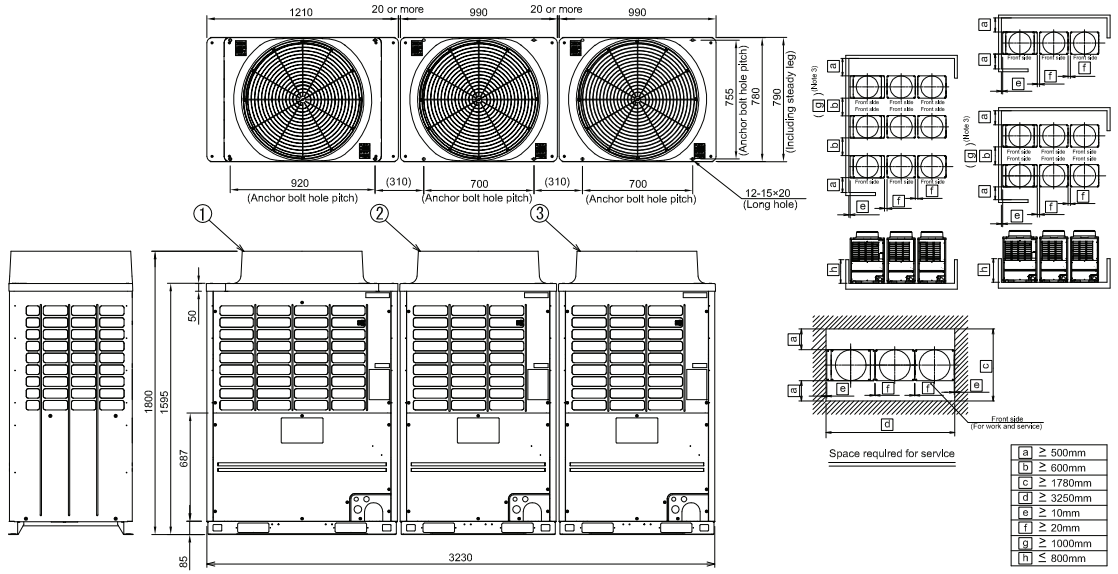



(Unit:mm)

(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
(Header unit ① ≥ Follower unit ② ≥ Follower unit ③ )
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

Three units connected

| Model | Outdoor unit | | |
|---|---|---|---|
| | ① Header unit | ② Follower unit | ③ Follower unit |
| MMY-AP3214FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |
| MMY-AP3414FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 | MMY-MAP1004FT8/FT7/FT5 |



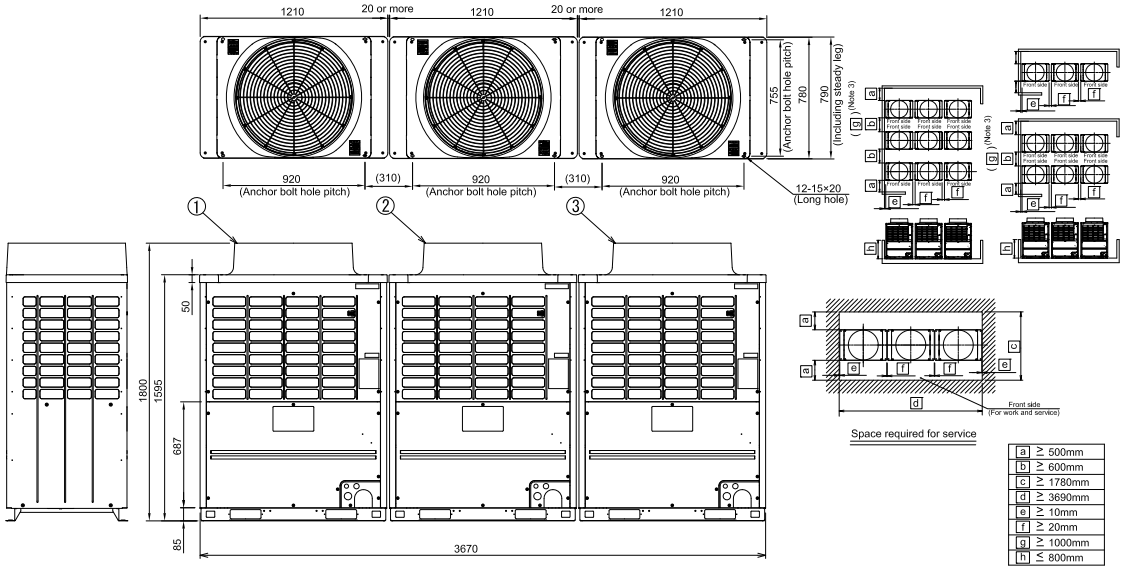

(Unit:mm)

(Note)

1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
   (Header unit ① ≥ Follower unit ② ≥ Follower unit ③)
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

Three units connected

| Model | Outdoor unit | | |
|---|---|---|---|
| | ① Header unit | ② Follower unit | ③ Follower unit |
| MMY-AP3614FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 |
| MMY-AP3814FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 |
| MMY-AP4014FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1204FT8/FT7/FT5 |
| MMY-AP4214FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 | MMY-MAP1404FT8/FT7/FT5 |




(Unit:mm)

(Note)

1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the front of the outdoor unit horizontally,and keep 500mm or more between the outdoor unit and traversing pipe if placing pipe transversely.
4. Arrange each outdoor unit in order of its capacity.
   (Header unit ① ≥ Follower unit ② ≥ Follower unit ③)
5. Dimensional drawing of corrosion protection and corrosion heavy protection model is the same as that of standard model.

## FS unit (Flow Selector unit)

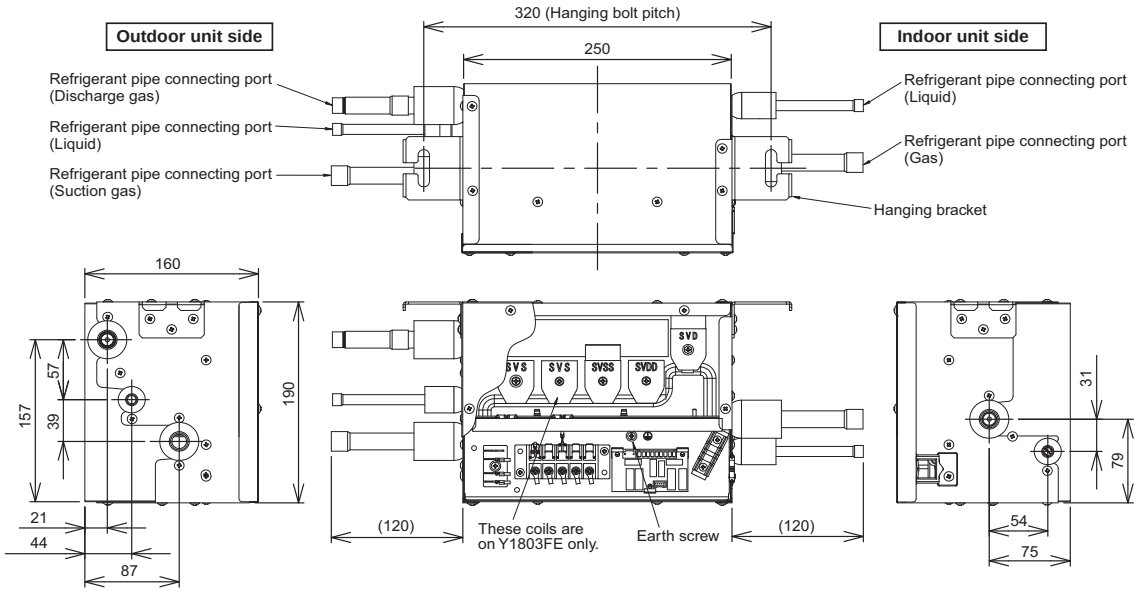
### Specifications

| Model Name | | RBM-Y1123FE | RBM-Y1803FE | RBM-Y2803FE |
|---|---|---|---|---|
| Power supply | | 220-240 V / 1 ph /50 Hz | | |
| Conectable indoor unit capacity | | Below 4.0HP | 4.0 to below 6.4HP | 6.4 to 10.0HP or less |
| Conectable indoor units | | 5 | 8 | 8 |
| Dimension | Height (mm) | 190 | 190 | 200 |
| | Width (mm) | 250 | 250 | 400 |
| | Depth (mm) | 160 | 160 | 200 |
| Total Weight (kg) | | 5 | 5 | 8 |
| Connecting port dia. (Indoor unit side) | Liquid side (mm) | Ø9.5 | Ø9.5 | Ø12.7 |
| | Gas side (mm) | Ø15.9 | Ø15.9 | Ø22.2 |
| Connecting port dia. (Outdoor unit side) | Liquid side (mm) | Ø9.5 | Ø9.5 | Ø12.7 |
| | Discharge gas side (mm) | Ø12.7 | Ø12.7 | Ø19.1 |
| | Gas side (mm) | Ø15.9 | Ø15.9 | Ø22.2 |
| Connection | | Blaze connection | | |

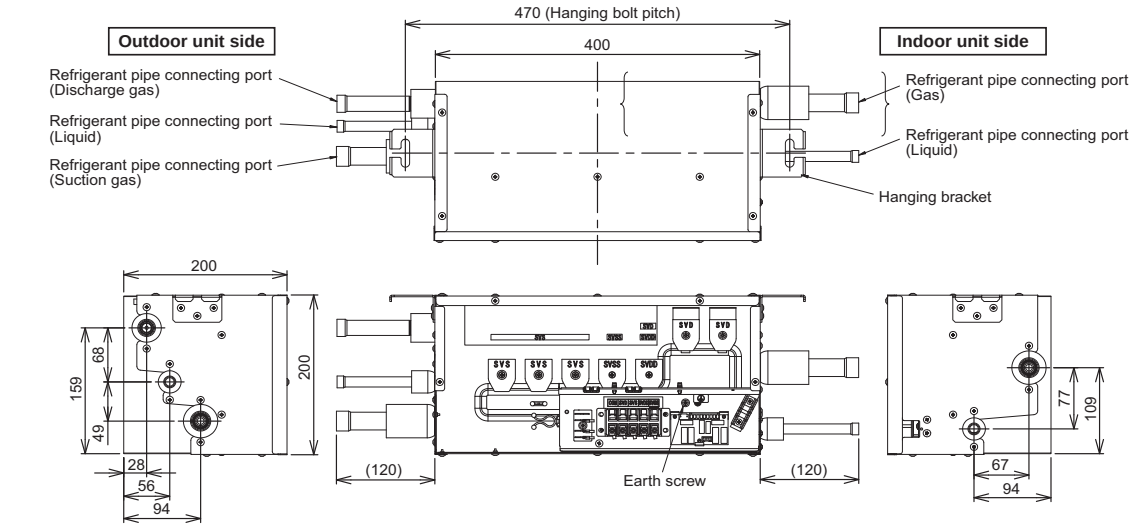
### External view

**RBM-Y1123FE, RBM-Y1803FE**

(Unit: mm)



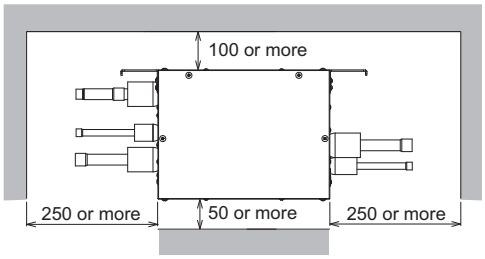

**RBM-Y2803FE**

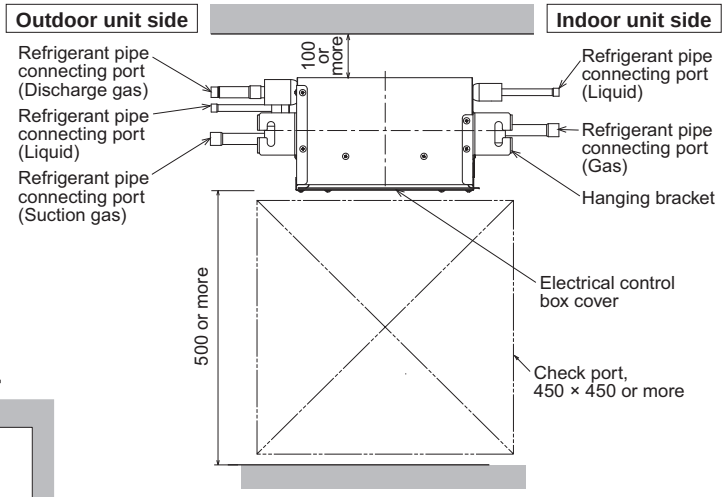


## <Installation space>

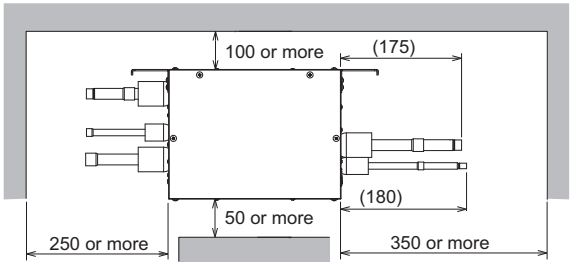
**RBM-Y1123FE, RBM-Y1803FE**

(Unit: mm)

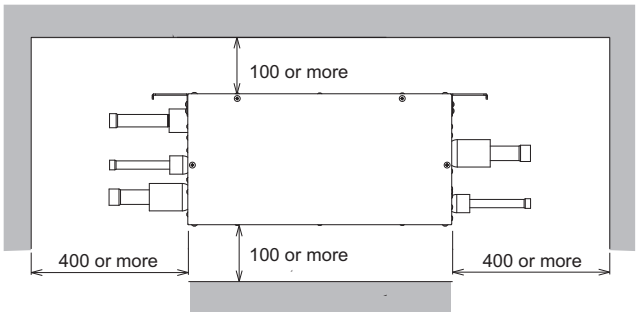


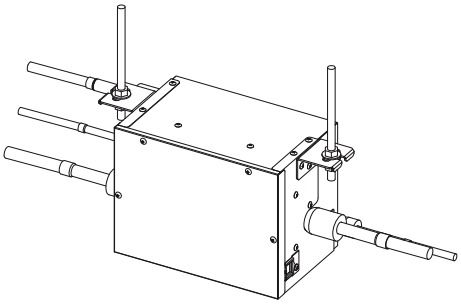



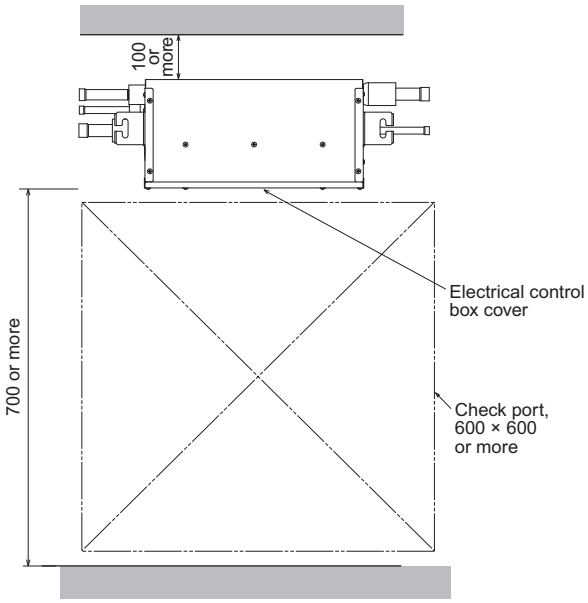

**<RBM-Y1123FE (When attached pipes are used)>**



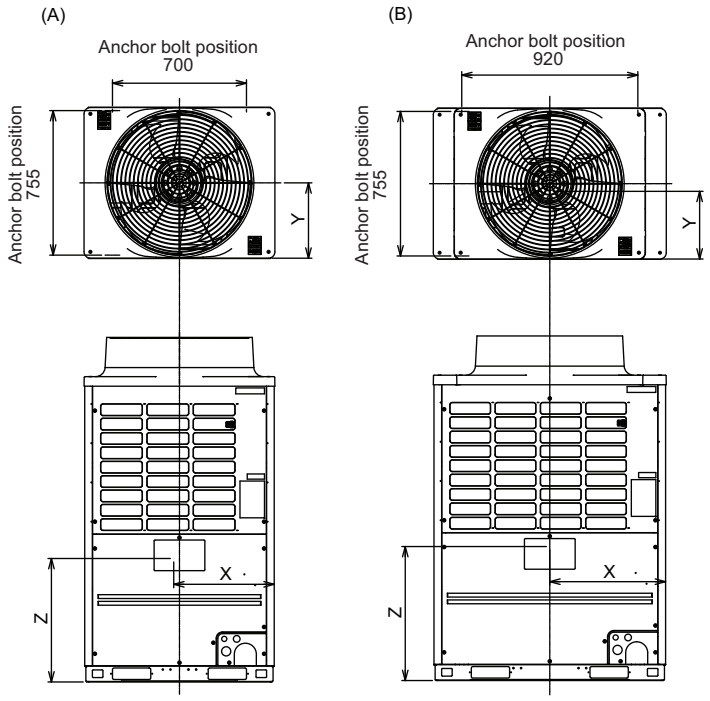

**RBM-Y2803FE**





## 5-3. Center of gravity




**(Unit : mm)**

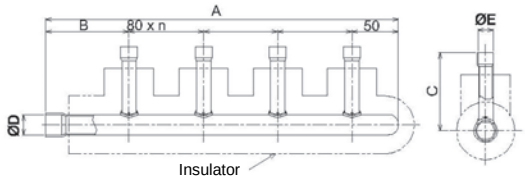
| No. | Model type | X (mm) | Y (mm) | Z (mm) | Weight (kg) |
|---|---|---|---|---|---|
| (A) | MMY-MAP0804FT * | 490 | 370 | 680 | 259 |
| | MMY-MAP1004FT * | | | | |
| (B) | MMY-MAP1204FT * | 590 | 350 | 700 | 334 |
| | MMY-MAP1404FT * | | | | |

## 5-4. Branch header / branch joint

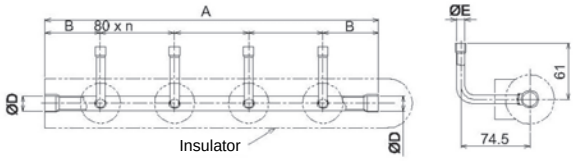
**• Branch header**

**RBM-HY1043FE, HY1083FE, HY2043FE, HY2083FE** (For 3 piping)

**Suction gas side, Discharge gas side**



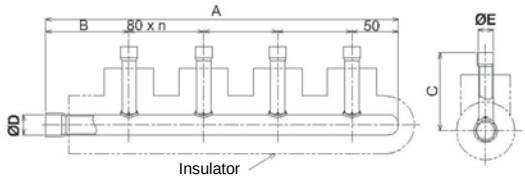

**Liquid side**



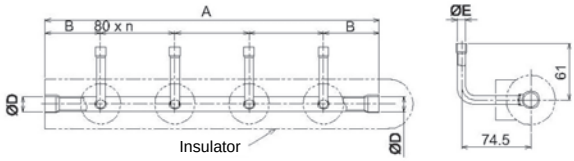

| Model | | A | B | C | øD | øE | n | Accessory socket Q'ty | Sealed pipe |
|---|---|---|---|---|---|---|---|---|---|
| RBM-HY1043FE | Suction gas side | 380 | 90 | 83.6 | 22.2 | 15.9 | 3 | ⑥x 3, ⑨x 4, ⑭x 1, ⑦⓪x 1 | ø 15.9 x 1 |
| | Discharge gas side | 380 | 90 | 83.6 | 22.2 | 15.9 | 3 | ⑥x 4, ⑨x 4, ⑱x 1, ⑧⑤x 1 | ø 15.9 x 3 |
| | Liquid side | 330 | 45 | - | 15.9 | 9.5 | 3 | ①x 4, ⑥x 1, ⑨x 1 | ø 15.9 x 1, ø 9.5 x 1 |
| RBM-HY1083FE | Suction gas side | 700 | 90 | 83.6 | 22.2 | 15.9 | 7 | ⑥x 7, ⑨x 8, ⑭x 1, ⑦⓪x 1 | ø 15.9 x 3 |
| | Discharge gas side | 700 | 90 | 83.6 | 22.2 | 15.9 | 7 | ⑥x 8, ⑨x 8, ⑱x 1, ⑧⑤x 1 | ø 15.9 x 7 |
| | Liquid side | 650 | 45 | - | 15.9 | 9.5 | 7 | ①x 8, ⑥x 1, ⑨x 1 | ø 15.9 x 1, ø 9.5 x 3 |
| RBM-HY2043FE | Suction gas side | 385.5 | 95.5 | 89.3 | 31.8 | 15.9 | 3 | ⑥x 2, ⑨x 2, ㉗x 1, ⑤⑨x 1 | ø 15.9 x 1 |
| | Discharge gas side | 380 | 90 | 83.6 | 22.2 | 15.9 | 3 | ⑨x 4, ⑦⓪x 1 | ø 15.9 x 3 |
| | Liquid side | 330 | 45 | - | 15.9 | 9.5 | 3 | ①x 2, ⑤①x 1 | ø 15.9 x 1, ø 9.5 x 1 |
| RBM-HY2083FE | Suction gas side | 705.5 | 95.5 | 89.3 | 31.8 | 15.9 | 7 | ⑥x 7, ⑨x 7, ㉗x 1, ⑤⑨x 1 | ø 15.9 x 3 |
| | Discharge gas side | 700 | 90 | 83.6 | 22.2 | 15.9 | 7 | ⑨x 8, ⑦⓪x 1 | ø 15.9 x 7 |
| | Liquid side | 650 | 45 | - | 15.9 | 9.5 | 7 | ①x 7, ⑤①x 1 | ø 15.9 x 1, ø 9.5 x 3 |

**RBM-HY1043E, HY1083E, HY2043E, HY2083E** (For 2 piping)

**Gas side**




**Liquid side**

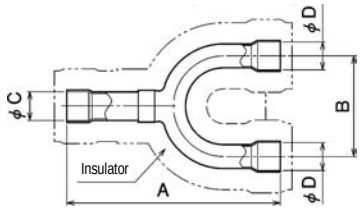



| Model | | A | B | C | øD | øE | n | Accessory socket Q'ty | Sealed pipe |
|---|---|---|---|---|---|---|---|---|---|
| RBM-HY1043E | Gas side | 380 | 90 | 83.6 | 22.2 | 15.9 | 3 | ⑥x 4, ⑨x 4, ⑭x 1, ⑱x 1, ⑦⓪x 1 | ø 15.9 x 1 |
| | Liquid side | 360 | 60 | - | 15.9 | 9.5 | 3 | ①x 4, ⑥x 1, ⑨x 1 | ø 15.9 x 1, ø 9.5 x 1 |
| RBM-HY1083E | Gas side | 700 | 90 | 83.6 | 22.2 | 15.9 | 7 | ⑥x 8, ⑨x 8, ⑭x 1, ⑱x 1, ⑦⓪x 1 | ø 15.9 x 3 |
| | Liquid side | 680 | 60 | - | 15.9 | 9.5 | 7 | ①x 8, ⑥x 1, ⑨x 1 | ø 15.9 x 1, ø 9.5 x 3 |
| RBM-HY2043E | Gas side | 385.5 | 95.5 | 89.3 | 31.8 | 15.9 | 3 | ⑥x 2, ⑨x 2, ㉗x 1, ⑤⑨x 1 | ø 15.9 x 1 |
| | Liquid side | 360 | 60 | - | 15.9 | 9.5 | 3 | ①x 2 | ø 15.9 x 1, ø 9.5 x 1 |
| RBM-HY2083E | Gas side | 705.5 | 95.5 | 89.3 | 31.8 | 15.9 | 7 | ⑥x 7, ⑨x 7, ㉗x 1, ⑤⑨x 1 | ø 15.9 x 3 |
| | Liquid side | 680 | 60 | - | 15.9 | 9.5 | 7 | ①x 7 | ø 15.9 x 1, ø 9.5 x 3 |

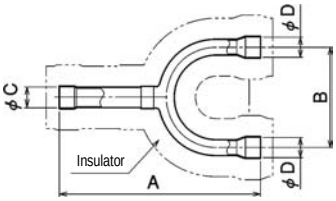
**• Y-shape branch joint**

**RBM-BY55FE, BY105FE, BY205FE, BY305FE** (For 3 piping)

**Suction gas side, Discharge gas side**



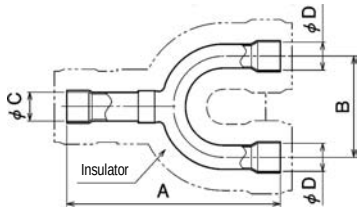

**Liquid side**



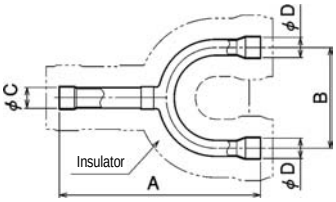

| Model | | A | B | øC | øD | Accessory socket Q'ty | Sealed pipe |
|---|---|---|---|---|---|---|---|
| RBM-BY55FE | Suction gas side | 160 | 80 | 15.9 | 15.9 | ⑨1 x 2 | |
| | Discharge gas side | 160 | 80 | 15.9 | 15.9 | ⑨ x 3 | ø 12.7 x 1 |
| | Liquid side | 130 | 70 | 9.5 | 9.5 | ① x 2 | |
| RBM-BY105FE | Suction gas side | 170 | 80 | 22.2 | 22.2 | ⑭ x 2, ⑦⓪ x 2, ⑨1 x 1 | |
| | Discharge gas side | 170 | 80 | 22.2 | 22.2 | ⑱ x 1, ⑨③ x 1 | ø 12.7 x 1 |
| | Liquid side | 160 | 80 | 15.9 | 15.9 | ⑨ x 1, ⑨1 x 1, ⑨2 x 1 | |
| RBM-BY205FE | Suction gas side | 200 | 80 | 31.8 | 28.6 | ⑯ x 1, ㉗ x 1, ④③ x 2, ⑤⑧ x 1, ⑤⑨ x 1, ⑨1 x 1 | |
| | Discharge gas side | 170 | 80 | 22.2 | 22.2 | ⑱ x 2, ⑦⓪ x 2, ⑨③ x 1 | ø 12.7 x 1 |
| | Liquid side | 160 | 80 | 15.9 | 15.9 | ⑨ x 1, ⑤① x 1, ⑨2 x 1 | |
| RBM-BY305FE | Suction gas side | 220 | 80 | 38.1 | 38.1 | ④③ x 1, ⑥① x 3, ⑥② x 2, ⑦① x 2, ⑦⑤ x 1, ⑨1 x 1 | |
| | Discharge gas side | 200 | 80 | 31.8 | 28.6 | ㉗ x 1, ④③ x 2, ④⑨ x 1, ⑤⑧ x 1, ⑤⑨ x 1, ⑨③ x 1 | ø 12.7 x 1 |
| | Liquid side | 170 | 80 | 22.2 | 22.2 | ⑭ x 1, ⑱ x 1, ⑨2 x 1, ⑨④ x 1 | |

**RBM-BY55E, BY105E, BY205E, BY305E** (For 2 piping)

**Gas side**




**Liquid side**

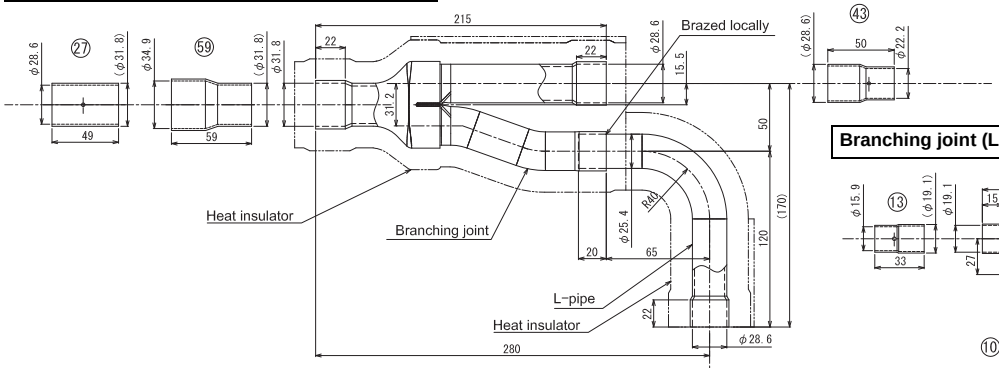



| Model | | A | B | øC | øD | Accessory socket Q'ty |
|---|---|---|---|---|---|---|
| RBM-BY55E | Gas side | 160 | 80 | 15.9 | 15.9 | ⑨ x 1, ⑤① x 2, ⑨1 x 2 |
| | Liquid side | 130 | 70 | 9.5 | 9.5 | ① x 2 |
| RBM-BY105E | Gas side | 170 | 80 | 22.2 | 22.2 | ⑭ x 2, ⑦⓪ x 2, ⑨1 x 1 |
| | Liquid side | 160 | 80 | 15.9 | 15.9 | ⑨ x 1, ⑨1 x 1, ⑨2 x 1 |
| RBM-BY205E | Gas side | 200 | 80 | 31.8 | 28.6 | ⑯ x 1, ㉗ x 1, ④③ x 2, ⑤⑧ x 1, ⑤⑨ x 1, ⑨1 x 1 |
| | Liquid side | 160 | 80 | 15.9 | 15.9 | ⑨ x 1, ⑤① x 2, ⑨2 x 1 |
| RBM-BY305E | Gas side | 220 | 80 | 38.1 | 38.1 | ④③ x 1, ⑥① x 3, ⑥② x 2, ⑦① x 2, ⑦⑤ x 1, ⑨1 x 1 |
| | Liquid side | 170 | 80 | 22.2 | 22.2 | ⑨2 x 1, ⑨④ x 3 |

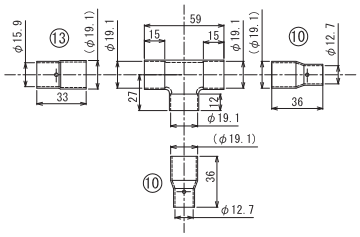
## • Branching joint for connection of outdoor units (Set of three kinds of joint)

### RBM-BT14FE

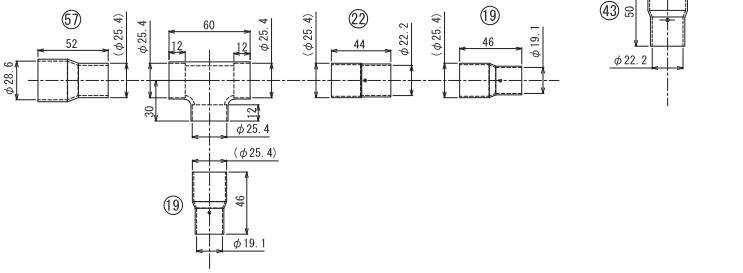
**Branching joint (Suction gas side) and sockets**



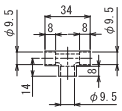

**Branching joint (Liquid side) and sockets**



**Branching joint (Discharge gas side) and sockets**

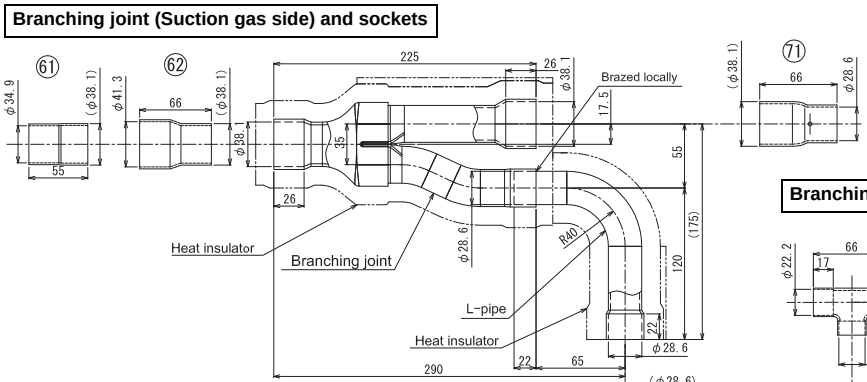


**Balance pipe side**

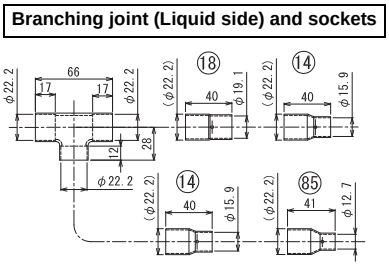


### RBM-BT24FE

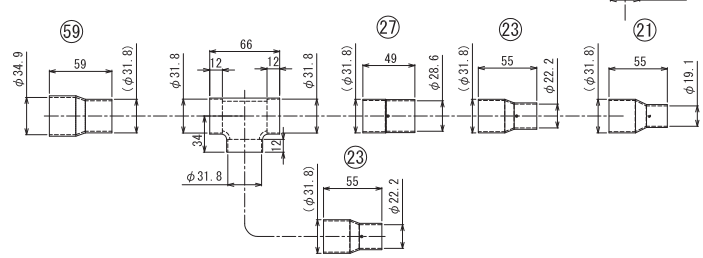
**Branching joint (Suction gas side) and sockets**



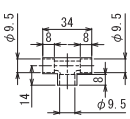

**Branching joint (Liquid side) and sockets**



**Branching joint (Discharge gas side) and sockets**



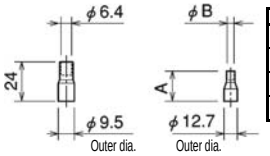
**Balance pipe side**



**(Unit : mm)**

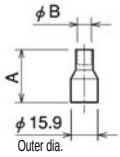
## • Accessory socket

① ② ⑤ ⑭ ⑧④



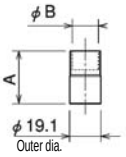

| | A | øB |
|---|---|---|
| ② | 29 | 6.4 |
| ⑤ | 26 | 9.5 |
| ⑭ | 31 | 15.9 |
| ⑧④ | 40 | 19.1 |

③ ⑥ ⑨ ⑤①



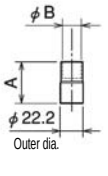

| | A | øB |
|---|---|---|
| ③ | 35 | 6.4 |
| ⑥ | 32 | 9.5 |
| ⑨ | 28 | 12.7 |
| ⑤① | 37.5 | 19.1 |

④ ⑦ ⑩ ⑬ ⑤② ⑥⑦



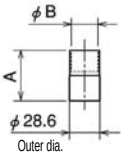

| | A | øB |
|---|---|---|
| ④ | 39 | 6.4 |
| ⑦ | 39 | 9.5 |
| ⑩ | 36 | 12.7 |
| ⑬ | 33 | 15.9 |
| ⑤② | 42.5 | 22.2 |
| ⑥⑦ | 49 | 25.4 |

⑭ ⑱ ⑥⑨ ⑦⓪ ⑧⑤ ⑧⑥



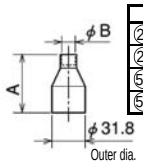

| | A | øB |
|---|---|---|
| ⑭ | 40 | 15.9 |
| ⑱ | 40 | 19.1 |
| ⑥⑨ | 48 | 25.4 |
| ⑦⓪ | 54 | 28.6 |
| ⑧⑤ | 41 | 12.7 |
| ⑧⑥ | 44 | 9.5 |

⑯ ⑳ ㉔ ④③ ④⑧ ④⑨ ⑤③ ⑤⑧



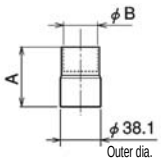

| | A | øB |
|---|---|---|
| ⑯ | 50 | 15.9 |
| ⑳ | 52 | 19.1 |
| ㉔ | 48 | 25.4 |
| ④③ | 50 | 22.2 |
| ④⑧ | 54 | 9.5 |
| ④⑨ | 52 | 12.7 |
| ⑤③ | 55 | 31.8 |
| ⑤⑧ | 62 | 34.9 |

㉕ ㉗ ⑤⑤ ⑤⑨



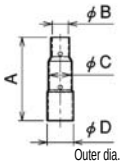

| | A | øB |
|---|---|---|
| ㉕ | 53 | 25.4 |
| ㉗ | 49 | 28.6 |
| ⑤⑤ | 64 | 38.1 |
| ⑤⑨ | 59 | 34.9 |

㉘ ⑥① ⑥② ⑦① ⑦② ⑦③ ⑦④ ⑦⑤ ⑦⑥ ⑦⑦



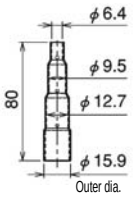

| | A | øB |
|---|---|---|
| ㉘ | 58 | 31.8 |
| ⑥① | 55 | 34.9 |
| ⑥② | 66 | 41.3 |
| ⑦① | 66 | 28.6 |
| ⑦② | 66 | 25.4 |
| ⑦③ | 66 | 22.2 |
| ⑦④ | 66 | 19.1 |
| ⑦⑤ | 64 | 15.9 |
| ⑦⑥ | 62 | 12.7 |
| ⑦⑦ | 62 | 9.5 |

⑨① ⑨③ ⑨④ ⑨⑤ ⑨⑥ ⑨⑦

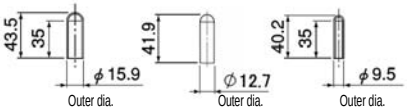



| | A | øB | øC | øD |
|---|---|---|---|---|
| ⑨① | 58 | 9.5 | 12.7 | 15.9 |
| ⑨③ | 69 | 12.7 | 19.1 | 22.2 |
| ⑨④ | 71 | 15.9 | 19.1 | 22.2 |
| ⑨⑤ | 80 | 22.2 | 25.4 | 28.6 |
| ⑨⑥ | 87 | 25.4 | 28.6 | 31.8 |
| ⑨⑦ | 95 | 28.6 | 31.8 | 38.1 |

⑨②



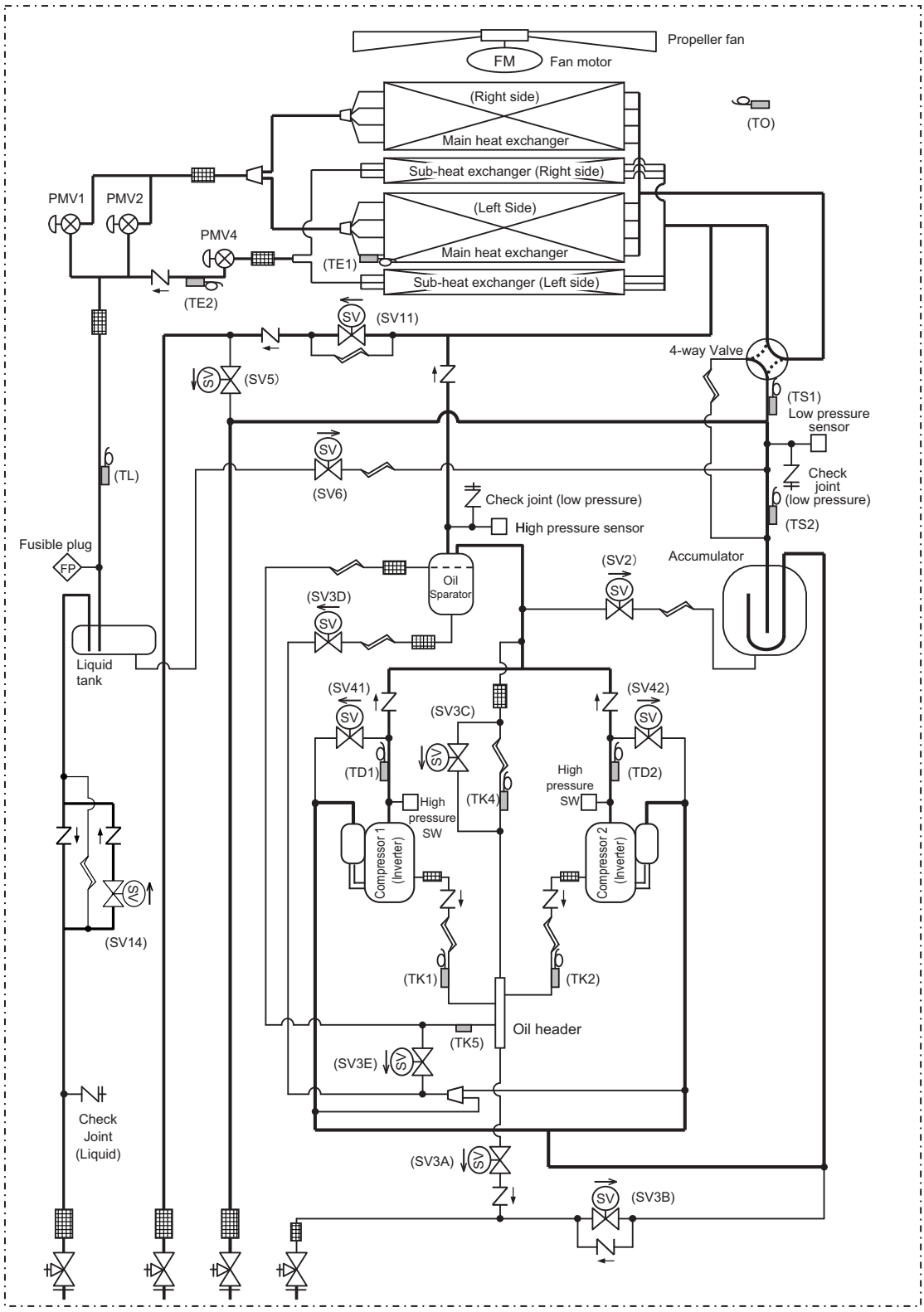

**Sealed pipe**



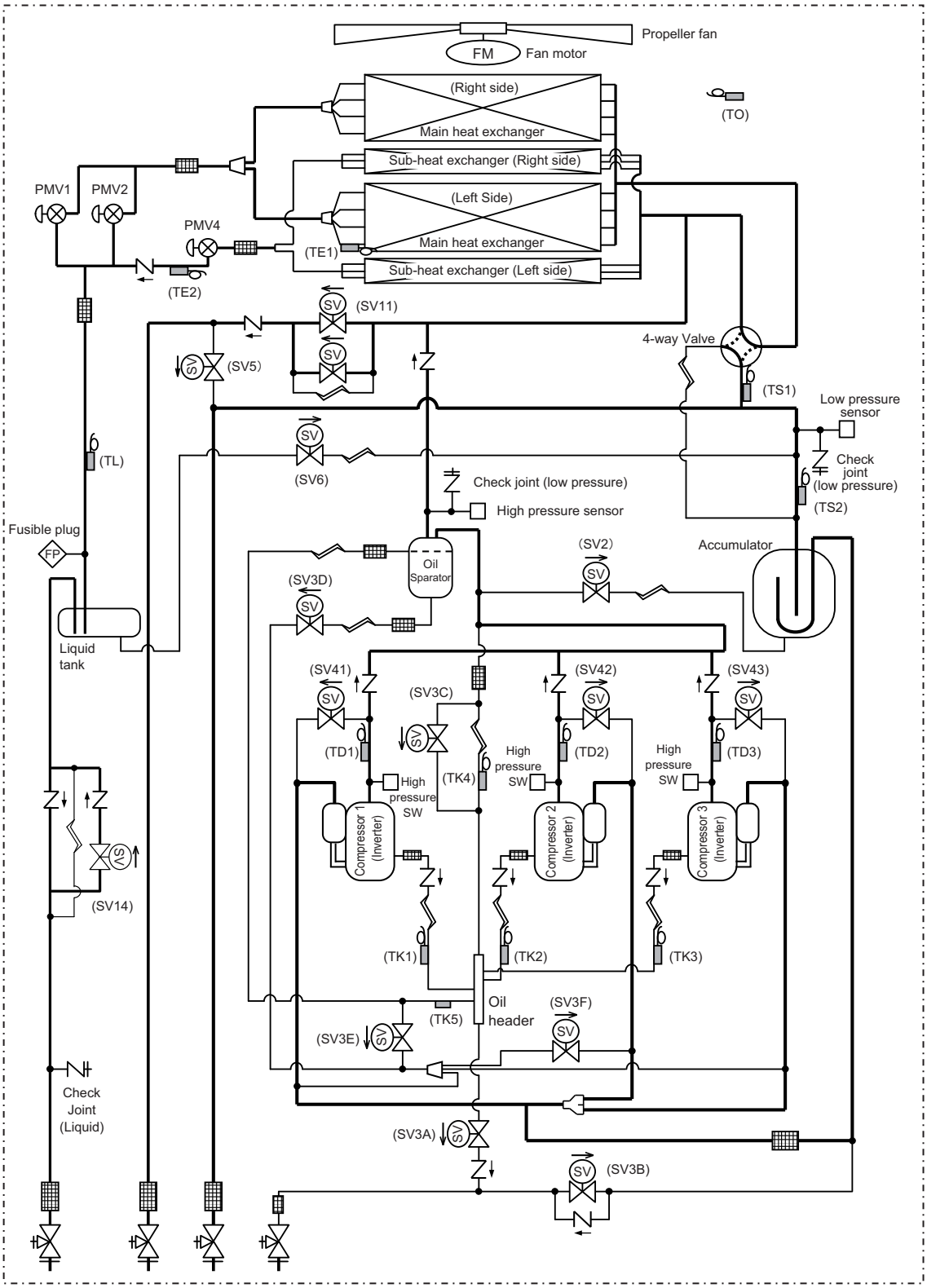

**(Unit : mm)**

## 5-5. Refrigerant cycle diagram

**Model : MMY-MAP0804FT*, MAP1004FT***

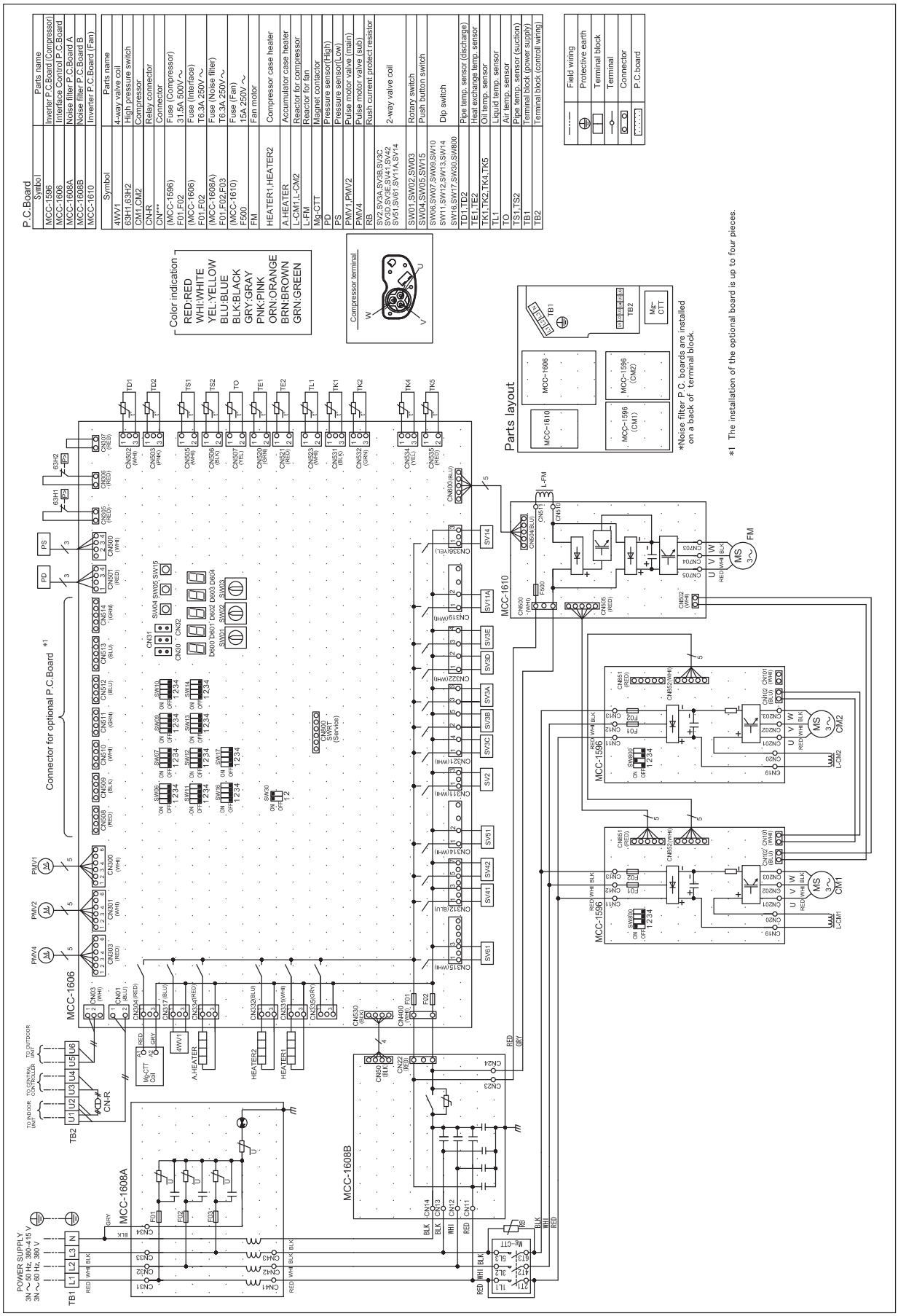


**Model Name : MMY-MAP1204FT*, MAP1404FT***

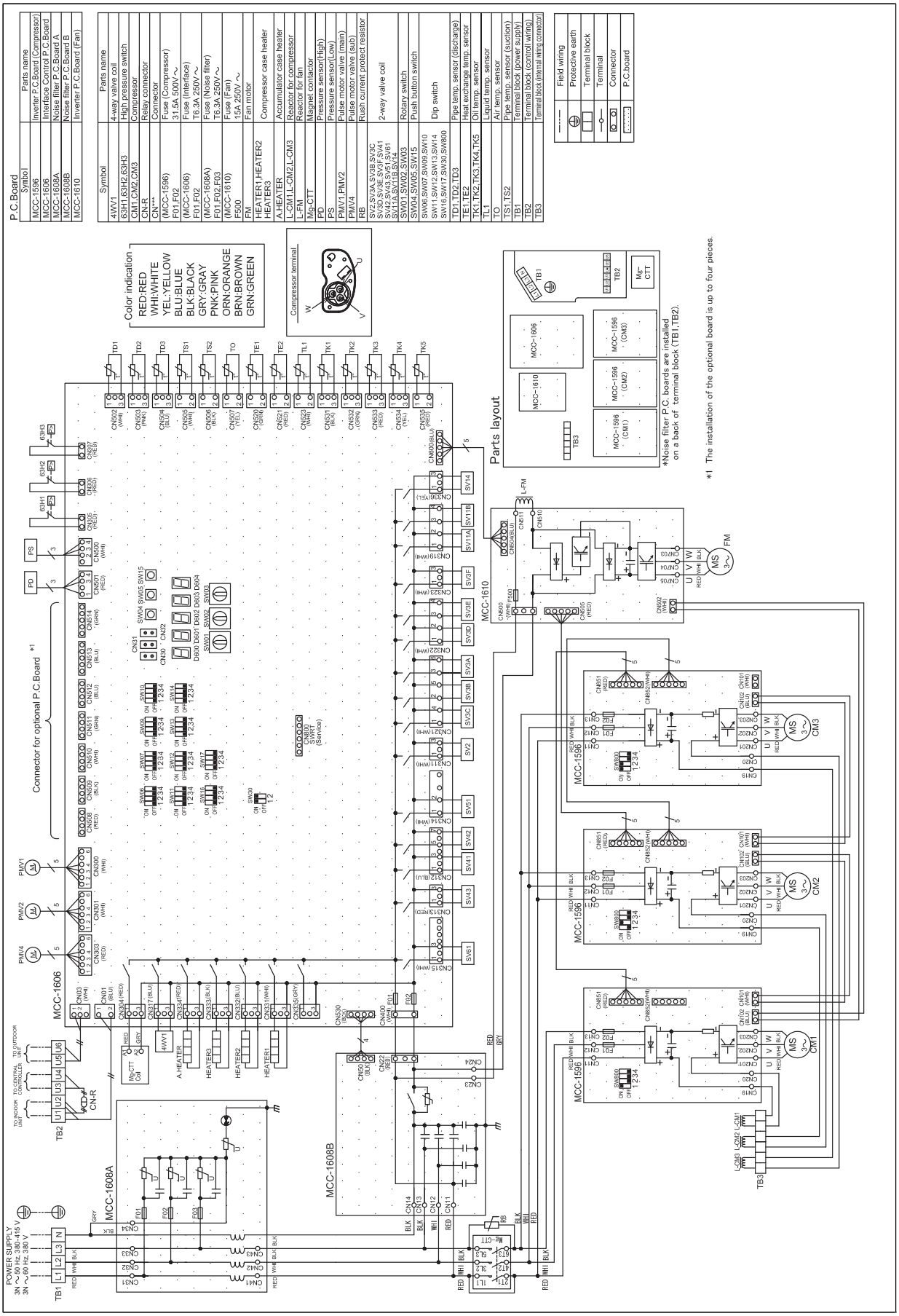


# 5-6. Wiring diagram

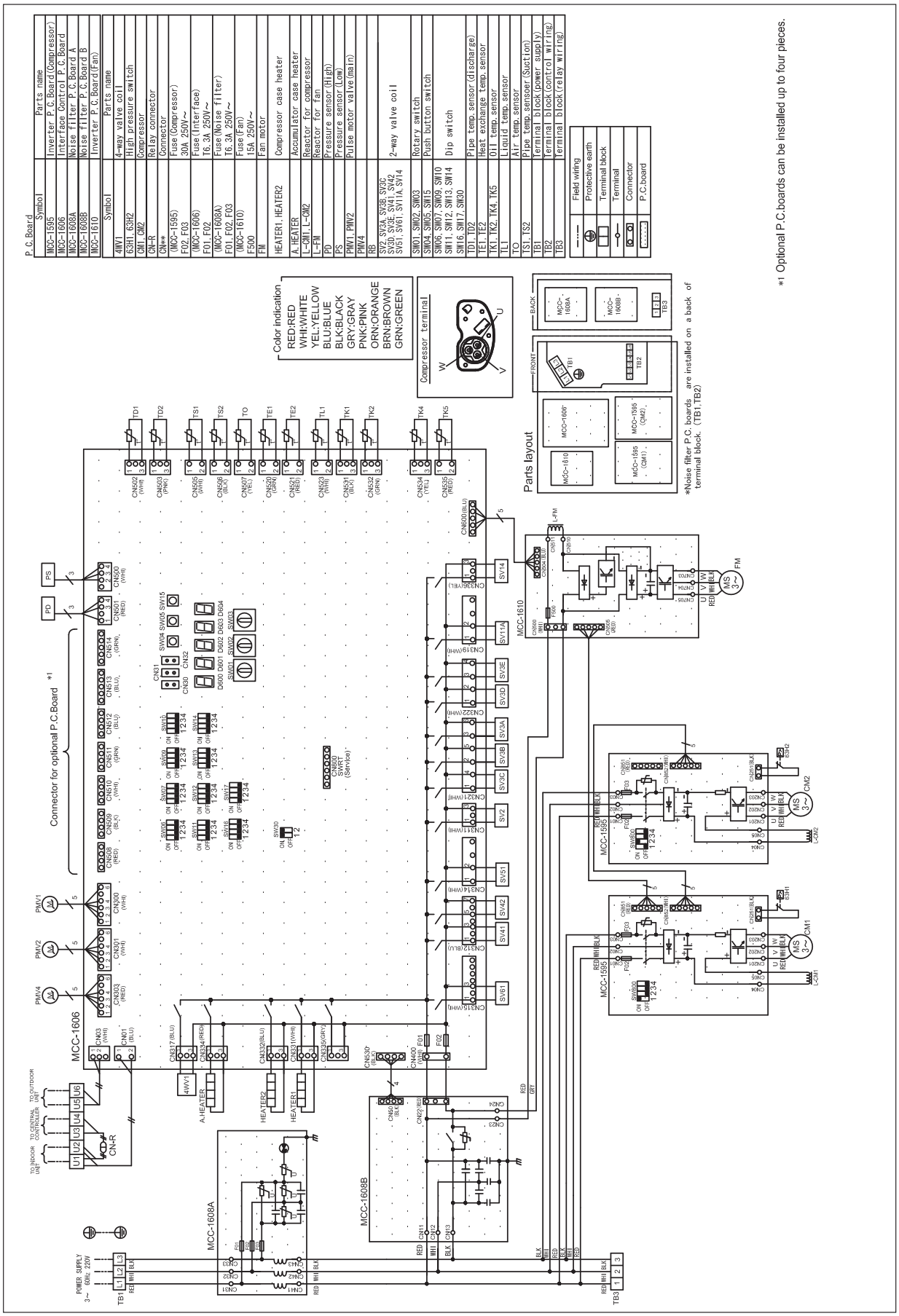
**Model : MMY-MAP0804FT8/FT7, MAP1004FT8/FT7**



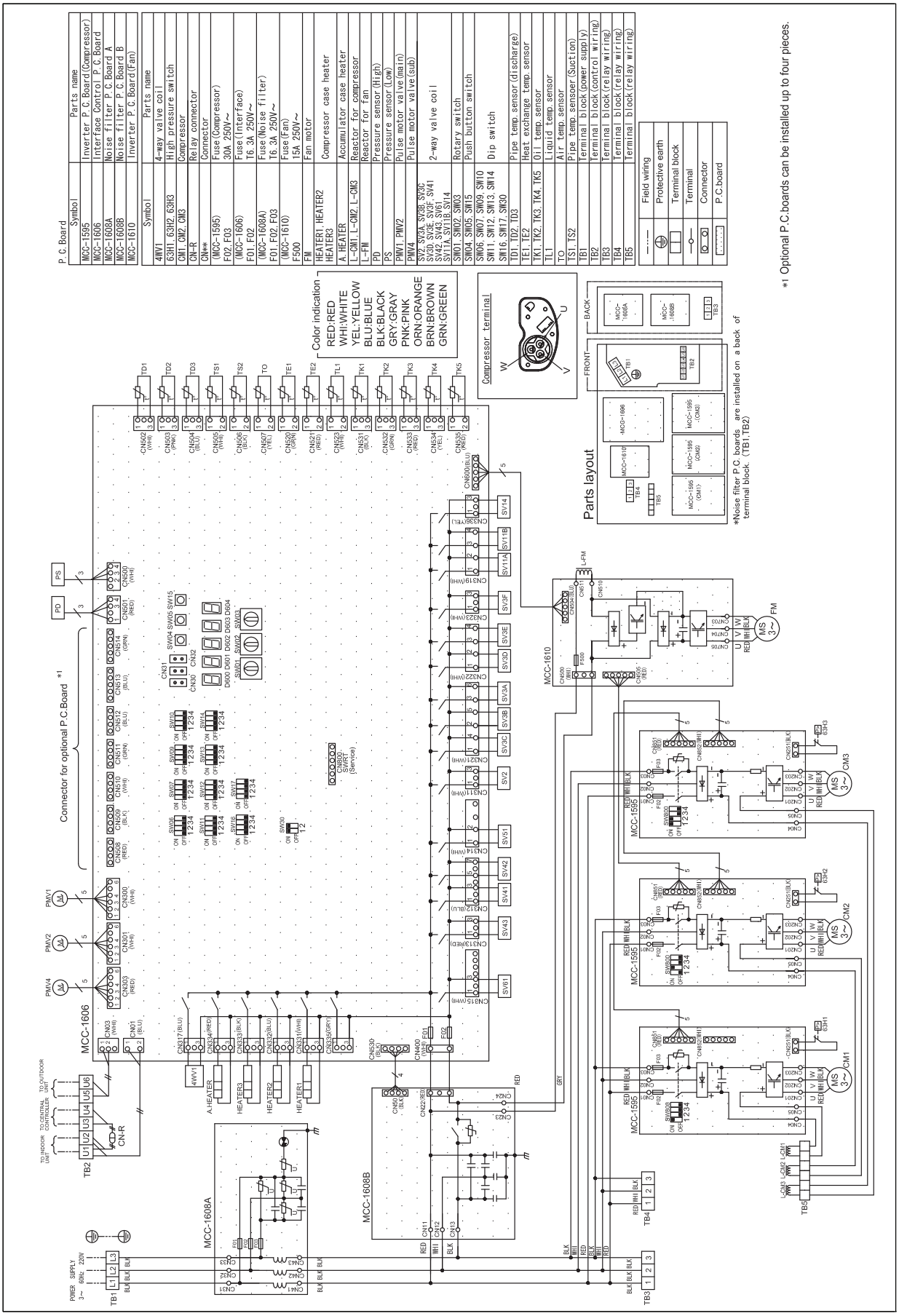
**Model : MMY-MAP1204FT8/FT7, MAP1404FT8/FT7**



**Model : MMY-MAP0804FT5, MAP1004FT5**

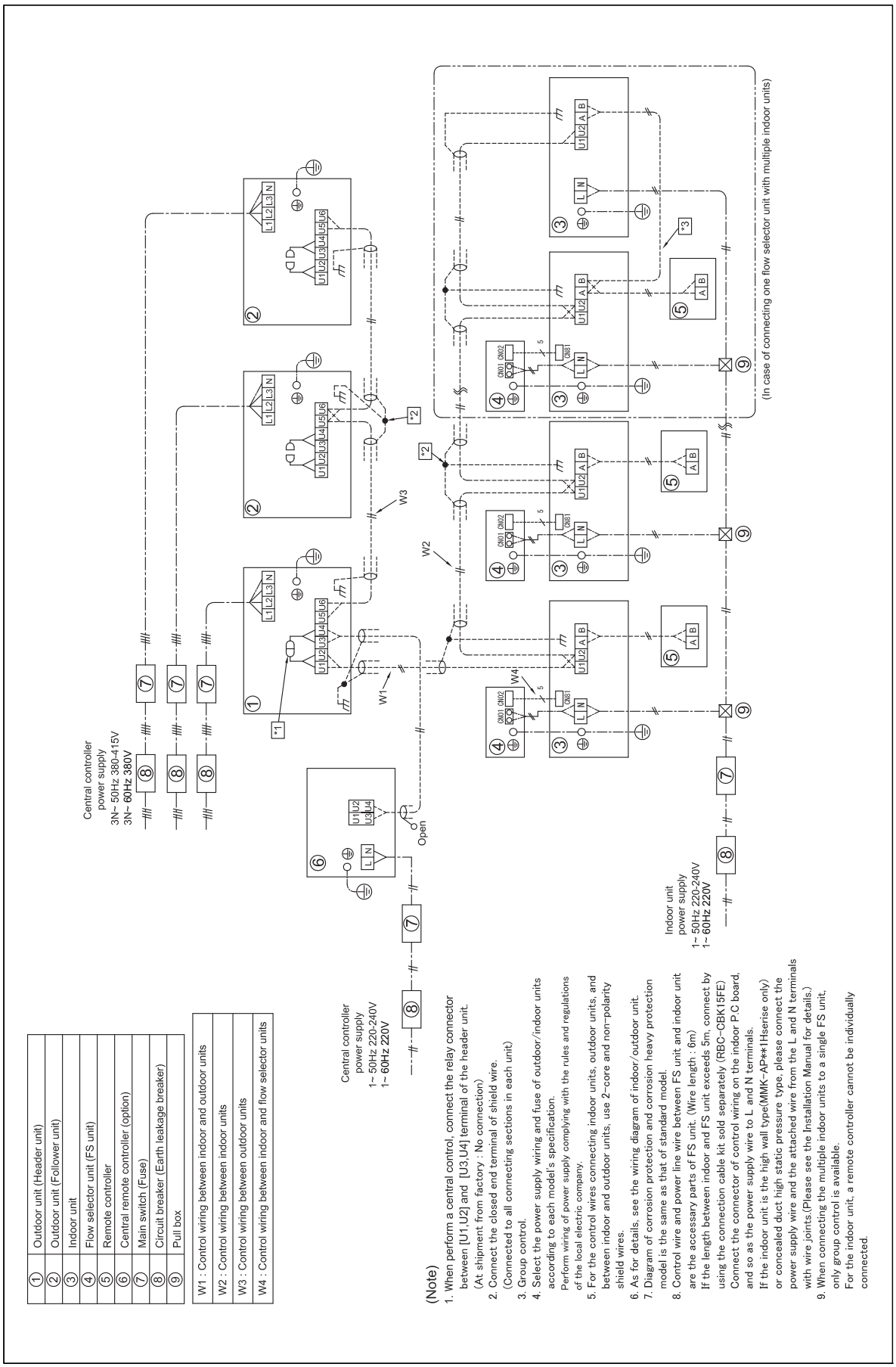


**Model : MMY-MAP1204FT5, MAP1404FT5**

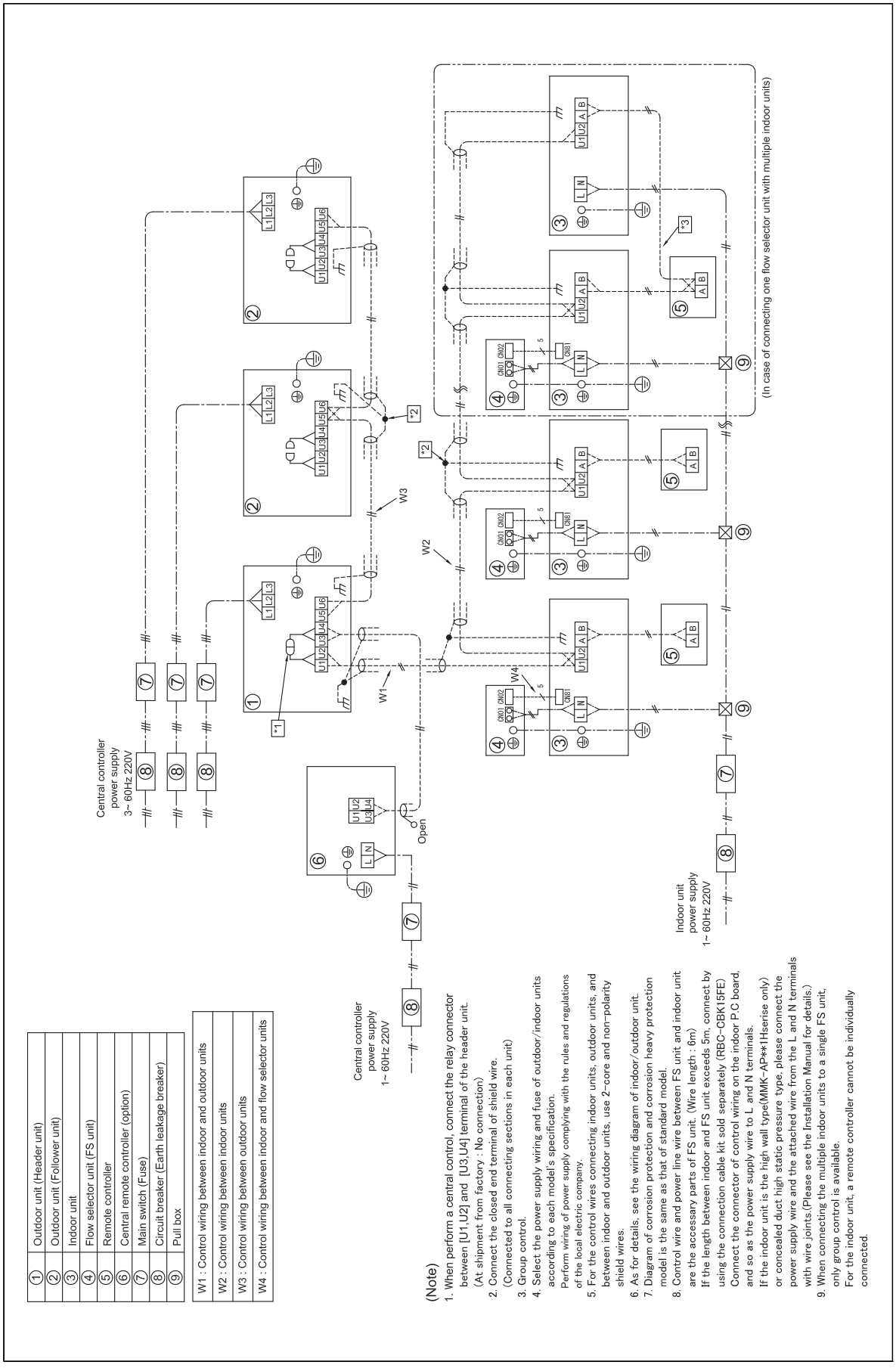


# 5-7. Connecting diagram

**SHRM-i Combination unit (MMY-MAP✻✻✻4FT8/FT7)**



## SHRM-i Combination unit (MMY-MAP✻✻✻4FT5)



## 5-8. Applied control for Outdoor Unit

The outdoor fan high static pressure support and priority operation mode setting (cooling / heating / number of units / or priority indoor unit) functions are made available by setting relevant switches provided on the interface P.C. board of the outdoor unit.

### 5-8-1. Outdoor Fan High Static Pressure Shift

**Purpose / characteristics**

This function is used when connecting a duct to the discharge port of an outdoor unit (as part of, for example, unit installation on the floor by floor installation.)

**Setup**

Turn ON the DIP switch [SW10, Bit 2] provided on the interface P.C. board of the outdoor unit.
This function must be enabled with every discharge duct connected outdoor unit for both of the header and follower units.

**Specification**

Increase the speed of the propeller fan units on the outdoor fan to allow the installation of a duct with a maximum external static pressure not greater than specified in the table below. If a discharge duct with a resistance greater than 15 Pa (1.5 mmAq) is to be used, enable this function. The maximum external static pressures of base units are shown below (Table 1). In the case of combined use of multiple outdoor units, set all the units to the same maximum external static pressure as the one with the lowest maximum external static pressure (see Table 2).

Table 1: Maximum External Static Pressures of Base Outdoor Units

| Model | MMY- | MAP0804∗ | MAP1004∗ | MAP1204∗ | MAP1404∗ |
|---|---|---|---|---|---|
| Maximum external static pressure | (Pa) | 50 | 40 | 40 | 40 |
| (*) Outdoor unit air flow | ($m^3$/h) | 8700 | 9420 | 12000 | 12960 |

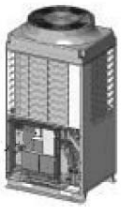
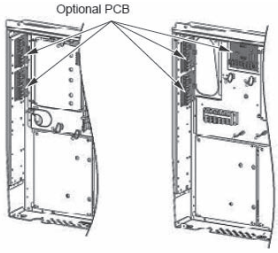
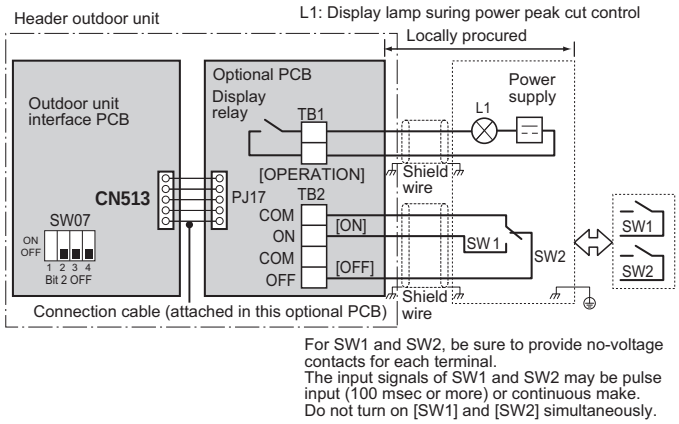
(*) Calculate duct resistance from outdoor unit air flow.

Table 2: Maximum External Static Pressures for Combined Use of Base Units

(1) Standard models

| Combined horsepower output | Model MMY- | Combination of outdoor units | | | Maximum external static pressure (Pa) |
|---|---|---|---|---|---|
| | | Unit 1 | Unit 2 | Unit 3 | |
| 8 | MAP0804∗ | MAP0804∗ | | | 50 |
| 10 | MAP1004∗ | MAP1004∗ | | | 40 |
| 12 | MAP1204∗ | MAP1204∗ | | | 40 |
| 14 | MAP1404∗ | MAP1404∗ | | | 40 |
| 16 | AP1614∗ | MAP0804∗ | MAP0804∗ | | 50 |
| 18 | AP1814∗ | MAP1004∗ | MAP0804∗ | | 40 |
| 20 | AP2014∗ | MAP1004∗ | MAP1004∗ | | 40 |
| 22 | AP2214∗ | MAP1204∗ | MAP1004∗ | | 40 |
| 24 | AP2414∗ | MAP1404∗ | MAP1004∗ | | 40 |
| 26 | AP2614∗ | MAP1404∗ | MAP1204∗ | | 40 |
| 28 | AP2814∗ | MAP1404∗ | MAP1404∗ | | 40 |
| 30 | AP3014∗ | MAP1004∗ | MAP1004∗ | MAP1004∗ | 40 |
| 32 | AP3214∗ | MAP1204∗ | MAP1004∗ | MAP1004∗ | 40 |
| 34 | AP3414∗ | MAP1404∗ | MAP1004∗ | MAP1004∗ | 40 |
| 36 | AP3614∗ | MAP1204∗ | MAP1204∗ | MAP1204∗ | 40 |
| 38 | AP3814∗ | MAP1404∗ | MAP1204∗ | MAP1204∗ | 40 |
| 40 | AP4014∗ | MAP1404∗ | MAP1404∗ | MAP1204∗ | 40 |
| 42 | AP4214∗ | MAP1404∗ | MAP1404∗ | MAP1404∗ | 40 |

## 5-9. Optional printed circuit board (PCB) of outdoor unit

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCDM4E |  <br>Size : 71 x 85 (mm)<br>**Application**<br>  <br>MMY-MAP080, 100 / MMY-MAP120, 140<br>Optional PCB<br>  <br>(max. number installed: 1 pc)<br>* Install the optional P.C. board in the outdoor header unit. | **[1] Power peak-cut Control**<br>• **Purpose: Limiting air conditioning performance with external signals and decreasing the peak power consumption.**<br>• **Feature**<br>The upper limit capacity of the outdoor unit is restricted based on the outdoor power peak selected setting.<br>**Standard Specifications**<br>(Wiring example)<br>  <br><br>For SW1 and SW2, be sure to provide no-voltage contacts for each terminal.<br>The input signals of SW1 and SW2 may be pulse input (100 msec or more) or continuous make.<br>Do not turn on [SW1] and [SW2] simultaneously.<br>**<SW07 (bit 2) OFF [2-stage switching]>**<br>See table below. |

| Input | | SW07 (bit 1) | | Display relay (L1) |
|---|---|---|---|---|
| SW1 | SW2 | Bit 1 OFF | Bit 1 ON | |
| OFF | ON | 100%<br>(normal operation) | 100%<br>(normal operation) | OFF |
| ON | OFF | 0% (forced stop) | Approx. 60%<br>(upper limit regulated) | ON |

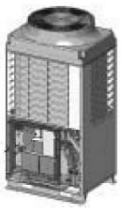
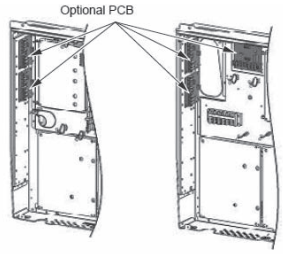
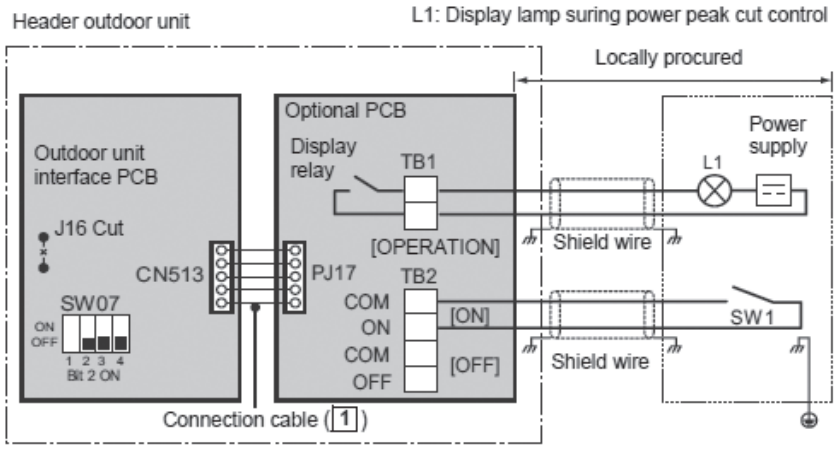
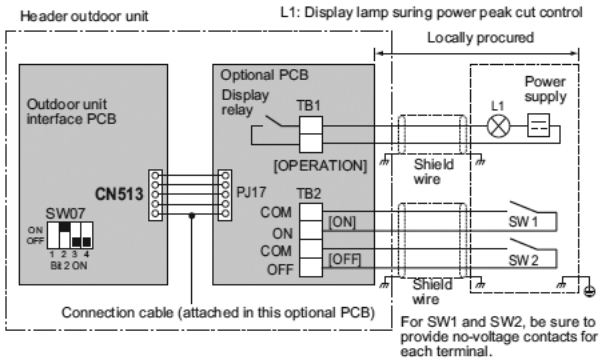
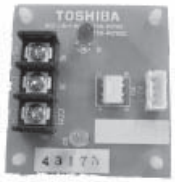
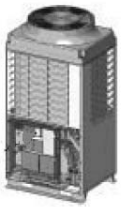
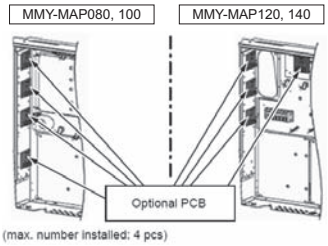
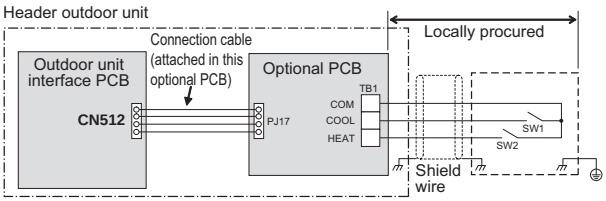
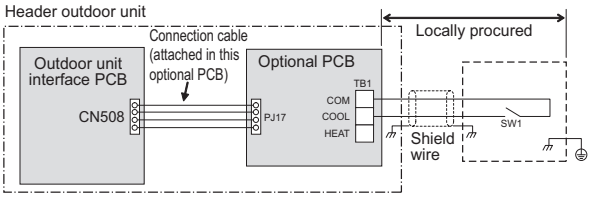
| Model name | Appearance | Function |
|---|---|---|
| TCB-PCDM4E |  <br>Size : 55.5 x 60 (mm)<br>**Application**<br>  <br>MMY-MAP080, 100 / MMY-MAP120, 140<br>  <br>(max. number installed: 1 pc)<br>* Install the optional P.C. board in the outdoor header unit. | **For one input function (SMMS-i and SHRM-i)**<br>Power peak-cut ON-OFF control is made possible on SMMS-i and SHRM-i on the [ON] terminal input (SW1) by cutting the jumper lead (J16) of the center outdoor unit interface PCB.<br>(Wiring example)<br>  <br><br>**<SW07 (bit 2) OFF [2-stage switching]>**<br>Power peak-cut control turns ON when SW1 in the wiring example is ON (continuous make).<br>See table 1<br>**Enhanced Specifications**<br>(Wiring example)<br>  <br><br>**<SW07 (bit 2) ON [4-stage switching]>**<br>See table 2 |

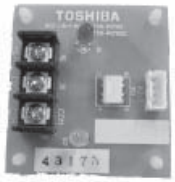
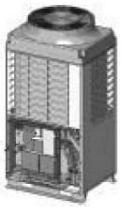
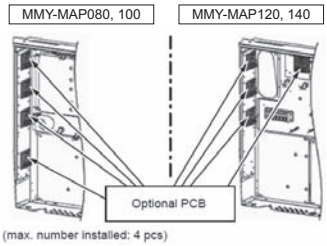
Table 1

| Jumper lead J16 | Input SW1 | SW07 (bit 1) | | Display relay (L1) |
|---|---|---|---|---|
| | | Bit 1 OFF | Bit 1 ON | |
| Cut | OFF | 100% (normal operation) | 100% (normal operation) | OFF |
| | ON | 0% (forced stop) | Approx. 60% (upper limit regulated) | ON |

Table 2

| Input | | SW07 (bit 1) | | Display relay (L1) |
|---|---|---|---|---|
| SW1 | SW2 | Bit 1 OFF | Bit 1 ON | |
| OFF | OFF | 100% (normal operation) | 100% (normal operation) | OFF |
| ON | OFF | Approx. 80% (upper limit regulated) | Approx. 85% (upper limit regulated) | ON |
| OFF | ON | Approx. 60% (upper limit regulated) | Approx. 75% (upper limit regulated) | ON |
| ON | ON | 0% (forced stop) | Approx. 60% (upper limit regulated) | ON |

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCMO4E |  <br>Size : 55.5 x 60 (mm)<br>**Application**<br>  <br>  <br>MMY-MAP080, 100 / MMY-MAP120, 140<br>Optional PCB<br>(max. number installed: 4 pcs)<br>* Install the optional P.C. board in the outdoor header unit. | **[2] External master ON/OFF control**<br>• Feature<br>The outdoor unit starts or stop the system.<br>• Function<br>By connecting the cable (attached in this optional PCB) to the interface PC board on an outdoor unit, all indoor units connected to the outdoor unit enable to operate simultaneously.<br>• Operation<br>The outdoor unit connection is for the header unit (U1).<br>  <br><br>SW1: Operation input switch<br>SW2: Stop input switch<br>**Terminal** / **Input signal** / **Operation**<br>COOL (SW1) — ON / OFF — Batch-operates indoor units.<br>HEAT (SW2) — ON / OFF — Batch-stops indoor units.<br>Provide no-voltage pulse contacts for each terminal.<br>Hold the ON state for at least 100 msec.<br>Do not turn SW1 and SW2 ON simultaneously<br>**[3] Night time operation (sound reduction) control**<br>• Purpose : Reducing noise from an outdoor unit<br>• Functions<br>The rotation speed of the compressor and fan can be restricted during input of the night time signal to reduce noise by connecting to the PCB of outdoor units.<br>• Operation<br>The outdoor unit connection is for the header unit (U1).<br>  <br><br>SW1: Night time signal switch<br>**Terminal** / **Input signal** / **Operation**<br>COOL (SW1) — ON / OFF — Night time control<br>COOL (SW1) — ON / OFF — Normal time control<br>Be sure to provide no-voltage continuous contacts for each terminal. |

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCMO4E |  <br>Size : 55.5 x 60 (mm)<br>**Application**<br>  <br>  <br><br>(max. number installed: 4 pcs)<br>* Install the optional P.C. board in the outdoor header unit. | **Sound reduction and approximation capacity (reference)** |

| System | Model | Sound reduction level dB(A) | Capacity | |
|---|---|---|---|---|
| | | | Cooling | Heating |
| SMMS | 0501HT | 50 | approx. 85% | approx. 80% |
| | 0601HT | 50 | approx. 75% | approx. 70% |
| SMMS-i | 0804HT | 50 | approx. 85% | approx. 80% |
| | 1004HT | 50 | approx. 70% | approx. 65% |
| | 1204HT | 50 | approx. 60% | approx. 55% |
| | 1404HT | 53 | approx. 80% | approx. 80% |
| | 1604HT | 53 | approx. 70% | approx. 70% |
| SHRM-i | 0804FT | 50 | approx. 90% | approx. 85% |
| | 1004FT | 50 | approx. 75% | approx. 70% |
| | 1204FT | 53 | approx. 90% | approx. 80% |
| | 1404FT | 53 | approx. 80% | approx. 70% |

Condition
Cooling : (Indoor 27 deg DB, 19 deg WB)
(Outdoor temperature 25 deg DB)
Heating : (Indoor 20 deg DB)
(Outdoor temperature 7 deg DB, 6 deg WB)
Microphone position
Front 1 m, Height 1 m

**[4] Snowfall fan control**

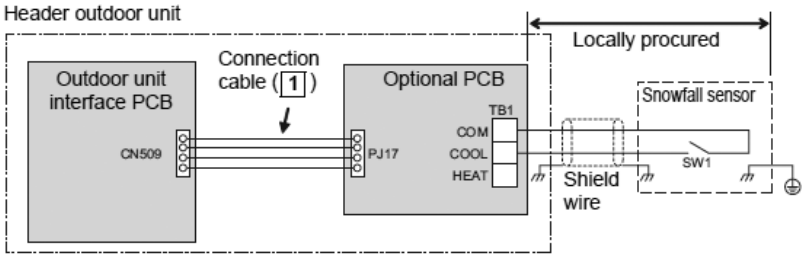
- Purpose : Rotating the fan to prevent snow accumulation
- Feature

Outdoor fan is operated from the snowfall signal received from the outside.

**▼ Functions**

The outdoor unit fan operates at snowfall by connecting to the outdoor unit interface PCB.

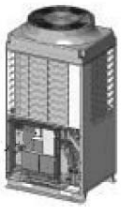
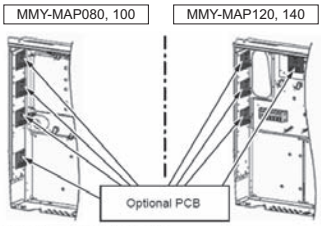
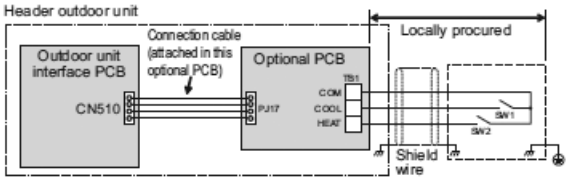
**▼ Operation**




SW1: Snowfall detection switch (snowfall sensor)

| Terminal | Input Signal | Operation |
|---|---|---|
| Cooling (SW1) | ON / OFF ▲ | Snowfall fan control (Fan in outdoor unit operates.) |
| | ON / OFF ▼ | Normal operation |

Be sure to provide no-voltage continous contacts for each terminal.

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCMO4E |  <br>Size : 55.5 x 60 (mm)<br>**Application**<br>  <br>  <br>(max. number installed: 4 pcs)<br>* Install the optional P.C. board in the outdoor header unit. | **[5] Operation mode selection control**<br>• **Purpose: Limiting operation modes to cooling and heating only**<br>• **Feature**<br>This control can restrict the selectable operation mode.<br>▼Function<br>The heating/cooling mode of the system can be selected by connecting to the interface PCB of outdoor units.<br>▼Operation<br>The outdoor unit connection is for the header unit (U1).<br>  <br>SW1: Cooling mode specified input switch<br>SW2: Heating mode specified input switch |

| Input Signal | | Operation: Selected operation mode |
|---|---|---|
| Cooling (SW1) | Heating (SW2) | |
| ON | OFF | Cooling operation only |
| OFF | ON | Heating operation only |
| OFF | OFF | Normal operation |

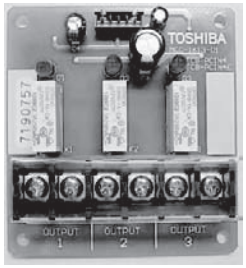
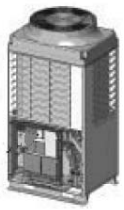
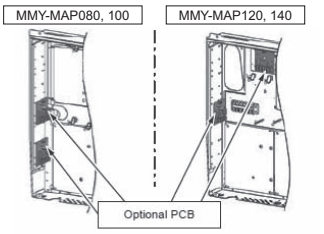
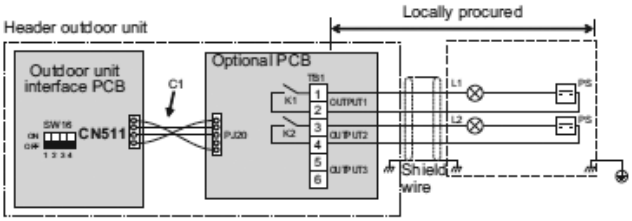
Each terminal should be connected to dry contact.

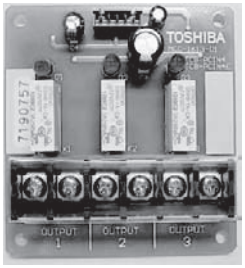
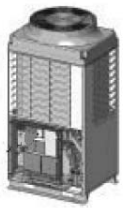
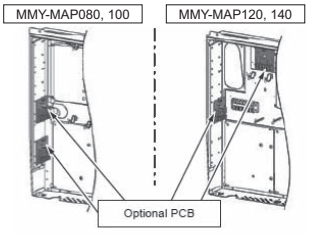
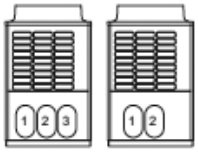
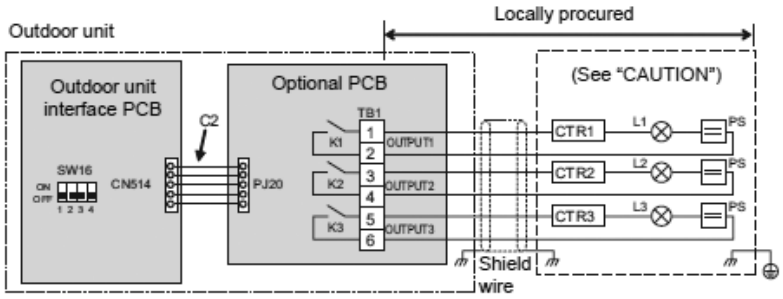
**About Switching of Processing of Indoor Unit Operation State [Setting can be changed on SMMS-i and SHRM-i.]**
Processing of the operation state can be switched for indoor units in a mode other than the selected operation mode by setting the jumper lead (J01) of the header outdoor unit interface PCB.

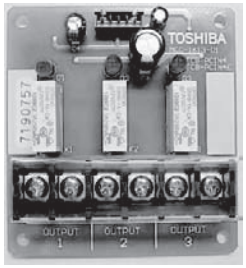
| Jumper lead | Details of Processing |
|---|---|
| J01 connected (factory default) | Unallowed indoor units in a mode other than the selected operation mode are not treated as priority (thermo OFF state).<br>(Unallowed indoor units)<br>Operation Mode: Cooling unit — Operation State: Air blow operation at blow rate set on remote control<br>Operation Mode: Heating unit — Operation State: Air blow operation at super-slow blow rate<br>Operation Mode: Air blow unit — Operation State: Regular air blow operation at blow rate set on remote control<br>Remote control: ⏻, ✺ indicator is displayed. |
| J01 cut | Indoor units in a mode other than the selected operation mode are forcibly switched to the selected operation mode.<br>PC board selection mode: Normal — Remote control operation/display: ❄, 💧, ☀, or 🌀 can be selected<br>PC board selection mode: Cool — Remote control operation/display: Only ❄, 💧, or 🌀 can be selected<br>PC board selection mode: Heat — Remote control operation/display: Only ☀ or 🌀 can be selected<br>When using the remote control, 📝 (mode select control) indicator is displayed. |

**▼ Model : SMMS, SHRM**
The jumper lead is not switched.
**Indoor units in a mode other than the selected operation mode are forcibly switched to the selected operation mode.**

| PC board selection mode | Remote control operation/display | |
|---|---|---|
| Normal | ❄, 💧, ☀, or 🌀 can be selected | When using the remote control, 📝 (mode select control) indicator is displayed. |
| Cool | Only ❄, 💧, or 🌀 can be selected | |
| Heat | Only ☀ or 🌀 can be selected | |

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCIN4E |  <br>Size: 73 x 79 (mm)<br>**Application**<br>  <br>  <br>(max. number installed: 2 pcs)<br>* Install the optional P.C. board in the outdoor header unit. | **[6] Error / Operation Output**<br>• Feature<br>Operation and error monitoring is possible.<br>▼ Function<br>The operation error output PCB can indicate operation and error states by connecting to the interface PCB of outdoor units.<br>▼ Operation<br>Operation output: The operation indicator is on while any indoor unit in the system is operating.<br>Error output: The error indicator is on when an error is occurred on even one of the indoor or outdoor units in the system.<br>Wiring example<br>  <br>C1 Attached connection cable 1 (4wires)<br>CN511 Connector on interface side (green)<br>K1, K2 Relays<br>L1 Error indication Lamp<br>L2 Operation indication Lamp<br>OUTPUT1 Error output<br>OUTPUT2 Operation output<br>PJ20 Connector on optional PCB side<br>PS Power supply unit<br>TB1 Terminal block<br>* [OUTPUT3] is normally output when power is turned out. |

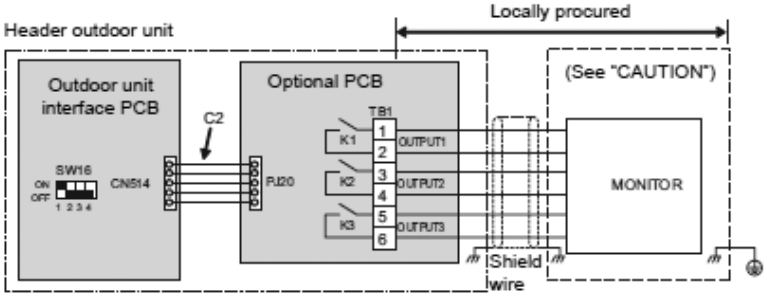
| Model name | Appearance | Function |
|---|---|---|
| TCB-PCIN4E |  <br>Size: 73 x 79 (mm)<br>**Application**<br>  <br>  <br>(max. number installed: 2 pcs)<br>* Install the optional P.C. board in individual outdoor unit | **[7] Compressor Operation Output (SMMS-i and SHRM-i)**<br>• Feature<br>Outputs the operation status of the compressors in each outdoor unit.<br>▼ **Functions**<br>This function can be applied, for example, to the elapsed operation time count of each compressor mounted on an outdoor unit since the compressor in operation signal can be output externally.<br>▼ **Operation**<br>During compressor operation, the relay of the output terminal corresponding to that compressor turns ON (closes) and turns OFF (opens) when compressor operation stops.<br>As shown in the figure, the output terminals are "OUTPUT1", "OUTPUT2" and "OUTPUT3" from the left compressor facing the front of the outdoor unit.<br>  <br>**Wiring example**<br>  <br>C2 Connector cable 2 ( 2 )<br>CN514 Connector on interface side (green)<br>CTR1 Elapsed operation counter 1<br>CTR2 Elapsed operation counter 2<br>CTR3 Elapsed operation counter 3<br>K1, K2, K3 Relays<br>L1, L2, L3 Operation indication LEDs<br>OUTPUT1 Compressor 1 operation output terminal<br>OUTPUT2 Compressor 2 operation output terminal<br>OUTPUT3 Compressor 3 operation output terminal<br>PJ20 Connector on optional PCB side<br>PS Power supply unit<br>TB1 Terminal block |

| Model name | Appearance | Function |
|---|---|---|
| TCB-PCIN4E |  Size: 73 x 79 (mm) | **[8] Operating Rate Output (SMMS-i and SHRM-i)**<br>• Feature<br>Relay turn ON/OFF depending on the running rate of the system.<br>▼ Functions<br>The operation state can be remotely checked since the system operating rate signal can be output externally.<br>▼ Operation<br>As shown in the table, each of the output terminals turns ON (relay closes) and OFF (relay opens) according to the system operating rate. |

| Functions | SW16 | OUTPUT1 | OUTPUT2 | OUTPUT3 | Operating rate FA |
|---|---|---|---|---|---|
| System operating rate output | ON/OFF 1 2 3 4<br>bit 1 : ON<br>bit 2 : OFF | OFF | OFF | OFF | FA=0% |
| | | ON | OFF | OFF | 0%<FA<20% |
| | | OFF | ON | OFF | 20%≤FA<35% |
| | | ON | ON | OFF | 35%≤FA<50% |
| | | OFF | OFF | ON | 50%≤FA<65% |
| | | ON | OFF | ON | 65%≤FA<80% |
| | | OFF | ON | ON | 80%≤FA<95% |
| | | ON | ON | ON | 95%≤FA |

OFF=relay open ON=relay closed

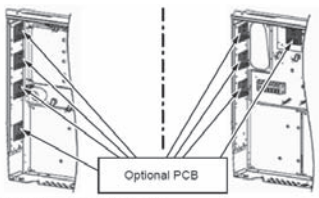
**Wiring example**




| | |
|---|---|
| C2 | Connector cable 2 (2) |
| CN514 | Connector on interface side (green) |
| K1, K2, K3 | Relays |
| MONITOR | Monitoring device |
| OUTPUT1 | Output terminal for each function |
| OUTPUT2 | Output terminal for each function |
| OUTPUT3 | Output terminal for each function |
| PJ20 | Connector on optional PCB side |
| TB1 | Terminal block |

**Application**

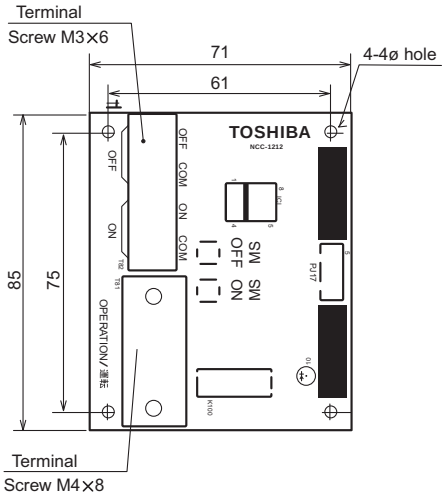
MMY-MAP080, 100 | MMY-MAP120, 140



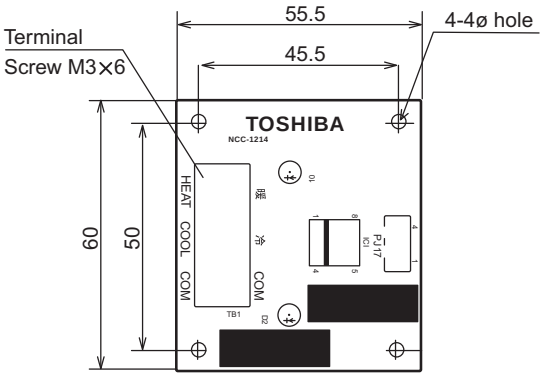

(max. number installed: 4 pcs)

* Install the optional P.C. board in the outdoor header unit.

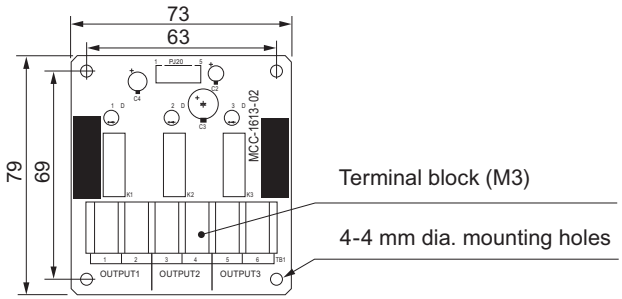
**TCB-PCDM4E**




**TCB-PCMO4E**




**TCB-PCIN4E**



# 5-10. Part load performance

## Single unit

MMY-MAP0804FT8/FT7/FT5 (8HP, 22.4 kW system)

### Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 20.8 | 20.8 | 5.58 | 18.7 | 4.65 | 16.6 | 3.82 | 14.6 | 3.11 |
| 39 °C | 21.2 | 21.2 | 5.50 | 19.1 | 4.58 | 17.0 | 3.76 | 14.8 | 3.06 |
| 37 °C | 21.8 | 21.8 | 5.34 | 19.6 | 4.44 | 17.4 | 3.65 | 15.3 | 2.97 |
| 35 °C | 22.4 | 22.4 | 5.17 | 20.2 | 4.30 | 17.9 | 3.54 | 15.7 | 2.87 |
| 33 °C | 22.4 | 22.4 | 4.79 | 20.2 | 3.99 | 17.9 | 3.29 | 15.7 | 2.68 |
| 31 °C | 22.4 | 22.4 | 4.46 | 20.2 | 3.72 | 17.9 | 3.07 | 15.7 | 2.51 |
| 30 °C | 22.4 | 22.4 | 4.30 | 20.2 | 3.59 | 17.9 | 2.97 | 15.7 | 2.43 |
| 29 °C | 22.4 | 22.4 | 4.16 | 20.2 | 3.47 | 17.9 | 2.87 | 15.7 | 2.36 |
| 27 °C | 22.4 | 22.4 | 3.88 | 20.2 | 3.25 | 17.9 | 2.69 | 15.7 | 2.21 |
| 25 °C | 22.4 | 22.4 | 3.63 | 20.2 | 3.04 | 17.9 | 2.53 | 15.7 | 2.08 |
| 23 °C | 22.4 | 22.4 | 3.40 | 20.2 | 2.85 | 17.9 | 2.37 | 15.7 | 1.96 |
| 21 °C | 22.4 | 22.4 | 3.33 | 20.2 | 2.80 | 17.9 | 2.33 | 15.7 | 1.93 |
| 20 °C | 22.4 | 22.4 | 3.30 | 20.2 | 2.77 | 17.9 | 2.31 | 15.7 | 1.91 |
| 19 °C | 22.4 | 22.4 | 3.27 | 20.2 | 2.75 | 17.9 | 2.29 | 15.7 | 1.90 |
| 17 °C | 22.4 | 22.4 | 3.22 | 20.2 | 2.71 | 17.9 | 2.26 | 15.7 | 1.88 |
| 15 °C | 22.4 | 22.4 | 3.18 | 20.2 | 2.68 | 17.9 | 2.24 | 15.7 | 1.86 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 20.8 | 12.5 | 2.50 | 10.4 | 2.01 | 8.32 | 1.63 | 6.24 | 1.36 |
| 39 °C | 21.2 | 12.7 | 2.47 | 10.6 | 1.98 | 8.48 | 1.60 | 6.36 | 1.34 |
| 37 °C | 21.8 | 13.1 | 2.39 | 10.9 | 1.92 | 8.72 | 1.55 | 6.54 | 1.30 |
| 35 °C | 22.4 | 13.4 | 2.32 | 11.2 | 1.86 | 8.96 | 1.51 | 6.72 | 1.26 |
| 33 °C | 22.4 | 13.4 | 2.17 | 11.2 | 1.75 | 8.96 | 1.43 | 6.72 | 1.20 |
| 31 °C | 22.4 | 13.4 | 2.04 | 11.2 | 1.65 | 8.96 | 1.36 | 6.72 | 1.15 |
| 30 °C | 22.4 | 13.4 | 1.98 | 11.2 | 1.61 | 8.96 | 1.32 | 6.72 | 1.12 |
| 29 °C | 22.4 | 13.4 | 1.92 | 11.2 | 1.56 | 8.96 | 1.29 | 6.72 | 1.10 |
| 27 °C | 22.4 | 13.4 | 1.81 | 11.2 | 1.48 | 8.96 | 1.23 | 6.72 | 1.05 |
| 25 °C | 22.4 | 13.4 | 1.70 | 11.2 | 1.40 | 8.96 | 1.16 | 6.72 | 1.00 |
| 23 °C | 22.4 | 13.4 | 1.61 | 11.2 | 1.32 | 8.96 | 1.11 | 6.72 | 0.95 |
| 21 °C | 22.4 | 13.4 | 1.58 | 11.2 | 1.31 | 8.96 | 1.10 | 6.72 | 0.95 |
| 20 °C | 22.4 | 13.4 | 1.57 | 11.2 | 1.30 | 8.96 | 1.09 | 6.72 | 0.95 |
| 19 °C | 22.4 | 13.4 | 1.57 | 11.2 | 1.30 | 8.96 | 1.09 | 6.72 | 0.95 |
| 17 °C | 22.4 | 13.4 | 1.55 | 11.2 | 1.29 | 8.96 | 1.08 | 6.72 | 0.94 |
| 15 °C | 22.4 | 13.4 | 1.54 | 11.2 | 1.28 | 8.96 | 1.08 | 6.72 | 0.94 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

### Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 25.0 | 25.0 | 4.98 | 22.5 | 4.26 | 20.0 | 3.61 | 17.5 | 3.03 |
| 13.0 | 11.8 | 25.0 | 25.0 | 5.12 | 22.5 | 4.37 | 20.0 | 3.69 | 17.5 | 3.09 |
| 11.0 | 9.8 | 25.0 | 25.0 | 5.29 | 22.5 | 4.51 | 20.0 | 3.80 | 17.5 | 3.17 |
| 9.0 | 7.9 | 25.0 | 25.0 | 5.48 | 22.5 | 4.65 | 20.0 | 3.91 | 17.5 | 3.25 |
| 7.0 | 6.0 | 25.0 | 25.0 | 5.68 | 22.5 | 4.82 | 20.0 | 4.04 | 17.5 | 3.35 |
| 5.0 | 4.1 | 24.2 | 24.2 | 5.59 | 21.8 | 4.74 | 19.4 | 3.98 | 16.9 | 3.30 |
| 3.0 | 2.2 | 23.3 | 23.3 | 5.51 | 21.0 | 4.67 | 18.6 | 3.92 | 16.3 | 3.25 |
| 0.0 | -0.7 | 21.9 | 21.9 | 5.38 | 19.7 | 4.56 | 17.5 | 3.82 | 15.3 | 3.17 |
| -3.0 | -3.7 | 20.5 | 20.5 | 5.24 | 18.5 | 4.44 | 16.4 | 3.73 | 14.4 | 3.09 |
| -5.0 | -5.6 | 19.6 | 19.6 | 5.15 | 17.6 | 4.37 | 15.7 | 3.67 | 13.7 | 3.04 |
| -7.0 | -7.6 | 18.6 | 18.6 | 5.06 | 16.7 | 4.29 | 14.9 | 3.60 | 13.0 | 2.98 |
| -10 | -10.5 | 17.1 | 17.1 | 4.93 | 15.4 | 4.18 | 13.7 | 3.51 | 12.0 | 2.91 |
| -14.5 | -15.0 | 14.7 | 14.7 | 4.73 | 13.2 | 4.01 | 11.8 | 3.36 | 10.3 | 2.79 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 25.0 | 15.0 | 2.52 | 12.5 | 2.08 | 10.0 | 1.71 | 7.50 | 1.41 |
| 13.0 | 11.8 | 25.0 | 15.0 | 2.56 | 12.5 | 2.10 | 10.0 | 1.72 | 7.50 | 1.41 |
| 11.0 | 9.8 | 25.0 | 15.0 | 2.61 | 12.5 | 2.14 | 10.0 | 1.74 | 7.50 | 1.42 |
| 9.0 | 7.9 | 25.0 | 15.0 | 2.67 | 12.5 | 2.18 | 10.0 | 1.76 | 7.50 | 1.42 |
| 7.0 | 6.0 | 25.0 | 15.0 | 2.74 | 12.5 | 2.22 | 10.0 | 1.78 | 7.50 | 1.43 |
| 5.0 | 4.1 | 24.2 | 14.5 | 2.70 | 12.1 | 2.19 | 9.68 | 1.76 | 7.26 | 1.41 |
| 3.0 | 2.2 | 23.3 | 14.0 | 2.66 | 11.7 | 2.15 | 9.32 | 1.73 | 6.99 | 1.39 |
| 0.0 | -0.7 | 21.9 | 13.1 | 2.59 | 11.0 | 2.10 | 8.76 | 1.69 | 6.57 | 1.35 |
| -3.0 | -3.7 | 20.5 | 12.3 | 2.53 | 10.3 | 2.05 | 8.20 | 1.64 | 6.15 | 1.32 |
| -5.0 | -5.6 | 19.6 | 11.8 | 2.49 | 9.80 | 2.01 | 7.84 | 1.62 | 5.88 | 1.30 |
| -7.0 | -7.6 | 18.6 | 11.2 | 2.44 | 9.30 | 1.98 | 7.44 | 1.59 | 5.58 | 1.28 |
| -10 | -10.5 | 17.1 | 10.3 | 2.38 | 8.55 | 1.93 | 6.84 | 1.55 | 5.13 | 1.24 |
| -14.5 | -15.0 | 14.7 | 8.82 | 2.28 | 7.35 | 1.85 | 5.88 | 1.48 | 4.41 | 1.19 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-MAP1004FT8/FT7/FT5 (10HP, 28 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 26.1 | 26.1 | 7.86 | 23.5 | 6.46 | 20.9 | 5.23 | 18.3 | 4.18 |
| 39 °C | 26.5 | 26.5 | 7.75 | 23.9 | 6.37 | 21.2 | 5.16 | 18.6 | 4.12 |
| 37 °C | 27.3 | 27.3 | 7.51 | 24.6 | 6.17 | 21.8 | 5.00 | 19.1 | 4.00 |
| 35 °C | 28.0 | 28.0 | 7.28 | 25.2 | 5.98 | 22.4 | 4.84 | 19.6 | 3.87 |
| 33 °C | 28.0 | 28.0 | 6.73 | 25.2 | 5.54 | 22.4 | 4.50 | 19.6 | 3.60 |
| 31 °C | 28.0 | 28.0 | 6.24 | 25.2 | 5.14 | 22.4 | 4.18 | 19.6 | 3.36 |
| 30 °C | 28.0 | 28.0 | 6.02 | 25.2 | 4.96 | 22.4 | 4.04 | 19.6 | 3.25 |
| 29 °C | 28.0 | 28.0 | 5.81 | 25.2 | 4.79 | 22.4 | 3.91 | 19.6 | 3.15 |
| 27 °C | 28.0 | 28.0 | 5.41 | 25.2 | 4.47 | 22.4 | 3.65 | 19.6 | 2.95 |
| 25 °C | 28.0 | 28.0 | 5.05 | 25.2 | 4.18 | 22.4 | 3.42 | 19.6 | 2.77 |
| 23 °C | 28.0 | 28.0 | 4.72 | 25.2 | 3.91 | 22.4 | 3.20 | 19.6 | 2.60 |
| 21 °C | 28.0 | 28.0 | 4.62 | 25.2 | 3.83 | 22.4 | 3.14 | 19.6 | 2.55 |
| 20 °C | 28.0 | 28.0 | 4.58 | 25.2 | 3.79 | 22.4 | 3.11 | 19.6 | 2.53 |
| 19 °C | 28.0 | 28.0 | 4.53 | 25.2 | 3.76 | 22.4 | 3.09 | 19.6 | 2.51 |
| 17 °C | 28.0 | 28.0 | 4.46 | 25.2 | 3.70 | 22.4 | 3.04 | 19.6 | 2.48 |
| 15 °C | 28.0 | 28.0 | 4.40 | 25.2 | 3.65 | 22.4 | 3.00 | 19.6 | 2.45 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 26.1 | 15.7 | 3.30 | 13.1 | 2.60 | 10.4 | 2.08 | 7.83 | 1.73 |
| 39 °C | 26.5 | 15.9 | 3.26 | 13.3 | 2.56 | 10.6 | 2.05 | 7.95 | 1.70 |
| 37 °C | 27.3 | 16.4 | 3.16 | 13.7 | 2.49 | 10.9 | 1.98 | 8.19 | 1.65 |
| 35 °C | 28.0 | 16.8 | 3.06 | 14.0 | 2.41 | 11.2 | 1.92 | 8.40 | 1.60 |
| 33 °C | 28.0 | 16.8 | 2.86 | 14.0 | 2.27 | 11.2 | 1.82 | 8.40 | 1.53 |
| 31 °C | 28.0 | 16.8 | 2.68 | 14.0 | 2.14 | 11.2 | 1.73 | 8.40 | 1.46 |
| 30 °C | 28.0 | 16.8 | 2.60 | 14.0 | 2.07 | 11.2 | 1.69 | 8.40 | 1.43 |
| 29 °C | 28.0 | 16.8 | 2.52 | 14.0 | 2.02 | 11.2 | 1.64 | 8.40 | 1.40 |
| 27 °C | 28.0 | 16.8 | 2.37 | 14.0 | 1.90 | 11.2 | 1.56 | 8.40 | 1.34 |
| 25 °C | 28.0 | 16.8 | 2.23 | 14.0 | 1.80 | 11.2 | 1.48 | 8.40 | 1.28 |
| 23 °C | 28.0 | 16.8 | 2.10 | 14.0 | 1.70 | 11.2 | 1.41 | 8.40 | 1.22 |
| 21 °C | 28.0 | 16.8 | 2.07 | 14.0 | 1.68 | 11.2 | 1.40 | 8.40 | 1.21 |
| 20 °C | 28.0 | 16.8 | 2.05 | 14.0 | 1.67 | 11.2 | 1.39 | 8.40 | 1.21 |
| 19 °C | 28.0 | 16.8 | 2.04 | 14.0 | 1.66 | 11.2 | 1.39 | 8.40 | 1.21 |
| 17 °C | 28.0 | 16.8 | 2.02 | 14.0 | 1.65 | 11.2 | 1.38 | 8.40 | 1.20 |
| 15 °C | 28.0 | 16.8 | 2.00 | 14.0 | 1.64 | 11.2 | 1.37 | 8.40 | 1.20 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit | | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| Dry-Bulb (°C) | Wet-Bulb (°C) | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 31.5 | 31.5 | 6.51 | 28.4 | 5.52 | 25.2 | 4.64 | 22.1 | 3.85 |
| 13.0 | 11.8 | 31.5 | 31.5 | 6.72 | 28.4 | 5.68 | 25.2 | 4.76 | 22.1 | 3.94 |
| 11.0 | 9.8 | 31.5 | 31.5 | 6.95 | 28.4 | 5.87 | 25.2 | 4.91 | 22.1 | 4.05 |
| 9.0 | 7.9 | 31.5 | 31.5 | 7.21 | 28.4 | 6.08 | 25.2 | 5.06 | 22.1 | 4.17 |
| 7.0 | 6.0 | 31.5 | 31.5 | 7.50 | 28.4 | 6.31 | 25.2 | 5.24 | 22.1 | 4.30 |
| 5.0 | 4.1 | 30.4 | 30.4 | 7.38 | 27.4 | 6.21 | 24.3 | 5.16 | 21.3 | 4.23 |
| 3.0 | 2.2 | 29.3 | 29.3 | 7.27 | 26.4 | 6.12 | 23.4 | 5.08 | 20.5 | 4.17 |
| 0.0 | -0.7 | 27.6 | 27.6 | 7.10 | 24.8 | 5.97 | 22.1 | 4.96 | 19.3 | 4.07 |
| -3.0 | -3.7 | 25.8 | 25.8 | 6.92 | 23.2 | 5.82 | 20.6 | 4.84 | 18.1 | 3.97 |
| -5.0 | -5.6 | 24.6 | 24.6 | 6.80 | 22.1 | 5.72 | 19.7 | 4.76 | 17.2 | 3.90 |
| -7.0 | -7.6 | 23.4 | 23.4 | 6.68 | 21.1 | 5.62 | 18.7 | 4.67 | 16.4 | 3.83 |
| -10 | -10.5 | 21.5 | 21.5 | 6.51 | 19.4 | 5.48 | 17.2 | 4.55 | 15.1 | 3.73 |
| -14.5 | -15.0 | 18.5 | 18.5 | 6.24 | 16.7 | 5.25 | 14.8 | 4.36 | 13.0 | 3.58 |

| Outdoor Unit | | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| Dry-Bulb (°C) | Wet-Bulb (°C) | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 31.5 | 18.9 | 3.17 | 15.8 | 2.58 | 12.6 | 2.10 | 9.45 | 1.73 |
| 13.0 | 11.8 | 31.5 | 18.9 | 3.23 | 15.8 | 2.62 | 12.6 | 2.12 | 9.45 | 1.73 |
| 11.0 | 9.8 | 31.5 | 18.9 | 3.30 | 15.8 | 2.67 | 12.6 | 2.15 | 9.45 | 1.74 |
| 9.0 | 7.9 | 31.5 | 18.9 | 3.39 | 15.8 | 2.72 | 12.6 | 2.17 | 9.45 | 1.74 |
| 7.0 | 6.0 | 31.5 | 18.9 | 3.48 | 15.8 | 2.78 | 12.6 | 2.21 | 9.45 | 1.75 |
| 5.0 | 4.1 | 30.4 | 18.2 | 3.43 | 15.2 | 2.74 | 12.2 | 2.17 | 9.12 | 1.73 |
| 3.0 | 2.2 | 29.3 | 17.6 | 3.37 | 14.7 | 2.70 | 11.7 | 2.14 | 8.79 | 1.70 |
| 0.0 | -0.7 | 27.6 | 16.6 | 3.29 | 13.8 | 2.63 | 11.0 | 2.09 | 8.28 | 1.66 |
| -3.0 | -3.7 | 25.8 | 15.5 | 3.21 | 12.9 | 2.57 | 10.3 | 2.04 | 7.74 | 1.62 |
| -5.0 | -5.6 | 24.6 | 14.8 | 3.16 | 12.3 | 2.52 | 9.84 | 2.00 | 7.38 | 1.59 |
| -7.0 | -7.6 | 23.4 | 14.0 | 3.10 | 11.7 | 2.48 | 9.36 | 1.97 | 7.02 | 1.56 |
| -10 | -10.5 | 21.5 | 12.9 | 3.02 | 10.8 | 2.41 | 8.60 | 1.92 | 6.45 | 1.52 |
| -14.5 | -15.0 | 18.5 | 11.1 | 2.89 | 9.25 | 2.31 | 7.40 | 1.84 | 5.55 | 1.46 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-MAP1204FT8/FT7/FT5 (12HP, 33.5 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 31.2 | 31.2 | 9.05 | 28.1 | 7.42 | 25.0 | 5.99 | 21.8 | 4.78 |
| 39 °C | 31.7 | 31.7 | 8.92 | 28.5 | 7.31 | 25.4 | 5.90 | 22.2 | 4.71 |
| 37 °C | 32.6 | 32.6 | 8.65 | 29.3 | 7.09 | 26.1 | 5.72 | 22.8 | 4.57 |
| 35 °C | 33.5 | 33.5 | 8.38 | 30.2 | 6.86 | 26.8 | 5.55 | 23.5 | 4.42 |
| 33 °C | 33.5 | 33.5 | 7.74 | 30.2 | 6.35 | 26.8 | 5.14 | 23.5 | 4.12 |
| 31 °C | 33.5 | 33.5 | 7.18 | 30.2 | 5.90 | 26.8 | 4.79 | 23.5 | 3.84 |
| 30 °C | 33.5 | 33.5 | 6.92 | 30.2 | 5.69 | 26.8 | 4.62 | 23.5 | 3.72 |
| 29 °C | 33.5 | 33.5 | 6.67 | 30.2 | 5.49 | 26.8 | 4.47 | 23.5 | 3.60 |
| 27 °C | 33.5 | 33.5 | 6.22 | 30.2 | 5.12 | 26.8 | 4.18 | 23.5 | 3.37 |
| 25 °C | 33.5 | 33.5 | 5.80 | 30.2 | 4.79 | 26.8 | 3.91 | 23.5 | 3.16 |
| 23 °C | 33.5 | 33.5 | 5.42 | 30.2 | 4.48 | 26.8 | 3.66 | 23.5 | 2.97 |
| 21 °C | 33.5 | 33.5 | 5.30 | 30.2 | 4.39 | 26.8 | 3.59 | 23.5 | 2.92 |
| 20 °C | 33.5 | 33.5 | 5.25 | 30.2 | 4.34 | 26.8 | 3.56 | 23.5 | 2.90 |
| 19 °C | 33.5 | 33.5 | 5.20 | 30.2 | 4.31 | 26.8 | 3.53 | 23.5 | 2.87 |
| 17 °C | 33.5 | 33.5 | 5.11 | 30.2 | 4.24 | 26.8 | 3.48 | 23.5 | 2.84 |
| 15 °C | 33.5 | 33.5 | 5.04 | 30.2 | 4.18 | 26.8 | 3.43 | 23.5 | 2.80 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 31.2 | 18.7 | 3.78 | 15.6 | 2.99 | 12.5 | 2.42 | 9.36 | 2.05 |
| 39 °C | 31.7 | 19.0 | 3.72 | 15.9 | 2.95 | 12.7 | 2.38 | 9.51 | 2.02 |
| 37 °C | 32.6 | 19.6 | 3.61 | 16.3 | 2.86 | 13.0 | 2.31 | 9.78 | 1.96 |
| 35 °C | 33.5 | 20.1 | 3.50 | 16.8 | 2.77 | 13.4 | 2.24 | 10.1 | 1.90 |
| 33 °C | 33.5 | 20.1 | 3.27 | 16.8 | 2.61 | 13.4 | 2.12 | 10.1 | 1.82 |
| 31 °C | 33.5 | 20.1 | 3.07 | 16.8 | 2.46 | 13.4 | 2.02 | 10.1 | 1.75 |
| 30 °C | 33.5 | 20.1 | 2.97 | 16.8 | 2.39 | 13.4 | 1.97 | 10.1 | 1.71 |
| 29 °C | 33.5 | 20.1 | 2.88 | 16.8 | 2.32 | 13.4 | 1.92 | 10.1 | 1.67 |
| 27 °C | 33.5 | 20.1 | 2.71 | 16.8 | 2.20 | 13.4 | 1.83 | 10.1 | 1.60 |
| 25 °C | 33.5 | 20.1 | 2.55 | 16.8 | 2.08 | 13.4 | 1.74 | 10.1 | 1.53 |
| 23 °C | 33.5 | 20.1 | 2.40 | 16.8 | 1.96 | 13.4 | 1.65 | 10.1 | 1.46 |
| 21 °C | 33.5 | 20.1 | 2.37 | 16.8 | 1.94 | 13.4 | 1.64 | 10.1 | 1.46 |
| 20 °C | 33.5 | 20.1 | 2.35 | 16.8 | 1.93 | 13.4 | 1.63 | 10.1 | 1.45 |
| 19 °C | 33.5 | 20.1 | 2.34 | 16.8 | 1.92 | 13.4 | 1.63 | 10.1 | 1.45 |
| 17 °C | 33.5 | 20.1 | 2.31 | 16.8 | 1.91 | 13.4 | 1.62 | 10.1 | 1.45 |
| 15 °C | 33.5 | 20.1 | 2.29 | 16.8 | 1.89 | 13.4 | 1.61 | 10.1 | 1.45 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 37.5 | 37.5 | 7.84 | 33.8 | 6.64 | 30.0 | 5.57 | 26.3 | 4.62 |
| 13.0 | 11.8 | 37.5 | 37.5 | 8.09 | 33.8 | 6.84 | 30.0 | 5.72 | 26.3 | 4.73 |
| 11.0 | 9.8 | 37.5 | 37.5 | 8.38 | 33.8 | 7.07 | 30.0 | 5.90 | 26.3 | 4.86 |
| 9.0 | 7.9 | 37.5 | 37.5 | 8.70 | 33.8 | 7.32 | 30.0 | 6.09 | 26.3 | 5.00 |
| 7.0 | 6.0 | 37.5 | 37.5 | 9.05 | 33.8 | 7.60 | 30.0 | 6.31 | 26.3 | 5.16 |
| 5.0 | 4.1 | 36.2 | 36.2 | 8.91 | 32.6 | 7.49 | 29.0 | 6.21 | 25.3 | 5.09 |
| 3.0 | 2.2 | 34.9 | 34.9 | 8.77 | 31.4 | 7.37 | 27.9 | 6.11 | 24.4 | 5.01 |
| 0.0 | -0.7 | 32.9 | 32.9 | 8.56 | 29.6 | 7.19 | 26.3 | 5.97 | 23.0 | 4.89 |
| -3.0 | -3.7 | 30.7 | 30.7 | 8.35 | 27.6 | 7.01 | 24.6 | 5.82 | 21.5 | 4.76 |
| -5.0 | -5.6 | 29.3 | 29.3 | 8.21 | 26.4 | 6.90 | 23.4 | 5.72 | 20.5 | 4.68 |
| -7.0 | -7.6 | 27.8 | 27.8 | 8.06 | 25.0 | 6.77 | 22.2 | 5.62 | 19.5 | 4.60 |
| -10 | -10.5 | 25.6 | 25.6 | 7.85 | 23.0 | 6.60 | 20.5 | 5.47 | 17.9 | 4.48 |
| -14.5 | -15.0 | 22.0 | 22.0 | 7.53 | 19.8 | 6.32 | 17.6 | 5.25 | 15.4 | 4.30 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 37.5 | 22.5 | 3.80 | 18.8 | 3.10 | 15.0 | 2.53 | 11.3 | 2.09 |
| 13.0 | 11.8 | 37.5 | 22.5 | 3.87 | 18.8 | 3.15 | 15.0 | 2.55 | 11.3 | 2.09 |
| 11.0 | 9.8 | 37.5 | 22.5 | 3.96 | 18.8 | 3.20 | 15.0 | 2.58 | 11.3 | 2.10 |
| 9.0 | 7.9 | 37.5 | 22.5 | 4.06 | 18.8 | 3.26 | 15.0 | 2.61 | 11.3 | 2.11 |
| 7.0 | 6.0 | 37.5 | 22.5 | 4.17 | 18.8 | 3.34 | 15.0 | 2.65 | 11.3 | 2.12 |
| 5.0 | 4.1 | 36.2 | 21.7 | 4.11 | 18.1 | 3.29 | 14.5 | 2.61 | 10.9 | 2.09 |
| 3.0 | 2.2 | 34.9 | 20.9 | 4.05 | 17.5 | 3.23 | 14.0 | 2.57 | 10.5 | 2.05 |
| 0.0 | -0.7 | 32.9 | 19.7 | 3.95 | 16.5 | 3.16 | 13.2 | 2.51 | 9.87 | 2.00 |
| -3.0 | -3.7 | 30.7 | 18.4 | 3.85 | 15.4 | 3.08 | 12.3 | 2.45 | 9.21 | 1.95 |
| -5.0 | -5.6 | 29.3 | 17.6 | 3.79 | 14.7 | 3.03 | 11.7 | 2.40 | 8.79 | 1.92 |
| -7.0 | -7.6 | 27.8 | 16.7 | 3.72 | 13.9 | 2.97 | 11.1 | 2.36 | 8.34 | 1.89 |
| -10 | -10.5 | 25.6 | 15.4 | 3.62 | 12.8 | 2.90 | 10.2 | 2.30 | 7.68 | 1.84 |
| -14.5 | -15.0 | 22.0 | 13.2 | 3.47 | 11.0 | 2.78 | 8.80 | 2.21 | 6.60 | 1.76 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-MAP1404FT8/FT7/FT5 (14HP, 40 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 37.2 | 37.2 | 12.2 | 33.5 | 9.96 | 29.8 | 8.01 | 26.0 | 6.36 |
| 39 °C | 37.8 | 37.8 | 12.0 | 34.0 | 9.81 | 30.2 | 7.89 | 26.5 | 6.27 |
| 37 °C | 39.0 | 39.0 | 11.7 | 35.1 | 9.52 | 31.2 | 7.65 | 27.3 | 6.08 |
| 35 °C | 40.0 | 40.0 | 11.3 | 36.0 | 9.22 | 32.0 | 7.41 | 28.0 | 5.89 |
| 33 °C | 40.0 | 40.0 | 10.4 | 36.0 | 8.52 | 32.0 | 6.87 | 28.0 | 5.48 |
| 31 °C | 40.0 | 40.0 | 9.66 | 36.0 | 7.91 | 32.0 | 6.39 | 28.0 | 5.11 |
| 30 °C | 40.0 | 40.0 | 9.31 | 36.0 | 7.63 | 32.0 | 6.17 | 28.0 | 4.94 |
| 29 °C | 40.0 | 40.0 | 8.98 | 36.0 | 7.36 | 32.0 | 5.96 | 28.0 | 4.78 |
| 27 °C | 40.0 | 40.0 | 8.36 | 36.0 | 6.86 | 32.0 | 5.57 | 28.0 | 4.48 |
| 25 °C | 40.0 | 40.0 | 7.79 | 36.0 | 6.41 | 32.0 | 5.21 | 28.0 | 4.20 |
| 23 °C | 40.0 | 40.0 | 7.28 | 36.0 | 5.99 | 32.0 | 4.88 | 28.0 | 3.94 |
| 21 °C | 40.0 | 40.0 | 7.12 | 36.0 | 5.86 | 32.0 | 4.78 | 28.0 | 3.87 |
| 20 °C | 40.0 | 40.0 | 7.05 | 36.0 | 5.81 | 32.0 | 4.74 | 28.0 | 3.84 |
| 19 °C | 40.0 | 40.0 | 6.98 | 36.0 | 5.75 | 32.0 | 4.70 | 28.0 | 3.81 |
| 17 °C | 40.0 | 40.0 | 6.86 | 36.0 | 5.66 | 32.0 | 4.63 | 28.0 | 3.76 |
| 15 °C | 40.0 | 40.0 | 6.76 | 36.0 | 5.58 | 32.0 | 4.57 | 28.0 | 3.72 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 37.2 | 22.3 | 5.01 | 18.6 | 3.95 | 14.9 | 3.20 | 11.20 | 2.74 |
| 39 °C | 37.8 | 22.7 | 4.93 | 18.9 | 3.90 | 15.1 | 3.15 | 11.30 | 2.70 |
| 37 °C | 39.0 | 23.4 | 4.79 | 19.5 | 3.78 | 15.6 | 3.05 | 11.70 | 2.62 |
| 35 °C | 40.0 | 24.0 | 4.64 | 20.0 | 3.66 | 16.0 | 2.96 | 12.0 | 2.53 |
| 33 °C | 40.0 | 24.0 | 4.33 | 20.0 | 3.44 | 16.0 | 2.81 | 12.0 | 2.43 |
| 31 °C | 40.0 | 24.0 | 4.06 | 20.0 | 3.25 | 16.0 | 2.67 | 12.0 | 2.33 |
| 30 °C | 40.0 | 24.0 | 3.94 | 20.0 | 3.16 | 16.0 | 2.61 | 12.0 | 2.28 |
| 29 °C | 40.0 | 24.0 | 3.81 | 20.0 | 3.07 | 16.0 | 2.54 | 12.0 | 2.23 |
| 27 °C | 40.0 | 24.0 | 3.59 | 20.0 | 2.90 | 16.0 | 2.42 | 12.0 | 2.14 |
| 25 °C | 40.0 | 24.0 | 3.38 | 20.0 | 2.74 | 16.0 | 2.30 | 12.0 | 2.05 |
| 23 °C | 40.0 | 24.0 | 3.18 | 20.0 | 2.59 | 16.0 | 2.19 | 12.0 | 1.95 |
| 21 °C | 40.0 | 24.0 | 3.13 | 20.0 | 2.57 | 16.0 | 2.17 | 12.0 | 1.95 |
| 20 °C | 40.0 | 24.0 | 3.11 | 20.0 | 2.55 | 16.0 | 2.17 | 12.0 | 1.95 |
| 19 °C | 40.0 | 24.0 | 3.09 | 20.0 | 2.54 | 16.0 | 2.16 | 12.0 | 1.95 |
| 17 °C | 40.0 | 24.0 | 3.06 | 20.0 | 2.52 | 16.0 | 2.15 | 12.0 | 1.94 |
| 15 °C | 40.0 | 24.0 | 3.03 | 20.0 | 2.50 | 16.0 | 2.14 | 12.0 | 1.94 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 45.0 | 45.0 | 10.7 | 40.5 | 8.82 | 36.0 | 7.20 | 31.5 | 5.82 |
| 13.0 | 11.8 | 45.0 | 45.0 | 11.1 | 40.5 | 9.14 | 36.0 | 7.44 | 31.5 | 5.99 |
| 11.0 | 9.8 | 45.0 | 45.0 | 11.6 | 40.5 | 9.52 | 36.0 | 7.72 | 31.5 | 6.19 |
| 9.0 | 7.9 | 45.0 | 45.0 | 12.1 | 40.5 | 9.93 | 36.0 | 8.03 | 31.5 | 6.41 |
| 7.0 | 6.0 | 45.0 | 45.0 | 12.7 | 40.5 | 10.4 | 36.0 | 8.38 | 31.5 | 6.66 |
| 5.0 | 4.1 | 43.5 | 43.5 | 12.5 | 39.2 | 10.2 | 34.8 | 8.26 | 30.5 | 6.56 |
| 3.0 | 2.2 | 41.9 | 41.9 | 12.3 | 37.7 | 10.1 | 33.5 | 8.13 | 29.3 | 6.46 |
| 0.0 | -0.7 | 39.5 | 39.5 | 12.0 | 35.6 | 9.84 | 31.6 | 7.93 | 27.7 | 6.31 |
| -3.0 | -3.7 | 36.9 | 36.9 | 11.7 | 33.2 | 9.59 | 29.5 | 7.73 | 25.8 | 6.15 |
| -5.0 | -5.6 | 35.2 | 35.2 | 11.5 | 31.7 | 9.43 | 28.2 | 7.61 | 24.6 | 6.04 |
| -7.0 | -7.6 | 33.4 | 33.4 | 11.3 | 30.1 | 9.26 | 26.7 | 7.47 | 23.4 | 5.94 |
| -10 | -10.5 | 30.7 | 30.7 | 11.0 | 27.6 | 9.02 | 24.6 | 7.28 | 21.5 | 5.78 |
| -14.5 | -15.0 | 26.4 | 26.4 | 10.6 | 23.8 | 8.65 | 21.1 | 6.98 | 18.5 | 5.54 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 45.0 | 27.0 | 4.68 | 22.5 | 3.78 | 18.0 | 3.13 | 13.5 | 2.71 |
| 13.0 | 11.8 | 45.0 | 27.0 | 4.79 | 22.5 | 3.84 | 18.0 | 3.14 | 13.5 | 2.70 |
| 11.0 | 9.8 | 45.0 | 27.0 | 4.92 | 22.5 | 3.91 | 18.0 | 3.17 | 13.5 | 2.69 |
| 9.0 | 7.9 | 45.0 | 27.0 | 5.06 | 22.5 | 3.99 | 18.0 | 3.20 | 13.5 | 2.68 |
| 7.0 | 6.0 | 45.0 | 27.0 | 5.23 | 22.5 | 4.09 | 18.0 | 3.24 | 13.5 | 2.68 |
| 5.0 | 4.1 | 43.5 | 26.1 | 5.15 | 21.8 | 4.03 | 17.4 | 3.19 | 13.1 | 2.64 |
| 3.0 | 2.2 | 41.9 | 25.1 | 5.07 | 21.0 | 3.97 | 16.8 | 3.14 | 12.6 | 2.60 |
| 0.0 | -0.7 | 39.5 | 23.7 | 4.95 | 19.8 | 3.87 | 15.8 | 3.07 | 11.9 | 2.54 |
| -3.0 | -3.7 | 36.9 | 22.1 | 4.83 | 18.5 | 3.77 | 14.8 | 2.99 | 11.1 | 2.47 |
| -5.0 | -5.6 | 35.2 | 21.1 | 4.75 | 17.6 | 3.71 | 14.1 | 2.94 | 10.6 | 2.43 |
| -7.0 | -7.6 | 33.4 | 20.0 | 4.66 | 16.7 | 3.65 | 13.4 | 2.89 | 10.0 | 2.39 |
| -10 | -10.5 | 30.7 | 18.4 | 4.54 | 15.4 | 3.55 | 12.3 | 2.81 | 9.21 | 2.33 |
| -14.5 | -15.0 | 26.4 | 15.8 | 4.35 | 13.2 | 3.40 | 10.6 | 2.70 | 7.92 | 2.23 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

## Combination

MMY-AP1614FT8/FT7/FT5 (16HP, 45 kW system)

### Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 41.9 | 41.9 | 11.3 | 37.7 | 9.37 | 33.5 | 7.70 | 29.3 | 6.26 |
| 39 °C | 42.5 | 42.5 | 11.1 | 38.3 | 9.23 | 34.0 | 7.59 | 29.8 | 6.17 |
| 37 °C | 43.8 | 43.8 | 10.8 | 39.4 | 8.95 | 35.0 | 7.36 | 30.7 | 5.98 |
| 35 °C | 45.0 | 45.0 | 10.4 | 40.5 | 8.67 | 36.0 | 7.13 | 31.5 | 5.79 |
| 33 °C | 45.0 | 45.0 | 9.66 | 40.5 | 8.05 | 36.0 | 6.64 | 31.5 | 5.41 |
| 31 °C | 45.0 | 45.0 | 8.98 | 40.5 | 7.50 | 36.0 | 6.19 | 31.5 | 5.06 |
| 30 °C | 45.0 | 45.0 | 8.67 | 40.5 | 7.25 | 36.0 | 5.99 | 31.5 | 4.90 |
| 29 °C | 45.0 | 45.0 | 8.38 | 40.5 | 7.00 | 36.0 | 5.79 | 31.5 | 4.75 |
| 27 °C | 45.0 | 45.0 | 7.82 | 40.5 | 6.55 | 36.0 | 5.43 | 31.5 | 4.46 |
| 25 °C | 45.0 | 45.0 | 7.32 | 40.5 | 6.13 | 36.0 | 5.09 | 31.5 | 4.19 |
| 23 °C | 45.0 | 45.0 | 6.85 | 40.5 | 5.75 | 36.0 | 4.78 | 31.5 | 3.94 |
| 21 °C | 45.0 | 45.0 | 6.71 | 40.5 | 5.64 | 36.0 | 4.69 | 31.5 | 3.88 |
| 20 °C | 45.0 | 45.0 | 6.65 | 40.5 | 5.59 | 36.0 | 4.66 | 31.5 | 3.85 |
| 19 °C | 45.0 | 45.0 | 6.60 | 40.5 | 5.55 | 36.0 | 4.62 | 31.5 | 3.83 |
| 17 °C | 45.0 | 45.0 | 6.49 | 40.5 | 5.47 | 36.0 | 4.56 | 31.5 | 3.78 |
| 15 °C | 45.0 | 45.0 | 6.41 | 40.5 | 5.40 | 36.0 | 4.51 | 31.5 | 3.74 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 41.9 | 25.1 | 5.04 | 21.0 | 4.05 | 16.8 | 3.28 | 12.6 | 2.73 |
| 39 °C | 42.5 | 25.5 | 4.97 | 21.3 | 3.99 | 17.0 | 3.23 | 12.8 | 2.69 |
| 37 °C | 43.8 | 26.3 | 4.82 | 21.9 | 3.87 | 17.5 | 3.13 | 13.1 | 2.61 |
| 35 °C | 45.0 | 27.0 | 4.67 | 22.5 | 3.75 | 18.0 | 3.04 | 13.5 | 2.53 |
| 33 °C | 45.0 | 27.0 | 4.38 | 22.5 | 3.53 | 18.0 | 2.88 | 13.5 | 2.42 |
| 31 °C | 45.0 | 27.0 | 4.11 | 22.5 | 3.34 | 18.0 | 2.74 | 13.5 | 2.31 |
| 30 °C | 45.0 | 27.0 | 3.99 | 22.5 | 3.24 | 18.0 | 2.67 | 13.5 | 2.26 |
| 29 °C | 45.0 | 27.0 | 3.87 | 22.5 | 3.15 | 18.0 | 2.60 | 13.5 | 2.21 |
| 27 °C | 45.0 | 27.0 | 3.65 | 22.5 | 2.98 | 18.0 | 2.47 | 13.5 | 2.11 |
| 25 °C | 45.0 | 27.0 | 3.44 | 22.5 | 2.82 | 18.0 | 2.35 | 13.5 | 2.02 |
| 23 °C | 45.0 | 27.0 | 3.24 | 22.5 | 2.67 | 18.0 | 2.23 | 13.5 | 1.92 |
| 21 °C | 45.0 | 27.0 | 3.19 | 22.5 | 2.64 | 18.0 | 2.21 | 13.5 | 1.91 |
| 20 °C | 45.0 | 27.0 | 3.17 | 22.5 | 2.62 | 18.0 | 2.20 | 13.5 | 1.91 |
| 19 °C | 45.0 | 27.0 | 3.16 | 22.5 | 2.61 | 18.0 | 2.20 | 13.5 | 1.91 |
| 17 °C | 45.0 | 27.0 | 3.12 | 22.5 | 2.59 | 18.0 | 2.18 | 13.5 | 1.90 |
| 15 °C | 45.0 | 27.0 | 3.09 | 22.5 | 2.57 | 18.0 | 2.17 | 13.5 | 1.89 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

### Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 50.0 | 50.0 | 9.96 | 45.0 | 8.52 | 40.0 | 7.21 | 35.0 | 6.05 |
| 13.0 | 11.8 | 50.0 | 50.0 | 10.2 | 45.0 | 8.74 | 40.0 | 7.39 | 35.0 | 6.18 |
| 11.0 | 9.8 | 50.0 | 50.0 | 10.6 | 45.0 | 9.02 | 40.0 | 7.60 | 35.0 | 6.34 |
| 9.0 | 7.9 | 50.0 | 50.0 | 11.0 | 45.0 | 9.31 | 40.0 | 7.83 | 35.0 | 6.51 |
| 7.0 | 6.0 | 50.0 | 50.0 | 11.4 | 45.0 | 9.64 | 40.0 | 8.08 | 35.0 | 6.70 |
| 5.0 | 4.1 | 48.3 | 48.3 | 11.2 | 43.5 | 9.49 | 38.6 | 7.96 | 33.8 | 6.59 |
| 3.0 | 2.2 | 46.6 | 46.6 | 11.0 | 41.9 | 9.34 | 37.3 | 7.84 | 32.6 | 6.49 |
| 0.0 | -0.7 | 43.9 | 43.9 | 10.8 | 39.5 | 9.12 | 35.1 | 7.65 | 30.7 | 6.34 |
| -3.0 | -3.7 | 41.0 | 41.0 | 10.5 | 36.9 | 8.89 | 32.8 | 7.45 | 28.7 | 6.18 |
| -5.0 | -5.6 | 39.1 | 39.1 | 10.3 | 35.2 | 8.74 | 31.3 | 7.33 | 27.4 | 6.08 |
| -7.0 | -7.6 | 37.1 | 37.1 | 10.1 | 33.4 | 8.59 | 29.7 | 7.20 | 26.0 | 5.97 |
| -10 | -10.5 | 34.1 | 34.1 | 9.86 | 30.7 | 8.36 | 27.3 | 7.01 | 23.9 | 5.81 |
| -14.5 | -15.0 | 29.4 | 29.4 | 9.45 | 26.5 | 8.02 | 23.5 | 6.72 | 20.6 | 5.57 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 50.0 | 30.0 | 5.03 | 25.0 | 4.15 | 20.0 | 3.42 | 15.0 | 2.82 |
| 13.0 | 11.8 | 50.0 | 30.0 | 5.12 | 25.0 | 4.21 | 20.0 | 3.44 | 15.0 | 2.83 |
| 11.0 | 9.8 | 50.0 | 30.0 | 5.23 | 25.0 | 4.28 | 20.0 | 3.48 | 15.0 | 2.83 |
| 9.0 | 7.9 | 50.0 | 30.0 | 5.35 | 25.0 | 4.35 | 20.0 | 3.52 | 15.0 | 2.85 |
| 7.0 | 6.0 | 50.0 | 30.0 | 5.48 | 25.0 | 4.44 | 20.0 | 3.57 | 15.0 | 2.86 |
| 5.0 | 4.1 | 48.3 | 29.0 | 5.40 | 24.2 | 4.37 | 19.3 | 3.51 | 14.5 | 2.82 |
| 3.0 | 2.2 | 46.6 | 28.0 | 5.32 | 23.3 | 4.30 | 18.6 | 3.46 | 14.0 | 2.77 |
| 0.0 | -0.7 | 43.9 | 26.3 | 5.19 | 22.0 | 4.20 | 17.6 | 3.37 | 13.2 | 2.71 |
| -3.0 | -3.7 | 41.0 | 24.6 | 5.06 | 20.5 | 4.09 | 16.4 | 3.29 | 12.3 | 2.64 |
| -5.0 | -5.6 | 39.1 | 23.5 | 4.97 | 19.6 | 4.03 | 15.6 | 3.23 | 11.7 | 2.60 |
| -7.0 | -7.6 | 37.1 | 22.3 | 4.89 | 18.6 | 3.96 | 14.8 | 3.18 | 11.1 | 2.55 |
| -10 | -10.5 | 34.1 | 20.5 | 4.76 | 17.1 | 3.85 | 13.6 | 3.09 | 10.2 | 2.48 |
| -14.5 | -15.0 | 29.4 | 17.6 | 4.56 | 14.7 | 3.69 | 11.8 | 2.97 | 8.82 | 2.38 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP1814FT8/FT7/FT5 (18HP, 50.4 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 46.9 | 46.9 | 13.4 | 42.2 | 11.1 | 37.5 | 9.08 | 32.8 | 7.32 |
| 39 °C | 47.7 | 47.7 | 13.2 | 42.9 | 11.0 | 38.2 | 8.94 | 33.4 | 7.21 |
| 37 °C | 49.1 | 49.1 | 12.8 | 44.2 | 10.6 | 39.3 | 8.67 | 34.4 | 6.99 |
| 35 °C | 50.4 | 50.4 | 12.5 | 45.4 | 10.3 | 40.3 | 8.40 | 35.3 | 6.77 |
| 33 °C | 50.4 | 50.4 | 11.5 | 45.4 | 9.55 | 40.3 | 7.81 | 35.3 | 6.31 |
| 31 °C | 50.4 | 50.4 | 10.7 | 45.4 | 8.88 | 40.3 | 7.28 | 35.3 | 5.90 |
| 30 °C | 50.4 | 50.4 | 10.3 | 45.4 | 8.57 | 40.3 | 7.03 | 35.3 | 5.71 |
| 29 °C | 50.4 | 50.4 | 9.97 | 45.4 | 8.28 | 40.3 | 6.80 | 35.3 | 5.53 |
| 27 °C | 50.4 | 50.4 | 9.30 | 45.4 | 7.74 | 40.3 | 6.37 | 35.3 | 5.19 |
| 25 °C | 50.4 | 50.4 | 8.69 | 45.4 | 7.24 | 40.3 | 5.97 | 35.3 | 4.87 |
| 23 °C | 50.4 | 50.4 | 8.13 | 45.4 | 6.78 | 40.3 | 5.59 | 35.3 | 4.58 |
| 21 °C | 50.4 | 50.4 | 7.96 | 45.4 | 6.64 | 40.3 | 5.49 | 35.3 | 4.50 |
| 20 °C | 50.4 | 50.4 | 7.89 | 45.4 | 6.58 | 40.3 | 5.44 | 35.3 | 4.47 |
| 19 °C | 50.4 | 50.4 | 7.82 | 45.4 | 6.53 | 40.3 | 5.40 | 35.3 | 4.44 |
| 17 °C | 50.4 | 50.4 | 7.69 | 45.4 | 6.43 | 40.3 | 5.33 | 35.3 | 4.38 |
| 15 °C | 50.4 | 50.4 | 7.59 | 45.4 | 6.35 | 40.3 | 5.26 | 35.3 | 4.33 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 46.9 | 28.1 | 5.84 | 23.5 | 4.65 | 18.8 | 3.74 | 14.1 | 3.11 |
| 39 °C | 47.7 | 28.6 | 5.75 | 23.9 | 4.58 | 19.1 | 3.68 | 14.3 | 3.06 |
| 37 °C | 49.1 | 29.5 | 5.58 | 24.6 | 4.44 | 19.6 | 3.57 | 14.7 | 2.97 |
| 35 °C | 50.4 | 30.2 | 5.40 | 25.2 | 4.30 | 20.2 | 3.46 | 15.1 | 2.88 |
| 33 °C | 50.4 | 30.2 | 5.06 | 25.2 | 4.05 | 20.2 | 3.28 | 15.1 | 2.75 |
| 31 °C | 50.4 | 30.2 | 4.75 | 25.2 | 3.82 | 20.2 | 3.11 | 15.1 | 2.63 |
| 30 °C | 50.4 | 30.2 | 4.60 | 25.2 | 3.71 | 20.2 | 3.04 | 15.1 | 2.57 |
| 29 °C | 50.4 | 30.2 | 4.46 | 25.2 | 3.61 | 20.2 | 2.96 | 15.1 | 2.52 |
| 27 °C | 50.4 | 30.2 | 4.20 | 25.2 | 3.41 | 20.2 | 2.81 | 15.1 | 2.41 |
| 25 °C | 50.4 | 30.2 | 3.96 | 25.2 | 3.22 | 20.2 | 2.67 | 15.1 | 2.30 |
| 23 °C | 50.4 | 30.2 | 3.73 | 25.2 | 3.05 | 20.2 | 2.53 | 15.1 | 2.19 |
| 21 °C | 50.4 | 30.2 | 3.67 | 25.2 | 3.01 | 20.2 | 2.51 | 15.1 | 2.18 |
| 20 °C | 50.4 | 30.2 | 3.65 | 25.2 | 3.00 | 20.2 | 2.51 | 15.1 | 2.18 |
| 19 °C | 50.4 | 30.2 | 3.63 | 25.2 | 2.98 | 20.2 | 2.50 | 15.1 | 2.17 |
| 17 °C | 50.4 | 30.2 | 3.59 | 25.2 | 2.96 | 20.2 | 2.48 | 15.1 | 2.17 |
| 15 °C | 50.4 | 30.2 | 3.56 | 25.2 | 2.94 | 20.2 | 2.47 | 15.1 | 2.16 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 56.5 | 56.5 | 11.5 | 50.9 | 9.79 | 45.2 | 8.26 | 39.6 | 6.89 |
| 13.0 | 11.8 | 56.5 | 56.5 | 11.8 | 50.9 | 10.1 | 45.2 | 8.47 | 39.6 | 7.05 |
| 11.0 | 9.8 | 56.5 | 56.5 | 12.3 | 50.9 | 10.4 | 45.2 | 8.72 | 39.6 | 7.23 |
| 9.0 | 7.9 | 56.5 | 56.5 | 12.7 | 50.9 | 10.7 | 45.2 | 8.99 | 39.6 | 7.44 |
| 7.0 | 6.0 | 56.5 | 56.5 | 13.2 | 50.9 | 11.1 | 45.2 | 9.30 | 39.6 | 7.66 |
| 5.0 | 4.1 | 54.6 | 54.6 | 13.0 | 49.1 | 11.0 | 43.7 | 9.15 | 38.2 | 7.55 |
| 3.0 | 2.2 | 52.6 | 52.6 | 12.8 | 47.3 | 10.8 | 42.1 | 9.01 | 36.8 | 7.43 |
| 0.0 | -0.7 | 49.6 | 49.6 | 12.5 | 44.6 | 10.5 | 39.7 | 8.80 | 34.7 | 7.25 |
| -3.0 | -3.7 | 46.3 | 46.3 | 12.2 | 41.7 | 10.3 | 37.0 | 8.57 | 32.4 | 7.07 |
| -5.0 | -5.6 | 44.2 | 44.2 | 12.0 | 39.8 | 10.1 | 35.4 | 8.43 | 30.9 | 6.95 |
| -7.0 | -7.6 | 41.9 | 41.9 | 11.7 | 37.7 | 9.92 | 33.5 | 8.28 | 29.3 | 6.83 |
| -10 | -10.5 | 38.6 | 38.6 | 11.4 | 34.7 | 9.66 | 30.9 | 8.07 | 27.0 | 6.65 |
| -14.5 | -15.0 | 33.2 | 33.2 | 11.0 | 29.9 | 9.26 | 26.6 | 7.73 | 23.2 | 6.38 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 56.5 | 33.9 | 5.70 | 28.3 | 4.68 | 22.6 | 3.83 | 17.0 | 3.15 |
| 13.0 | 11.8 | 56.5 | 33.9 | 5.81 | 28.3 | 4.75 | 22.6 | 3.86 | 17.0 | 3.16 |
| 11.0 | 9.8 | 56.5 | 33.9 | 5.94 | 28.3 | 4.83 | 22.6 | 3.90 | 17.0 | 3.17 |
| 9.0 | 7.9 | 56.5 | 33.9 | 6.08 | 28.3 | 4.92 | 22.6 | 3.95 | 17.0 | 3.18 |
| 7.0 | 6.0 | 56.5 | 33.9 | 6.24 | 28.3 | 5.02 | 22.6 | 4.01 | 17.0 | 3.20 |
| 5.0 | 4.1 | 54.6 | 32.8 | 6.14 | 27.3 | 4.94 | 21.8 | 3.95 | 16.4 | 3.15 |
| 3.0 | 2.2 | 52.6 | 31.6 | 6.05 | 26.3 | 4.87 | 21.0 | 3.89 | 15.8 | 3.10 |
| 0.0 | -0.7 | 49.6 | 29.8 | 5.90 | 24.8 | 4.75 | 19.8 | 3.79 | 14.9 | 3.03 |
| -3.0 | -3.7 | 46.3 | 27.8 | 5.75 | 23.2 | 4.63 | 18.5 | 3.70 | 13.9 | 2.95 |
| -5.0 | -5.6 | 44.2 | 26.5 | 5.66 | 22.1 | 4.55 | 17.7 | 3.64 | 13.3 | 2.90 |
| -7.0 | -7.6 | 41.9 | 25.1 | 5.56 | 21.0 | 4.47 | 16.8 | 3.57 | 12.6 | 2.85 |
| -10 | -10.5 | 38.6 | 23.2 | 5.41 | 19.3 | 4.36 | 15.4 | 3.48 | 11.6 | 2.78 |
| -14.5 | -15.0 | 33.2 | 19.9 | 5.19 | 16.6 | 4.18 | 13.3 | 3.33 | 9.96 | 2.66 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP2014FT8/FT7/FT5 (20HP, 56 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 52.1 | 52.1 | 15.7 | 46.9 | 12.9 | 41.7 | 10.5 | 36.5 | 8.36 |
| 39 °C | 52.9 | 52.9 | 15.5 | 47.6 | 12.7 | 42.3 | 10.3 | 37.0 | 8.24 |
| 37 °C | 54.5 | 54.5 | 15.0 | 49.1 | 12.3 | 43.6 | 10.0 | 38.2 | 7.99 |
| 35 °C | 56.0 | 56.0 | 14.6 | 50.4 | 12.0 | 44.8 | 9.69 | 39.2 | 7.74 |
| 33 °C | 56.0 | 56.0 | 13.5 | 50.4 | 11.1 | 44.8 | 8.99 | 39.2 | 7.21 |
| 31 °C | 56.0 | 56.0 | 12.5 | 50.4 | 10.3 | 44.8 | 8.37 | 39.2 | 6.73 |
| 30 °C | 56.0 | 56.0 | 12.0 | 50.4 | 9.93 | 44.8 | 8.08 | 39.2 | 6.51 |
| 29 °C | 56.0 | 56.0 | 11.6 | 50.4 | 9.58 | 44.8 | 7.81 | 39.2 | 6.29 |
| 27 °C | 56.0 | 56.0 | 10.8 | 50.4 | 8.94 | 44.8 | 7.30 | 39.2 | 5.90 |
| 25 °C | 56.0 | 56.0 | 10.1 | 50.4 | 8.36 | 44.8 | 6.84 | 39.2 | 5.53 |
| 23 °C | 56.0 | 56.0 | 9.45 | 50.4 | 7.82 | 44.8 | 6.40 | 39.2 | 5.20 |
| 21 °C | 56.0 | 56.0 | 9.24 | 50.4 | 7.66 | 44.8 | 6.28 | 39.2 | 5.11 |
| 20 °C | 56.0 | 56.0 | 9.15 | 50.4 | 7.59 | 44.8 | 6.23 | 39.2 | 5.06 |
| 19 °C | 56.0 | 56.0 | 9.07 | 50.4 | 7.52 | 44.8 | 6.18 | 39.2 | 5.03 |
| 17 °C | 56.0 | 56.0 | 8.92 | 50.4 | 7.41 | 44.8 | 6.09 | 39.2 | 4.96 |
| 15 °C | 56.0 | 56.0 | 8.79 | 50.4 | 7.31 | 44.8 | 6.01 | 39.2 | 4.90 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 52.1 | 31.3 | 6.61 | 26.1 | 5.21 | 20.8 | 4.15 | 15.6 | 3.45 |
| 39 °C | 52.9 | 31.7 | 6.51 | 26.5 | 5.13 | 21.2 | 4.09 | 15.9 | 3.40 |
| 37 °C | 54.5 | 32.7 | 6.31 | 27.3 | 4.97 | 21.8 | 3.97 | 16.4 | 3.30 |
| 35 °C | 56.0 | 33.6 | 6.12 | 28.0 | 4.82 | 22.4 | 3.84 | 16.8 | 3.19 |
| 33 °C | 56.0 | 33.6 | 5.72 | 28.0 | 4.53 | 22.4 | 3.65 | 16.8 | 3.06 |
| 31 °C | 56.0 | 33.6 | 5.36 | 28.0 | 4.27 | 22.4 | 3.46 | 16.8 | 2.93 |
| 30 °C | 56.0 | 33.6 | 5.19 | 28.0 | 4.15 | 22.4 | 3.37 | 16.8 | 2.86 |
| 29 °C | 56.0 | 33.6 | 5.03 | 28.0 | 4.03 | 22.4 | 3.29 | 16.8 | 2.80 |
| 27 °C | 56.0 | 33.6 | 4.73 | 28.0 | 3.81 | 22.4 | 3.12 | 16.8 | 2.67 |
| 25 °C | 56.0 | 33.6 | 4.46 | 28.0 | 3.60 | 22.4 | 2.96 | 16.8 | 2.55 |
| 23 °C | 56.0 | 33.6 | 4.19 | 28.0 | 3.40 | 22.4 | 2.81 | 16.8 | 2.43 |
| 21 °C | 56.0 | 33.6 | 4.13 | 28.0 | 3.36 | 22.4 | 2.79 | 16.8 | 2.42 |
| 20 °C | 56.0 | 33.6 | 4.10 | 28.0 | 3.34 | 22.4 | 2.78 | 16.8 | 2.42 |
| 19 °C | 56.0 | 33.6 | 4.08 | 28.0 | 3.33 | 22.4 | 2.77 | 16.8 | 2.42 |
| 17 °C | 56.0 | 33.6 | 4.03 | 28.0 | 3.30 | 22.4 | 2.76 | 16.8 | 2.41 |
| 15 °C | 56.0 | 33.6 | 3.99 | 28.0 | 3.27 | 22.4 | 2.74 | 16.8 | 2.40 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 63.0 | 63.0 | 13.0 | 56.7 | 11.0 | 50.4 | 9.27 | 44.1 | 7.70 |
| 13.0 | 11.8 | 63.0 | 63.0 | 13.4 | 56.7 | 11.4 | 50.4 | 9.52 | 44.1 | 7.88 |
| 11.0 | 9.8 | 63.0 | 63.0 | 13.9 | 56.7 | 11.7 | 50.4 | 9.81 | 44.1 | 8.10 |
| 9.0 | 7.9 | 63.0 | 63.0 | 14.4 | 56.7 | 12.2 | 50.4 | 10.1 | 44.1 | 8.33 |
| 7.0 | 6.0 | 63.0 | 63.0 | 15.0 | 56.7 | 12.6 | 50.4 | 10.5 | 44.1 | 8.60 |
| 5.0 | 4.1 | 60.9 | 60.9 | 14.8 | 54.8 | 12.4 | 48.7 | 10.3 | 42.6 | 8.47 |
| 3.0 | 2.2 | 58.7 | 58.7 | 14.5 | 52.8 | 12.2 | 47.0 | 10.2 | 41.1 | 8.34 |
| 0.0 | -0.7 | 55.3 | 55.3 | 14.2 | 49.8 | 11.9 | 44.2 | 9.92 | 38.7 | 8.14 |
| -3.0 | -3.7 | 51.6 | 51.6 | 13.8 | 46.4 | 11.6 | 41.3 | 9.67 | 36.1 | 7.93 |
| -5.0 | -5.6 | 49.3 | 49.3 | 13.6 | 44.4 | 11.4 | 39.4 | 9.51 | 34.5 | 7.80 |
| -7.0 | -7.6 | 46.8 | 46.8 | 13.4 | 42.1 | 11.2 | 37.4 | 9.35 | 32.8 | 7.66 |
| -10 | -10.5 | 43.0 | 43.0 | 13.0 | 38.7 | 11.0 | 34.4 | 9.10 | 30.1 | 7.46 |
| -14.5 | -15.0 | 37.0 | 37.0 | 12.5 | 33.3 | 10.5 | 29.6 | 8.73 | 25.9 | 7.16 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 63.0 | 37.8 | 6.33 | 31.5 | 5.17 | 25.2 | 4.21 | 18.9 | 3.45 |
| 13.0 | 11.8 | 63.0 | 37.8 | 6.46 | 31.5 | 5.25 | 25.2 | 4.25 | 18.9 | 3.46 |
| 11.0 | 9.8 | 63.0 | 37.8 | 6.61 | 31.5 | 5.34 | 25.2 | 4.29 | 18.9 | 3.47 |
| 9.0 | 7.9 | 63.0 | 37.8 | 6.77 | 31.5 | 5.44 | 25.2 | 4.35 | 18.9 | 3.49 |
| 7.0 | 6.0 | 63.0 | 37.8 | 6.96 | 31.5 | 5.56 | 25.2 | 4.41 | 18.9 | 3.51 |
| 5.0 | 4.1 | 60.9 | 36.5 | 6.85 | 30.5 | 5.48 | 24.4 | 4.35 | 18.3 | 3.46 |
| 3.0 | 2.2 | 58.7 | 35.2 | 6.75 | 29.4 | 5.39 | 23.5 | 4.28 | 17.6 | 3.40 |
| 0.0 | -0.7 | 55.3 | 33.2 | 6.59 | 27.7 | 5.27 | 22.1 | 4.18 | 16.6 | 3.32 |
| -3.0 | -3.7 | 51.6 | 31.0 | 6.42 | 25.8 | 5.13 | 20.6 | 4.07 | 15.5 | 3.24 |
| -5.0 | -5.6 | 49.3 | 29.6 | 6.31 | 24.7 | 5.05 | 19.7 | 4.00 | 14.8 | 3.18 |
| -7.0 | -7.6 | 46.8 | 28.1 | 6.20 | 23.4 | 4.96 | 18.7 | 3.93 | 14.0 | 3.13 |
| -10 | -10.5 | 43.0 | 25.8 | 6.04 | 21.5 | 4.83 | 17.2 | 3.83 | 12.9 | 3.05 |
| -14.5 | -15.0 | 37.0 | 22.2 | 5.79 | 18.5 | 4.63 | 14.8 | 3.67 | 11.1 | 2.92 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

## MMY-AP2214FT8/FT7/FT5 (22HP, 61.5 kW system)

### Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 57.2 | 57.2 | 16.9 | 51.5 | 13.9 | 45.8 | 11.2 | 40.0 | 8.96 |
| 39 °C | 58.2 | 58.2 | 16.7 | 52.4 | 13.7 | 46.6 | 11.1 | 40.7 | 8.83 |
| 37 °C | 59.9 | 59.9 | 16.2 | 53.9 | 13.3 | 47.9 | 10.7 | 41.9 | 8.56 |
| 35 °C | 61.5 | 61.5 | 15.7 | 55.4 | 12.8 | 49.2 | 10.4 | 43.1 | 8.30 |
| 33 °C | 61.5 | 61.5 | 14.5 | 55.4 | 11.9 | 49.2 | 9.64 | 43.1 | 7.72 |
| 31 °C | 61.5 | 61.5 | 13.4 | 55.4 | 11.0 | 49.2 | 8.97 | 43.1 | 7.21 |
| 30 °C | 61.5 | 61.5 | 12.9 | 55.4 | 10.7 | 49.2 | 8.67 | 43.1 | 6.97 |
| 29 °C | 61.5 | 61.5 | 12.5 | 55.4 | 10.3 | 49.2 | 8.37 | 43.1 | 6.75 |
| 27 °C | 61.5 | 61.5 | 11.6 | 55.4 | 9.60 | 49.2 | 7.83 | 43.1 | 6.32 |
| 25 °C | 61.5 | 61.5 | 10.9 | 55.4 | 8.97 | 49.2 | 7.33 | 43.1 | 5.93 |
| 23 °C | 61.5 | 61.5 | 10.1 | 55.4 | 8.39 | 49.2 | 6.87 | 43.1 | 5.57 |
| 21 °C | 61.5 | 61.5 | 9.93 | 55.4 | 8.22 | 49.2 | 6.73 | 43.1 | 5.47 |
| 20 °C | 61.5 | 61.5 | 9.83 | 55.4 | 8.14 | 49.2 | 6.67 | 43.1 | 5.43 |
| 19 °C | 61.5 | 61.5 | 9.74 | 55.4 | 8.07 | 49.2 | 6.62 | 43.1 | 5.39 |
| 17 °C | 61.5 | 61.5 | 9.58 | 55.4 | 7.94 | 49.2 | 6.52 | 43.1 | 5.32 |
| 15 °C | 61.5 | 61.5 | 9.44 | 55.4 | 7.83 | 49.2 | 6.44 | 43.1 | 5.26 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 57.2 | 34.3 | 7.09 | 28.6 | 5.60 | 22.9 | 4.49 | 17.2 | 3.78 |
| 39 °C | 58.2 | 34.9 | 6.98 | 29.1 | 5.51 | 23.3 | 4.43 | 17.5 | 3.72 |
| 37 °C | 59.9 | 35.9 | 6.77 | 30.0 | 5.35 | 24.0 | 4.29 | 18.0 | 3.61 |
| 35 °C | 61.5 | 36.9 | 6.56 | 30.8 | 5.18 | 24.6 | 4.16 | 18.5 | 3.49 |
| 33 °C | 61.5 | 36.9 | 6.13 | 30.8 | 4.87 | 24.6 | 3.94 | 18.5 | 3.35 |
| 31 °C | 61.5 | 36.9 | 5.75 | 30.8 | 4.60 | 24.6 | 3.75 | 18.5 | 3.20 |
| 30 °C | 61.5 | 36.9 | 5.57 | 30.8 | 4.47 | 24.6 | 3.65 | 18.5 | 3.13 |
| 29 °C | 61.5 | 36.9 | 5.40 | 30.8 | 4.34 | 24.6 | 3.56 | 18.5 | 3.07 |
| 27 °C | 61.5 | 36.9 | 5.08 | 30.8 | 4.10 | 24.6 | 3.39 | 18.5 | 2.93 |
| 25 °C | 61.5 | 36.9 | 4.78 | 30.8 | 3.88 | 24.6 | 3.22 | 18.5 | 2.80 |
| 23 °C | 61.5 | 36.9 | 4.50 | 30.8 | 3.66 | 24.6 | 3.05 | 18.5 | 2.67 |
| 21 °C | 61.5 | 36.9 | 4.44 | 30.8 | 3.62 | 24.6 | 3.03 | 18.5 | 2.66 |
| 20 °C | 61.5 | 36.9 | 4.41 | 30.8 | 3.60 | 24.6 | 3.02 | 18.5 | 2.66 |
| 19 °C | 61.5 | 36.9 | 4.38 | 30.8 | 3.59 | 24.6 | 3.01 | 18.5 | 2.66 |
| 17 °C | 61.5 | 36.9 | 4.33 | 30.8 | 3.55 | 24.6 | 2.99 | 18.5 | 2.65 |
| 15 °C | 61.5 | 36.9 | 4.29 | 30.8 | 3.53 | 24.6 | 2.98 | 18.5 | 2.64 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

### Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 69.0 | 69.0 | 14.4 | 62.1 | 12.2 | 55.2 | 10.2 | 48.3 | 8.47 |
| 13.0 | 11.8 | 69.0 | 69.0 | 14.8 | 62.1 | 12.5 | 55.2 | 10.5 | 48.3 | 8.67 |
| 11.0 | 9.8 | 69.0 | 69.0 | 15.3 | 62.1 | 12.9 | 55.2 | 10.8 | 48.3 | 8.91 |
| 9.0 | 7.9 | 69.0 | 69.0 | 15.9 | 62.1 | 13.4 | 55.2 | 11.2 | 48.3 | 9.17 |
| 7.0 | 6.0 | 69.0 | 69.0 | 16.6 | 62.1 | 13.9 | 55.2 | 11.6 | 48.3 | 9.47 |
| 5.0 | 4.1 | 66.7 | 66.7 | 16.3 | 60.0 | 13.7 | 53.4 | 11.4 | 46.7 | 9.32 |
| 3.0 | 2.2 | 64.3 | 64.3 | 16.0 | 57.9 | 13.5 | 51.4 | 11.2 | 45.0 | 9.18 |
| 0.0 | -0.7 | 60.5 | 60.5 | 15.7 | 54.5 | 13.2 | 48.4 | 10.9 | 42.4 | 8.96 |
| -3.0 | -3.7 | 56.6 | 56.6 | 15.3 | 50.9 | 12.8 | 45.3 | 10.7 | 39.6 | 8.73 |
| -5.0 | -5.6 | 54.0 | 54.0 | 15.0 | 48.6 | 12.6 | 43.2 | 10.5 | 37.8 | 8.59 |
| -7.0 | -7.6 | 51.2 | 51.2 | 14.7 | 46.1 | 12.4 | 41.0 | 10.3 | 35.8 | 8.44 |
| -10 | -10.5 | 47.1 | 47.1 | 14.4 | 42.4 | 12.1 | 37.7 | 10.0 | 33.0 | 8.22 |
| -14.5 | -15.0 | 40.6 | 40.6 | 13.8 | 36.5 | 11.6 | 32.5 | 9.61 | 28.4 | 7.88 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 69.0 | 41.4 | 6.97 | 34.5 | 5.69 | 27.6 | 4.64 | 20.7 | 3.82 |
| 13.0 | 11.8 | 69.0 | 41.4 | 7.10 | 34.5 | 5.77 | 27.6 | 4.68 | 20.7 | 3.82 |
| 11.0 | 9.8 | 69.0 | 41.4 | 7.27 | 34.5 | 5.87 | 27.6 | 4.73 | 20.7 | 3.83 |
| 9.0 | 7.9 | 69.0 | 41.4 | 7.45 | 34.5 | 5.99 | 27.6 | 4.79 | 20.7 | 3.85 |
| 7.0 | 6.0 | 69.0 | 41.4 | 7.66 | 34.5 | 6.12 | 27.6 | 4.86 | 20.7 | 3.87 |
| 5.0 | 4.1 | 66.7 | 40.0 | 7.54 | 33.4 | 6.03 | 26.7 | 4.78 | 20.0 | 3.81 |
| 3.0 | 2.2 | 64.3 | 38.6 | 7.42 | 32.2 | 5.93 | 25.7 | 4.71 | 19.3 | 3.75 |
| 0.0 | -0.7 | 60.5 | 36.3 | 7.25 | 30.3 | 5.79 | 24.2 | 4.60 | 18.2 | 3.66 |
| -3.0 | -3.7 | 56.6 | 34.0 | 7.06 | 28.3 | 5.64 | 22.6 | 4.48 | 17.0 | 3.57 |
| -5.0 | -5.6 | 54.0 | 32.4 | 6.95 | 27.0 | 5.55 | 21.6 | 4.41 | 16.2 | 3.51 |
| -7.0 | -7.6 | 51.2 | 30.7 | 6.82 | 25.6 | 5.45 | 20.5 | 4.33 | 15.4 | 3.45 |
| -10 | -10.5 | 47.1 | 28.3 | 6.65 | 23.6 | 5.31 | 18.8 | 4.22 | 14.1 | 3.36 |
| -14.5 | -15.0 | 40.6 | 24.4 | 6.37 | 20.3 | 5.09 | 16.2 | 4.04 | 12.2 | 3.22 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP2414FT8/FT7/FT5 (24HP, 68 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 63.3 | 63.3 | 20.1 | 57.0 | 16.5 | 50.6 | 13.5 | 44.3 | 10.8 |
| 39 °C | 64.3 | 64.3 | 19.8 | 57.9 | 16.3 | 51.4 | 13.3 | 45.0 | 10.7 |
| 37 °C | 66.2 | 66.2 | 19.2 | 59.6 | 15.8 | 53.0 | 12.9 | 46.3 | 10.3 |
| 35 °C | 68.0 | 68.0 | 18.6 | 61.2 | 15.3 | 54.4 | 12.5 | 47.6 | 10.0 |
| 33 °C | 68.0 | 68.0 | 17.2 | 61.2 | 14.2 | 54.4 | 11.6 | 47.6 | 9.32 |
| 31 °C | 68.0 | 68.0 | 16.0 | 61.2 | 13.2 | 54.4 | 10.8 | 47.6 | 8.72 |
| 30 °C | 68.0 | 68.0 | 15.4 | 61.2 | 12.7 | 54.4 | 10.4 | 47.6 | 8.43 |
| 29 °C | 68.0 | 68.0 | 14.8 | 61.2 | 12.3 | 54.4 | 10.1 | 47.6 | 8.16 |
| 27 °C | 68.0 | 68.0 | 13.8 | 61.2 | 11.5 | 54.4 | 9.42 | 47.6 | 7.66 |
| 25 °C | 68.0 | 68.0 | 12.9 | 61.2 | 10.7 | 54.4 | 8.82 | 47.6 | 7.19 |
| 23 °C | 68.0 | 68.0 | 12.1 | 61.2 | 10.0 | 54.4 | 8.27 | 47.6 | 6.75 |
| 21 °C | 68.0 | 68.0 | 11.8 | 61.2 | 9.85 | 54.4 | 8.12 | 47.6 | 6.64 |
| 20 °C | 68.0 | 68.0 | 11.7 | 61.2 | 9.76 | 54.4 | 8.05 | 47.6 | 6.59 |
| 19 °C | 68.0 | 68.0 | 11.6 | 61.2 | 9.67 | 54.4 | 7.98 | 47.6 | 6.54 |
| 17 °C | 68.0 | 68.0 | 11.4 | 61.2 | 9.53 | 54.4 | 7.87 | 47.6 | 6.46 |
| 15 °C | 68.0 | 68.0 | 11.3 | 61.2 | 9.40 | 54.4 | 7.77 | 47.6 | 6.39 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 63.3 | 38.0 | 8.61 | 31.7 | 6.86 | 25.3 | 5.55 | 19.0 | 4.69 |
| 39 °C | 64.3 | 38.6 | 8.49 | 32.2 | 6.76 | 25.7 | 5.47 | 19.3 | 4.62 |
| 37 °C | 66.2 | 39.7 | 8.23 | 33.1 | 6.55 | 26.5 | 5.30 | 19.9 | 4.48 |
| 35 °C | 68.0 | 40.8 | 7.97 | 34.0 | 6.35 | 27.2 | 5.14 | 20.4 | 4.34 |
| 33 °C | 68.0 | 40.8 | 7.46 | 34.0 | 5.98 | 27.2 | 4.88 | 20.4 | 4.15 |
| 31 °C | 68.0 | 40.8 | 7.00 | 34.0 | 5.65 | 27.2 | 4.64 | 20.4 | 3.98 |
| 30 °C | 68.0 | 40.8 | 6.79 | 34.0 | 5.49 | 27.2 | 4.52 | 20.4 | 3.89 |
| 29 °C | 68.0 | 40.8 | 6.59 | 34.0 | 5.33 | 27.2 | 4.41 | 20.4 | 3.81 |
| 27 °C | 68.0 | 40.8 | 6.20 | 34.0 | 5.04 | 27.2 | 4.19 | 20.4 | 3.64 |
| 25 °C | 68.0 | 40.8 | 5.84 | 34.0 | 4.77 | 27.2 | 3.99 | 20.4 | 3.48 |
| 23 °C | 68.0 | 40.8 | 5.50 | 34.0 | 4.51 | 27.2 | 3.78 | 20.4 | 3.32 |
| 21 °C | 68.0 | 40.8 | 5.42 | 34.0 | 4.46 | 27.2 | 3.76 | 20.4 | 3.31 |
| 20 °C | 68.0 | 40.8 | 5.39 | 34.0 | 4.44 | 27.2 | 3.74 | 20.4 | 3.30 |
| 19 °C | 68.0 | 40.8 | 5.36 | 34.0 | 4.42 | 27.2 | 3.73 | 20.4 | 3.30 |
| 17 °C | 68.0 | 40.8 | 5.30 | 34.0 | 4.38 | 27.2 | 3.71 | 20.4 | 3.29 |
| 15 °C | 68.0 | 40.8 | 5.25 | 34.0 | 4.35 | 27.2 | 3.70 | 20.4 | 3.28 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 76.5 | 76.5 | 17.3 | 68.9 | 14.6 | 61.2 | 12.1 | 53.6 | 10.0 |
| 13.0 | 11.8 | 76.5 | 76.5 | 17.9 | 68.9 | 15.0 | 61.2 | 12.5 | 53.6 | 10.3 |
| 11.0 | 9.8 | 76.5 | 76.5 | 18.6 | 68.9 | 15.6 | 61.2 | 12.9 | 53.6 | 10.6 |
| 9.0 | 7.9 | 76.5 | 76.5 | 19.4 | 68.9 | 16.2 | 61.2 | 13.3 | 53.6 | 10.9 |
| 7.0 | 6.0 | 76.5 | 76.5 | 20.2 | 68.9 | 16.8 | 61.2 | 13.9 | 53.6 | 11.3 |
| 5.0 | 4.1 | 73.9 | 73.9 | 19.9 | 66.5 | 16.6 | 59.1 | 13.6 | 51.7 | 11.1 |
| 3.0 | 2.2 | 71.3 | 71.3 | 19.6 | 64.2 | 16.3 | 57.0 | 13.4 | 49.9 | 10.9 |
| 0.0 | -0.7 | 67.1 | 67.1 | 19.1 | 60.4 | 15.9 | 53.7 | 13.1 | 47.0 | 10.6 |
| -3.0 | -3.7 | 62.7 | 62.7 | 18.6 | 56.4 | 15.5 | 50.2 | 12.8 | 43.9 | 10.4 |
| -5.0 | -5.6 | 59.8 | 59.8 | 18.3 | 53.8 | 15.3 | 47.8 | 12.6 | 41.9 | 10.2 |
| -7.0 | -7.6 | 56.8 | 56.8 | 18.0 | 51.1 | 15.0 | 45.4 | 12.3 | 39.8 | 10.0 |
| -10 | -10.5 | 52.2 | 52.2 | 17.5 | 47.0 | 14.6 | 41.8 | 12.0 | 36.5 | 9.77 |
| -14.5 | -15.0 | 45.0 | 45.0 | 16.8 | 40.5 | 14.0 | 36.0 | 11.5 | 31.5 | 9.36 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 76.5 | 45.9 | 8.20 | 38.3 | 6.70 | 30.6 | 5.53 | 23.0 | 4.67 |
| 13.0 | 11.8 | 76.5 | 45.9 | 8.36 | 38.3 | 6.80 | 30.6 | 5.56 | 23.0 | 4.66 |
| 11.0 | 9.8 | 76.5 | 45.9 | 8.56 | 38.3 | 6.91 | 30.6 | 5.61 | 23.0 | 4.66 |
| 9.0 | 7.9 | 76.5 | 45.9 | 8.78 | 38.3 | 7.05 | 30.6 | 5.67 | 23.0 | 4.66 |
| 7.0 | 6.0 | 76.5 | 45.9 | 9.03 | 38.3 | 7.20 | 30.6 | 5.75 | 23.0 | 4.68 |
| 5.0 | 4.1 | 73.9 | 44.3 | 8.90 | 37.0 | 7.09 | 29.6 | 5.66 | 22.2 | 4.61 |
| 3.0 | 2.2 | 71.3 | 42.8 | 8.76 | 35.7 | 6.98 | 28.5 | 5.57 | 21.4 | 4.53 |
| 0.0 | -0.7 | 67.1 | 40.3 | 8.55 | 33.6 | 6.81 | 26.8 | 5.44 | 20.1 | 4.43 |
| -3.0 | -3.7 | 62.7 | 37.6 | 8.33 | 31.4 | 6.64 | 25.1 | 5.30 | 18.8 | 4.31 |
| -5.0 | -5.6 | 59.8 | 35.9 | 8.20 | 29.9 | 6.53 | 23.9 | 5.21 | 17.9 | 4.24 |
| -7.0 | -7.6 | 56.8 | 34.1 | 8.05 | 28.4 | 6.42 | 22.7 | 5.12 | 17.0 | 4.17 |
| -10 | -10.5 | 52.2 | 31.3 | 7.84 | 26.1 | 6.25 | 20.9 | 4.99 | 15.7 | 4.06 |
| -14.5 | -15.0 | 45.0 | 27.0 | 7.52 | 22.5 | 5.99 | 18.0 | 4.78 | 13.5 | 3.89 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP2614FT8/FT7/FT5 (26HP, 73 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 67.9 | 67.9 | 21.0 | 61.1 | 17.2 | 54.3 | 13.9 | 47.5 | 11.1 |
| 39 °C | 69.0 | 69.0 | 20.7 | 62.1 | 17.0 | 55.2 | 13.7 | 48.3 | 10.9 |
| 37 °C | 71.1 | 71.1 | 20.1 | 64.0 | 16.5 | 56.9 | 13.3 | 49.8 | 10.6 |
| 35 °C | 73.0 | 73.0 | 19.5 | 65.7 | 15.9 | 58.4 | 12.9 | 51.1 | 10.3 |
| 33 °C | 73.0 | 73.0 | 18.0 | 65.7 | 14.8 | 58.4 | 11.9 | 51.1 | 9.54 |
| 31 °C | 73.0 | 73.0 | 16.7 | 65.7 | 13.7 | 58.4 | 11.1 | 51.1 | 8.90 |
| 30 °C | 73.0 | 73.0 | 16.1 | 65.7 | 13.2 | 58.4 | 10.7 | 51.1 | 8.61 |
| 29 °C | 73.0 | 73.0 | 15.5 | 65.7 | 12.8 | 58.4 | 10.4 | 51.1 | 8.33 |
| 27 °C | 73.0 | 73.0 | 14.4 | 65.7 | 11.9 | 58.4 | 9.68 | 51.1 | 7.80 |
| 25 °C | 73.0 | 73.0 | 13.5 | 65.7 | 11.1 | 58.4 | 9.06 | 51.1 | 7.32 |
| 23 °C | 73.0 | 73.0 | 12.6 | 65.7 | 10.4 | 58.4 | 8.49 | 51.1 | 6.87 |
| 21 °C | 73.0 | 73.0 | 12.3 | 65.7 | 10.2 | 58.4 | 8.32 | 51.1 | 6.75 |
| 20 °C | 73.0 | 73.0 | 12.2 | 65.7 | 10.1 | 58.4 | 8.25 | 51.1 | 6.70 |
| 19 °C | 73.0 | 73.0 | 12.1 | 65.7 | 9.99 | 58.4 | 8.18 | 51.1 | 6.65 |
| 17 °C | 73.0 | 73.0 | 11.9 | 65.7 | 9.83 | 58.4 | 8.06 | 51.1 | 6.56 |
| 15 °C | 73.0 | 73.0 | 11.7 | 65.7 | 9.70 | 58.4 | 7.96 | 51.1 | 6.48 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 67.9 | 40.7 | 8.74 | 34.0 | 6.89 | 27.2 | 5.53 | 20.4 | 4.67 |
| 39 °C | 69.0 | 41.4 | 8.61 | 34.5 | 6.79 | 27.6 | 5.45 | 20.7 | 4.60 |
| 37 °C | 71.1 | 42.7 | 8.35 | 35.6 | 6.58 | 28.4 | 5.29 | 21.3 | 4.46 |
| 35 °C | 73.0 | 43.8 | 8.09 | 36.5 | 6.38 | 29.2 | 5.12 | 21.9 | 4.32 |
| 33 °C | 73.0 | 43.8 | 7.56 | 36.5 | 6.00 | 29.2 | 4.86 | 21.9 | 4.14 |
| 31 °C | 73.0 | 43.8 | 7.09 | 36.5 | 5.66 | 29.2 | 4.62 | 21.9 | 3.97 |
| 30 °C | 73.0 | 43.8 | 6.87 | 36.5 | 5.50 | 29.2 | 4.50 | 21.9 | 3.88 |
| 29 °C | 73.0 | 43.8 | 6.66 | 36.5 | 5.34 | 29.2 | 4.39 | 21.9 | 3.80 |
| 27 °C | 73.0 | 43.8 | 6.26 | 36.5 | 5.05 | 29.2 | 4.17 | 21.9 | 3.63 |
| 25 °C | 73.0 | 43.8 | 5.89 | 36.5 | 4.77 | 29.2 | 3.97 | 21.9 | 3.47 |
| 23 °C | 73.0 | 43.8 | 5.55 | 36.5 | 4.51 | 29.2 | 3.77 | 21.9 | 3.31 |
| 21 °C | 73.0 | 43.8 | 5.46 | 36.5 | 4.46 | 29.2 | 3.74 | 21.9 | 3.30 |
| 20 °C | 73.0 | 43.8 | 5.43 | 36.5 | 4.44 | 29.2 | 3.73 | 21.9 | 3.30 |
| 19 °C | 73.0 | 43.8 | 5.39 | 36.5 | 4.41 | 29.2 | 3.72 | 21.9 | 3.29 |
| 17 °C | 73.0 | 43.8 | 5.33 | 36.5 | 4.38 | 29.2 | 3.69 | 21.9 | 3.29 |
| 15 °C | 73.0 | 43.8 | 5.28 | 36.5 | 4.34 | 29.2 | 3.68 | 21.9 | 3.28 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 81.5 | 81.5 | 18.3 | 73.4 | 15.3 | 65.2 | 12.6 | 57.1 | 10.4 |
| 13.0 | 11.8 | 81.5 | 81.5 | 18.9 | 73.4 | 15.8 | 65.2 | 13.0 | 57.1 | 10.6 |
| 11.0 | 9.8 | 81.5 | 81.5 | 19.6 | 73.4 | 16.4 | 65.2 | 13.5 | 57.1 | 11.0 |
| 9.0 | 7.9 | 81.5 | 81.5 | 20.4 | 73.4 | 17.0 | 65.2 | 14.0 | 57.1 | 11.3 |
| 7.0 | 6.0 | 81.5 | 81.5 | 21.4 | 73.4 | 17.7 | 65.2 | 14.5 | 57.1 | 11.7 |
| 5.0 | 4.1 | 78.7 | 78.7 | 21.0 | 70.8 | 17.5 | 63.0 | 14.3 | 55.1 | 11.5 |
| 3.0 | 2.2 | 75.9 | 75.9 | 20.7 | 68.3 | 17.2 | 60.7 | 14.1 | 53.1 | 11.4 |
| 0.0 | -0.7 | 71.5 | 71.5 | 20.2 | 64.4 | 16.8 | 57.2 | 13.7 | 50.1 | 11.1 |
| -3.0 | -3.7 | 66.8 | 66.8 | 19.7 | 60.1 | 16.3 | 53.4 | 13.4 | 46.8 | 10.8 |
| -5.0 | -5.6 | 63.8 | 63.8 | 19.4 | 57.4 | 16.1 | 51.0 | 13.2 | 44.7 | 10.6 |
| -7.0 | -7.6 | 60.5 | 60.5 | 19.0 | 54.5 | 15.8 | 48.4 | 12.9 | 42.4 | 10.4 |
| -10 | -10.5 | 55.7 | 55.7 | 18.5 | 50.1 | 15.4 | 44.6 | 12.6 | 39.0 | 10.2 |
| -14.5 | -15.0 | 47.9 | 47.9 | 17.8 | 43.1 | 14.7 | 38.3 | 12.1 | 33.5 | 9.75 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 81.5 | 48.9 | 8.44 | 40.8 | 6.86 | 32.6 | 5.62 | 24.5 | 4.74 |
| 13.0 | 11.8 | 81.5 | 48.9 | 8.62 | 40.8 | 6.96 | 32.6 | 5.66 | 24.5 | 4.73 |
| 11.0 | 9.8 | 81.5 | 48.9 | 8.84 | 40.8 | 7.09 | 32.6 | 5.72 | 24.5 | 4.73 |
| 9.0 | 7.9 | 81.5 | 48.9 | 9.08 | 40.8 | 7.23 | 32.6 | 5.78 | 24.5 | 4.74 |
| 7.0 | 6.0 | 81.5 | 48.9 | 9.35 | 40.8 | 7.40 | 32.6 | 5.86 | 24.5 | 4.75 |
| 5.0 | 4.1 | 78.7 | 47.2 | 9.21 | 39.4 | 7.29 | 31.5 | 5.78 | 23.6 | 4.68 |
| 3.0 | 2.2 | 75.9 | 45.5 | 9.07 | 38.0 | 7.17 | 30.4 | 5.69 | 22.8 | 4.61 |
| 0.0 | -0.7 | 71.5 | 42.9 | 8.85 | 35.8 | 7.00 | 28.6 | 5.55 | 21.5 | 4.50 |
| -3.0 | -3.7 | 66.8 | 40.1 | 8.62 | 33.4 | 6.82 | 26.7 | 5.41 | 20.0 | 4.38 |
| -5.0 | -5.6 | 63.8 | 38.3 | 8.48 | 31.9 | 6.71 | 25.5 | 5.32 | 19.1 | 4.31 |
| -7.0 | -7.6 | 60.5 | 36.3 | 8.33 | 30.3 | 6.59 | 24.2 | 5.23 | 18.2 | 4.23 |
| -10 | -10.5 | 55.7 | 33.4 | 8.12 | 27.9 | 6.42 | 22.3 | 5.09 | 16.7 | 4.12 |
| -14.5 | -15.0 | 47.9 | 28.7 | 7.78 | 24.0 | 6.15 | 19.2 | 4.88 | 14.4 | 3.95 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP2814FT8/FT7/FT5 (28HP, 78.5 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 73.1 | 73.1 | 23.7 | 65.8 | 19.4 | 58.5 | 15.6 | 51.2 | 12.4 |
| 39 °C | 74.2 | 74.2 | 23.4 | 66.8 | 19.1 | 59.4 | 15.4 | 51.9 | 12.2 |
| 37 °C | 76.4 | 76.4 | 22.7 | 68.8 | 18.5 | 61.1 | 14.9 | 53.5 | 11.8 |
| 35 °C | 78.5 | 78.5 | 22.0 | 70.7 | 17.9 | 62.8 | 14.4 | 55.0 | 11.5 |
| 33 °C | 78.5 | 78.5 | 20.3 | 70.7 | 16.6 | 62.8 | 13.4 | 55.0 | 10.70 |
| 31 °C | 78.5 | 78.5 | 18.8 | 70.7 | 15.4 | 62.8 | 12.4 | 55.0 | 9.94 |
| 30 °C | 78.5 | 78.5 | 18.1 | 70.7 | 14.8 | 62.8 | 12.0 | 55.0 | 9.61 |
| 29 °C | 78.5 | 78.5 | 17.5 | 70.7 | 14.3 | 62.8 | 11.6 | 55.0 | 9.29 |
| 27 °C | 78.5 | 78.5 | 16.3 | 70.7 | 13.3 | 62.8 | 10.8 | 55.0 | 8.71 |
| 25 °C | 78.5 | 78.5 | 15.2 | 70.7 | 12.5 | 62.8 | 10.1 | 55.0 | 8.17 |
| 23 °C | 78.5 | 78.5 | 14.2 | 70.7 | 11.7 | 62.8 | 9.49 | 55.0 | 7.66 |
| 21 °C | 78.5 | 78.5 | 13.8 | 70.7 | 11.4 | 62.8 | 9.30 | 55.0 | 7.53 |
| 20 °C | 78.5 | 78.5 | 13.7 | 70.7 | 11.3 | 62.8 | 9.22 | 55.0 | 7.47 |
| 19 °C | 78.5 | 78.5 | 13.6 | 70.7 | 11.2 | 62.8 | 9.14 | 55.0 | 7.41 |
| 17 °C | 78.5 | 78.5 | 13.3 | 70.7 | 11.0 | 62.8 | 9.00 | 55.0 | 7.31 |
| 15 °C | 78.5 | 78.5 | 13.1 | 70.7 | 10.9 | 62.8 | 8.89 | 55.0 | 7.23 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 73.1 | 43.9 | 9.74 | 36.6 | 7.69 | 29.2 | 6.22 | 21.9 | 5.32 |
| 39 °C | 74.2 | 44.5 | 9.60 | 37.1 | 7.58 | 29.7 | 6.13 | 22.3 | 5.25 |
| 37 °C | 76.4 | 45.8 | 9.31 | 38.2 | 7.35 | 30.6 | 5.94 | 22.9 | 5.09 |
| 35 °C | 78.5 | 47.1 | 9.02 | 39.3 | 7.12 | 31.4 | 5.75 | 23.6 | 4.93 |
| 33 °C | 78.5 | 47.1 | 8.43 | 39.3 | 6.70 | 31.4 | 5.47 | 23.6 | 4.73 |
| 31 °C | 78.5 | 47.1 | 7.90 | 39.3 | 6.32 | 31.4 | 5.20 | 23.6 | 4.53 |
| 30 °C | 78.5 | 47.1 | 7.65 | 39.3 | 6.14 | 31.4 | 5.07 | 23.6 | 4.44 |
| 29 °C | 78.5 | 47.1 | 7.42 | 39.3 | 5.97 | 31.4 | 4.95 | 23.6 | 4.35 |
| 27 °C | 78.5 | 47.1 | 6.98 | 39.3 | 5.65 | 31.4 | 4.71 | 23.6 | 4.16 |
| 25 °C | 78.5 | 47.1 | 6.57 | 39.3 | 5.34 | 31.4 | 4.48 | 23.6 | 3.98 |
| 23 °C | 78.5 | 47.1 | 6.18 | 39.3 | 5.05 | 31.4 | 4.25 | 23.6 | 3.80 |
| 21 °C | 78.5 | 47.1 | 6.09 | 39.3 | 4.99 | 31.4 | 4.22 | 23.6 | 3.79 |
| 20 °C | 78.5 | 47.1 | 6.05 | 39.3 | 4.97 | 31.4 | 4.21 | 23.6 | 3.79 |
| 19 °C | 78.5 | 47.1 | 6.01 | 39.3 | 4.94 | 31.4 | 4.20 | 23.6 | 3.78 |
| 17 °C | 78.5 | 47.1 | 5.95 | 39.3 | 4.90 | 31.4 | 4.18 | 23.6 | 3.78 |
| 15 °C | 78.5 | 47.1 | 5.89 | 39.3 | 4.87 | 31.4 | 4.16 | 23.6 | 3.77 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 88.0 | 88.0 | 20.7 | 79.2 | 17.1 | 70.4 | 13.9 | 61.6 | 11.3 |
| 13.0 | 11.8 | 88.0 | 88.0 | 21.5 | 79.2 | 17.7 | 70.4 | 14.4 | 61.6 | 11.6 |
| 11.0 | 9.8 | 88.0 | 88.0 | 22.4 | 79.2 | 18.4 | 70.4 | 15.0 | 61.6 | 12.0 |
| 9.0 | 7.9 | 88.0 | 88.0 | 23.5 | 79.2 | 19.2 | 70.4 | 15.6 | 61.6 | 12.4 |
| 7.0 | 6.0 | 88.0 | 88.0 | 24.6 | 79.2 | 20.1 | 70.4 | 16.2 | 61.6 | 12.9 |
| 5.0 | 4.1 | 85.0 | 85.0 | 24.2 | 76.5 | 19.8 | 68.0 | 16.0 | 59.5 | 12.7 |
| 3.0 | 2.2 | 82.0 | 82.0 | 23.9 | 73.8 | 19.5 | 65.6 | 15.7 | 57.4 | 12.5 |
| 0.0 | -0.7 | 77.2 | 77.2 | 23.3 | 69.5 | 19.1 | 61.8 | 15.4 | 54.0 | 12.2 |
| -3.0 | -3.7 | 72.1 | 72.1 | 22.7 | 64.9 | 18.6 | 57.7 | 15.0 | 50.5 | 11.9 |
| -5.0 | -5.6 | 68.8 | 68.8 | 22.3 | 61.9 | 18.3 | 55.0 | 14.7 | 48.2 | 11.7 |
| -7.0 | -7.6 | 65.3 | 65.3 | 21.9 | 58.8 | 17.9 | 52.2 | 14.5 | 45.7 | 11.5 |
| -10 | -10.5 | 60.1 | 60.1 | 21.4 | 54.1 | 17.5 | 48.1 | 14.1 | 42.1 | 11.2 |
| -14.5 | -15.0 | 51.7 | 51.7 | 20.5 | 46.5 | 16.8 | 41.4 | 13.5 | 36.2 | 10.7 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 88.0 | 52.8 | 9.07 | 44.0 | 7.33 | 35.2 | 6.06 | 26.4 | 5.25 |
| 13.0 | 11.8 | 88.0 | 52.8 | 9.27 | 44.0 | 7.44 | 35.2 | 6.09 | 26.4 | 5.23 |
| 11.0 | 9.8 | 88.0 | 52.8 | 9.53 | 44.0 | 7.58 | 35.2 | 6.14 | 26.4 | 5.21 |
| 9.0 | 7.9 | 88.0 | 52.8 | 9.81 | 44.0 | 7.74 | 35.2 | 6.20 | 26.4 | 5.20 |
| 7.0 | 6.0 | 88.0 | 52.8 | 10.13 | 44.0 | 7.92 | 35.2 | 6.28 | 26.4 | 5.19 |
| 5.0 | 4.1 | 85.0 | 51.0 | 9.98 | 42.5 | 7.80 | 34.0 | 6.18 | 25.5 | 5.12 |
| 3.0 | 2.2 | 82.0 | 49.2 | 9.82 | 41.0 | 7.68 | 32.8 | 6.09 | 24.6 | 5.04 |
| 0.0 | -0.7 | 77.2 | 46.3 | 9.59 | 38.6 | 7.50 | 30.9 | 5.94 | 23.2 | 4.92 |
| -3.0 | -3.7 | 72.1 | 43.3 | 9.35 | 36.1 | 7.31 | 28.8 | 5.79 | 21.6 | 4.79 |
| -5.0 | -5.6 | 68.8 | 41.3 | 9.19 | 34.4 | 7.19 | 27.5 | 5.69 | 20.6 | 4.71 |
| -7.0 | -7.6 | 65.3 | 39.2 | 9.03 | 32.7 | 7.06 | 26.1 | 5.59 | 19.6 | 4.63 |
| -10 | -10.5 | 60.1 | 36.1 | 8.80 | 30.1 | 6.88 | 24.0 | 5.45 | 18.0 | 4.51 |
| -14.5 | -15.0 | 51.7 | 31.0 | 8.43 | 25.9 | 6.59 | 20.7 | 5.22 | 15.5 | 4.32 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP3014FT8/FT7/FT5 (30HP, 85 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 79.1 | 79.1 | 24.0 | 71.2 | 19.8 | 63.3 | 16.0 | 55.4 | 12.8 |
| 39 °C | 80.4 | 80.4 | 23.7 | 72.4 | 19.5 | 64.3 | 15.8 | 56.3 | 12.6 |
| 37 °C | 82.8 | 82.8 | 23.0 | 74.5 | 18.9 | 66.2 | 15.3 | 58.0 | 12.2 |
| 35 °C | 85.0 | 85.0 | 22.3 | 76.5 | 18.3 | 68.0 | 14.8 | 59.5 | 11.8 |
| 33 °C | 85.0 | 85.0 | 20.6 | 76.5 | 16.9 | 68.0 | 13.7 | 59.5 | 11.0 |
| 31 °C | 85.0 | 85.0 | 19.1 | 76.5 | 15.7 | 68.0 | 12.8 | 59.5 | 10.3 |
| 30 °C | 85.0 | 85.0 | 18.4 | 76.5 | 15.2 | 68.0 | 12.4 | 59.5 | 9.95 |
| 29 °C | 85.0 | 85.0 | 17.8 | 76.5 | 14.7 | 68.0 | 11.9 | 59.5 | 9.62 |
| 27 °C | 85.0 | 85.0 | 16.6 | 76.5 | 13.7 | 68.0 | 11.2 | 59.5 | 9.02 |
| 25 °C | 85.0 | 85.0 | 15.5 | 76.5 | 12.8 | 68.0 | 10.5 | 59.5 | 8.46 |
| 23 °C | 85.0 | 85.0 | 14.4 | 76.5 | 12.0 | 68.0 | 9.79 | 59.5 | 7.94 |
| 21 °C | 85.0 | 85.0 | 14.1 | 76.5 | 11.7 | 68.0 | 9.60 | 59.5 | 7.81 |
| 20 °C | 85.0 | 85.0 | 14.0 | 76.5 | 11.6 | 68.0 | 9.52 | 59.5 | 7.74 |
| 19 °C | 85.0 | 85.0 | 13.9 | 76.5 | 11.5 | 68.0 | 9.44 | 59.5 | 7.69 |
| 17 °C | 85.0 | 85.0 | 13.6 | 76.5 | 11.3 | 68.0 | 9.30 | 59.5 | 7.58 |
| 15 °C | 85.0 | 85.0 | 13.4 | 76.5 | 11.2 | 68.0 | 9.19 | 59.5 | 7.50 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 79.1 | 47.5 | 10.1 | 39.6 | 7.96 | 31.6 | 6.35 | 23.7 | 5.28 |
| 39 °C | 80.4 | 48.2 | 9.96 | 40.2 | 7.84 | 32.2 | 6.26 | 24.1 | 5.20 |
| 37 °C | 82.8 | 49.7 | 9.65 | 41.4 | 7.61 | 33.1 | 6.07 | 24.8 | 5.04 |
| 35 °C | 85.0 | 51.0 | 9.35 | 42.5 | 7.37 | 34.0 | 5.88 | 25.5 | 4.88 |
| 33 °C | 85.0 | 51.0 | 8.74 | 42.5 | 6.93 | 34.0 | 5.57 | 25.5 | 4.67 |
| 31 °C | 85.0 | 51.0 | 8.20 | 42.5 | 6.53 | 34.0 | 5.29 | 25.5 | 4.47 |
| 30 °C | 85.0 | 51.0 | 7.94 | 42.5 | 6.34 | 34.0 | 5.16 | 25.5 | 4.37 |
| 29 °C | 85.0 | 51.0 | 7.70 | 42.5 | 6.16 | 34.0 | 5.02 | 25.5 | 4.28 |
| 27 °C | 85.0 | 51.0 | 7.24 | 42.5 | 5.82 | 34.0 | 4.77 | 25.5 | 4.09 |
| 25 °C | 85.0 | 51.0 | 6.81 | 42.5 | 5.50 | 34.0 | 4.53 | 25.5 | 3.90 |
| 23 °C | 85.0 | 51.0 | 6.41 | 42.5 | 5.20 | 34.0 | 4.30 | 25.5 | 3.72 |
| 21 °C | 85.0 | 51.0 | 6.32 | 42.5 | 5.14 | 34.0 | 4.27 | 25.5 | 3.71 |
| 20 °C | 85.0 | 51.0 | 6.27 | 42.5 | 5.11 | 34.0 | 4.25 | 25.5 | 3.70 |
| 19 °C | 85.0 | 51.0 | 6.23 | 42.5 | 5.08 | 34.0 | 4.24 | 25.5 | 3.69 |
| 17 °C | 85.0 | 51.0 | 6.16 | 42.5 | 5.04 | 34.0 | 4.21 | 25.5 | 3.68 |
| 15 °C | 85.0 | 51.0 | 6.10 | 42.5 | 5.00 | 34.0 | 4.19 | 25.5 | 3.67 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 95.0 | 95.0 | 19.7 | 85.5 | 16.7 | 76.0 | 14.0 | 66.5 | 11.7 |
| 13.0 | 11.8 | 95.0 | 95.0 | 20.3 | 85.5 | 17.2 | 76.0 | 14.4 | 66.5 | 11.9 |
| 11.0 | 9.8 | 95.0 | 95.0 | 21.0 | 85.5 | 17.8 | 76.0 | 14.9 | 66.5 | 12.3 |
| 9.0 | 7.9 | 95.0 | 95.0 | 21.8 | 85.5 | 18.4 | 76.0 | 15.3 | 66.5 | 12.6 |
| 7.0 | 6.0 | 95.0 | 95.0 | 22.7 | 85.5 | 19.1 | 76.0 | 15.9 | 66.5 | 13.0 |
| 5.0 | 4.1 | 91.8 | 91.8 | 22.4 | 82.6 | 18.8 | 73.4 | 15.6 | 64.3 | 12.8 |
| 3.0 | 2.2 | 88.5 | 88.5 | 22.0 | 79.7 | 18.5 | 70.8 | 15.4 | 62.0 | 12.6 |
| 0.0 | -0.7 | 83.3 | 83.3 | 21.5 | 75.0 | 18.1 | 66.6 | 15.0 | 58.3 | 12.3 |
| -3.0 | -3.7 | 77.9 | 77.9 | 20.9 | 70.1 | 17.6 | 62.3 | 14.6 | 54.5 | 12.0 |
| -5.0 | -5.6 | 74.3 | 74.3 | 20.6 | 66.9 | 17.3 | 59.4 | 14.4 | 52.0 | 11.8 |
| -7.0 | -7.6 | 70.5 | 70.5 | 20.2 | 63.5 | 17.0 | 56.4 | 14.1 | 49.4 | 11.6 |
| -10 | -10.5 | 64.9 | 64.9 | 19.7 | 58.4 | 16.6 | 51.9 | 13.8 | 45.4 | 11.3 |
| -14.5 | -15.0 | 55.8 | 55.8 | 18.9 | 50.2 | 15.9 | 44.6 | 13.2 | 39.1 | 10.8 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 95.0 | 57.0 | 9.58 | 47.5 | 7.82 | 38.0 | 6.37 | 28.5 | 5.23 |
| 13.0 | 11.8 | 95.0 | 57.0 | 9.77 | 47.5 | 7.94 | 38.0 | 6.43 | 28.5 | 5.23 |
| 11.0 | 9.8 | 95.0 | 57.0 | 10.0 | 47.5 | 8.08 | 38.0 | 6.50 | 28.5 | 5.25 |
| 9.0 | 7.9 | 95.0 | 57.0 | 10.2 | 47.5 | 8.24 | 38.0 | 6.58 | 28.5 | 5.28 |
| 7.0 | 6.0 | 95.0 | 57.0 | 10.5 | 47.5 | 8.42 | 38.0 | 6.68 | 28.5 | 5.31 |
| 5.0 | 4.1 | 91.8 | 55.1 | 10.4 | 45.9 | 8.29 | 36.7 | 6.58 | 27.5 | 5.23 |
| 3.0 | 2.2 | 88.5 | 53.1 | 10.2 | 44.3 | 8.16 | 35.4 | 6.48 | 26.6 | 5.15 |
| 0.0 | -0.7 | 83.3 | 50.0 | 9.97 | 41.7 | 7.97 | 33.3 | 6.32 | 25.0 | 5.03 |
| -3.0 | -3.7 | 77.9 | 46.7 | 9.71 | 39.0 | 7.77 | 31.2 | 6.16 | 23.4 | 4.90 |
| -5.0 | -5.6 | 74.3 | 44.6 | 9.55 | 37.2 | 7.64 | 29.7 | 6.06 | 22.3 | 4.82 |
| -7.0 | -7.6 | 70.5 | 42.3 | 9.39 | 35.3 | 7.50 | 28.2 | 5.95 | 21.2 | 4.73 |
| -10 | -10.5 | 64.9 | 38.9 | 9.14 | 32.5 | 7.31 | 26.0 | 5.80 | 19.5 | 4.61 |
| -14.5 | -15.0 | 55.8 | 33.5 | 8.76 | 27.9 | 7.00 | 22.3 | 5.56 | 16.7 | 4.42 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP3214FT8/FT7/FT5 (32HP, 90 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 83.8 | 83.8 | 25.0 | 75.4 | 20.5 | 67.0 | 16.6 | 58.7 | 13.3 |
| 39 °C | 85.1 | 85.1 | 24.6 | 76.6 | 20.2 | 68.1 | 16.4 | 59.6 | 13.1 |
| 37 °C | 87.6 | 87.6 | 23.9 | 78.8 | 19.6 | 70.1 | 15.9 | 61.3 | 12.7 |
| 35 °C | 90.0 | 90.0 | 23.2 | 81.0 | 19.0 | 72.0 | 15.4 | 63.0 | 12.3 |
| 33 °C | 90.0 | 90.0 | 21.4 | 81.0 | 17.6 | 72.0 | 14.3 | 63.0 | 11.4 |
| 31 °C | 90.0 | 90.0 | 19.8 | 81.0 | 16.3 | 72.0 | 13.3 | 63.0 | 10.7 |
| 30 °C | 90.0 | 90.0 | 19.1 | 81.0 | 15.8 | 72.0 | 12.8 | 63.0 | 10.3 |
| 29 °C | 90.0 | 90.0 | 18.5 | 81.0 | 15.2 | 72.0 | 12.4 | 63.0 | 9.98 |
| 27 °C | 90.0 | 90.0 | 17.2 | 81.0 | 14.2 | 72.0 | 11.6 | 63.0 | 9.36 |
| 25 °C | 90.0 | 90.0 | 16.1 | 81.0 | 13.3 | 72.0 | 10.8 | 63.0 | 8.78 |
| 23 °C | 90.0 | 90.0 | 15.0 | 81.0 | 12.4 | 72.0 | 10.2 | 63.0 | 8.24 |
| 21 °C | 90.0 | 90.0 | 14.7 | 81.0 | 12.2 | 72.0 | 9.97 | 63.0 | 8.10 |
| 20 °C | 90.0 | 90.0 | 14.5 | 81.0 | 12.0 | 72.0 | 9.88 | 63.0 | 8.04 |
| 19 °C | 90.0 | 90.0 | 14.4 | 81.0 | 11.9 | 72.0 | 9.80 | 63.0 | 7.98 |
| 17 °C | 90.0 | 90.0 | 14.2 | 81.0 | 11.8 | 72.0 | 9.65 | 63.0 | 7.87 |
| 15 °C | 90.0 | 90.0 | 14.0 | 81.0 | 11.6 | 72.0 | 9.53 | 63.0 | 7.78 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 83.8 | 50.3 | 10.5 | 41.9 | 8.27 | 33.5 | 6.63 | 25.1 | 5.55 |
| 39 °C | 85.1 | 51.1 | 10.3 | 42.6 | 8.15 | 34.0 | 6.53 | 25.5 | 5.47 |
| 37 °C | 87.6 | 52.6 | 10.0 | 43.8 | 7.91 | 35.0 | 6.33 | 26.3 | 5.30 |
| 35 °C | 90.0 | 54.0 | 9.70 | 45.0 | 7.66 | 36.0 | 6.13 | 27.0 | 5.14 |
| 33 °C | 90.0 | 54.0 | 9.08 | 45.0 | 7.21 | 36.0 | 5.82 | 27.0 | 4.92 |
| 31 °C | 90.0 | 54.0 | 8.51 | 45.0 | 6.79 | 36.0 | 5.53 | 27.0 | 4.71 |
| 30 °C | 90.0 | 54.0 | 8.24 | 45.0 | 6.60 | 36.0 | 5.39 | 27.0 | 4.61 |
| 29 °C | 90.0 | 54.0 | 7.99 | 45.0 | 6.41 | 36.0 | 5.25 | 27.0 | 4.51 |
| 27 °C | 90.0 | 54.0 | 7.52 | 45.0 | 6.06 | 36.0 | 4.99 | 27.0 | 4.31 |
| 25 °C | 90.0 | 54.0 | 7.07 | 45.0 | 5.73 | 36.0 | 4.74 | 27.0 | 4.11 |
| 23 °C | 90.0 | 54.0 | 6.66 | 45.0 | 5.41 | 36.0 | 4.50 | 27.0 | 3.92 |
| 21 °C | 90.0 | 54.0 | 6.56 | 45.0 | 5.35 | 36.0 | 4.47 | 27.0 | 3.91 |
| 20 °C | 90.0 | 54.0 | 6.52 | 45.0 | 5.32 | 36.0 | 4.45 | 27.0 | 3.90 |
| 19 °C | 90.0 | 54.0 | 6.48 | 45.0 | 5.30 | 36.0 | 4.44 | 27.0 | 3.90 |
| 17 °C | 90.0 | 54.0 | 6.40 | 45.0 | 5.25 | 36.0 | 4.41 | 27.0 | 3.89 |
| 15 °C | 90.0 | 54.0 | 6.34 | 45.0 | 5.21 | 36.0 | 4.39 | 27.0 | 3.88 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 100.0 | 100.0 | 20.7 | 90.0 | 17.5 | 80.0 | 14.7 | 70.0 | 12.2 |
| 13.0 | 11.8 | 100.0 | 100.0 | 21.3 | 90.0 | 18.1 | 80.0 | 15.1 | 70.0 | 12.5 |
| 11.0 | 9.8 | 100.0 | 100.0 | 22.1 | 90.0 | 18.7 | 80.0 | 15.6 | 70.0 | 12.9 |
| 9.0 | 7.9 | 100.0 | 100.0 | 22.9 | 90.0 | 19.3 | 80.0 | 16.1 | 70.0 | 13.2 |
| 7.0 | 6.0 | 100.0 | 100.0 | 23.9 | 90.0 | 20.1 | 80.0 | 16.7 | 70.0 | 13.7 |
| 5.0 | 4.1 | 96.6 | 96.6 | 23.5 | 86.9 | 19.8 | 77.3 | 16.4 | 67.6 | 13.4 |
| 3.0 | 2.2 | 93.1 | 93.1 | 23.1 | 83.8 | 19.4 | 74.5 | 16.2 | 65.2 | 13.2 |
| 0.0 | -0.7 | 87.7 | 87.7 | 22.6 | 78.9 | 19.0 | 70.2 | 15.8 | 61.4 | 12.9 |
| -3.0 | -3.7 | 82.0 | 82.0 | 22.0 | 73.8 | 18.5 | 65.6 | 15.4 | 57.4 | 12.6 |
| -5.0 | -5.6 | 78.2 | 78.2 | 21.6 | 70.4 | 18.2 | 62.6 | 15.1 | 54.7 | 12.4 |
| -7.0 | -7.6 | 74.2 | 74.2 | 21.3 | 66.8 | 17.9 | 59.4 | 14.8 | 51.9 | 12.2 |
| -10 | -10.5 | 68.3 | 68.3 | 20.7 | 61.5 | 17.4 | 54.6 | 14.5 | 47.8 | 11.9 |
| -14.5 | -15.0 | 58.8 | 58.8 | 19.8 | 52.9 | 16.7 | 47.0 | 13.9 | 41.2 | 11.4 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 100.0 | 60.0 | 10.0 | 50.0 | 8.20 | 40.0 | 6.69 | 30.0 | 5.50 |
| 13.0 | 11.8 | 100.0 | 60.0 | 10.2 | 50.0 | 8.32 | 40.0 | 6.74 | 30.0 | 5.50 |
| 11.0 | 9.8 | 100.0 | 60.0 | 10.5 | 50.0 | 8.47 | 40.0 | 6.82 | 30.0 | 5.52 |
| 9.0 | 7.9 | 100.0 | 60.0 | 10.7 | 50.0 | 8.64 | 40.0 | 6.90 | 30.0 | 5.55 |
| 7.0 | 6.0 | 100.0 | 60.0 | 11.0 | 50.0 | 8.83 | 40.0 | 7.01 | 30.0 | 5.58 |
| 5.0 | 4.1 | 96.6 | 58.0 | 10.9 | 48.3 | 8.69 | 38.6 | 6.90 | 29.0 | 5.49 |
| 3.0 | 2.2 | 93.1 | 55.9 | 10.7 | 46.6 | 8.56 | 37.2 | 6.79 | 27.9 | 5.41 |
| 0.0 | -0.7 | 87.7 | 52.6 | 10.5 | 43.9 | 8.35 | 35.1 | 6.63 | 26.3 | 5.28 |
| -3.0 | -3.7 | 82.0 | 49.2 | 10.2 | 41.0 | 8.14 | 32.8 | 6.46 | 24.6 | 5.15 |
| -5.0 | -5.6 | 78.2 | 46.9 | 10.0 | 39.1 | 8.01 | 31.3 | 6.36 | 23.5 | 5.06 |
| -7.0 | -7.6 | 74.2 | 44.5 | 9.84 | 37.1 | 7.87 | 29.7 | 6.24 | 22.3 | 4.97 |
| -10 | -10.5 | 68.3 | 41.0 | 9.59 | 34.2 | 7.66 | 27.3 | 6.08 | 20.5 | 4.84 |
| -14.5 | -15.0 | 58.8 | 35.3 | 9.19 | 29.4 | 7.34 | 23.5 | 5.83 | 17.6 | 4.64 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP3414FT8/FT7/FT5 (34HP, 96 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 89.3 | 89.3 | 27.9 | 80.4 | 22.9 | 71.4 | 18.5 | 62.5 | 14.8 |
| 39 °C | 90.8 | 90.8 | 27.5 | 81.7 | 22.6 | 72.6 | 18.2 | 63.6 | 14.5 |
| 37 °C | 93.5 | 93.5 | 26.7 | 84.2 | 21.9 | 74.8 | 17.7 | 65.5 | 14.1 |
| 35 °C | 96.0 | 96.0 | 25.9 | 86.4 | 21.2 | 76.8 | 17.1 | 67.2 | 13.7 |
| 33 °C | 96.0 | 96.0 | 23.9 | 86.4 | 19.6 | 76.8 | 15.9 | 67.2 | 12.7 |
| 31 °C | 96.0 | 96.0 | 22.2 | 86.4 | 18.2 | 76.8 | 14.8 | 67.2 | 11.9 |
| 30 °C | 96.0 | 96.0 | 21.4 | 86.4 | 17.6 | 76.8 | 14.3 | 67.2 | 11.5 |
| 29 °C | 96.0 | 96.0 | 20.6 | 86.4 | 17.0 | 76.8 | 13.8 | 67.2 | 11.1 |
| 27 °C | 96.0 | 96.0 | 19.2 | 86.4 | 15.8 | 76.8 | 12.9 | 67.2 | 10.4 |
| 25 °C | 96.0 | 96.0 | 17.9 | 86.4 | 14.8 | 76.8 | 12.1 | 67.2 | 9.76 |
| 23 °C | 96.0 | 96.0 | 16.7 | 86.4 | 13.8 | 76.8 | 11.3 | 67.2 | 9.16 |
| 21 °C | 96.0 | 96.0 | 16.4 | 86.4 | 13.5 | 76.8 | 11.1 | 67.2 | 9.00 |
| 20 °C | 96.0 | 96.0 | 16.2 | 86.4 | 13.4 | 76.8 | 11.0 | 67.2 | 8.93 |
| 19 °C | 96.0 | 96.0 | 16.1 | 86.4 | 13.3 | 76.8 | 10.9 | 67.2 | 8.86 |
| 17 °C | 96.0 | 96.0 | 15.8 | 86.4 | 13.1 | 76.8 | 10.7 | 67.2 | 8.74 |
| 15 °C | 96.0 | 96.0 | 15.6 | 86.4 | 12.9 | 76.8 | 10.6 | 67.2 | 8.64 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 89.3 | 53.6 | 11.6 | 44.7 | 9.18 | 35.7 | 7.36 | 26.8 | 6.18 |
| 39 °C | 90.8 | 54.5 | 11.5 | 45.4 | 9.05 | 36.3 | 7.25 | 27.2 | 6.09 |
| 37 °C | 93.5 | 56.1 | 11.1 | 46.8 | 8.77 | 37.4 | 7.03 | 28.1 | 5.90 |
| 35 °C | 96.0 | 57.6 | 10.8 | 48.0 | 8.50 | 38.4 | 6.81 | 28.8 | 5.71 |
| 33 °C | 96.0 | 57.6 | 10.1 | 48.0 | 7.99 | 38.4 | 6.46 | 28.8 | 5.47 |
| 31 °C | 96.0 | 57.6 | 9.45 | 48.0 | 7.54 | 38.4 | 6.14 | 28.8 | 5.24 |
| 30 °C | 96.0 | 57.6 | 9.15 | 48.0 | 7.32 | 38.4 | 5.98 | 28.8 | 5.13 |
| 29 °C | 96.0 | 57.6 | 8.87 | 48.0 | 7.12 | 38.4 | 5.83 | 28.8 | 5.02 |
| 27 °C | 96.0 | 57.6 | 8.34 | 48.0 | 6.72 | 38.4 | 5.54 | 28.8 | 4.80 |
| 25 °C | 96.0 | 57.6 | 7.85 | 48.0 | 6.36 | 38.4 | 5.27 | 28.8 | 4.58 |
| 23 °C | 96.0 | 57.6 | 7.39 | 48.0 | 6.01 | 38.4 | 5.00 | 28.8 | 4.37 |
| 21 °C | 96.0 | 57.6 | 7.28 | 48.0 | 5.94 | 38.4 | 4.96 | 28.8 | 4.36 |
| 20 °C | 96.0 | 57.6 | 7.23 | 48.0 | 5.90 | 38.4 | 4.94 | 28.8 | 4.35 |
| 19 °C | 96.0 | 57.6 | 7.19 | 48.0 | 5.88 | 38.4 | 4.93 | 28.8 | 4.35 |
| 17 °C | 96.0 | 57.6 | 7.11 | 48.0 | 5.82 | 38.4 | 4.90 | 28.8 | 4.33 |
| 15 °C | 96.0 | 57.6 | 7.04 | 48.0 | 5.78 | 38.4 | 4.88 | 28.8 | 4.33 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 108.0 | 108.0 | 23.8 | 97.2 | 20.0 | 86.4 | 16.6 | 75.6 | 13.7 |
| 13.0 | 11.8 | 108.0 | 108.0 | 24.6 | 97.2 | 20.6 | 86.4 | 17.1 | 75.6 | 14.1 |
| 11.0 | 9.8 | 108.0 | 108.0 | 25.5 | 97.2 | 21.4 | 86.4 | 17.7 | 75.6 | 14.5 |
| 9.0 | 7.9 | 108.0 | 108.0 | 26.6 | 97.2 | 22.2 | 86.4 | 18.3 | 75.6 | 14.9 |
| 7.0 | 6.0 | 108.0 | 108.0 | 27.7 | 97.2 | 23.1 | 86.4 | 19.0 | 75.6 | 15.4 |
| 5.0 | 4.1 | 104.3 | 104.3 | 27.3 | 93.9 | 22.7 | 83.4 | 18.7 | 73.0 | 15.2 |
| 3.0 | 2.2 | 100.6 | 100.6 | 26.9 | 90.5 | 22.4 | 80.5 | 18.4 | 70.4 | 15.0 |
| 0.0 | -0.7 | 94.7 | 94.7 | 26.2 | 85.2 | 21.9 | 75.8 | 18.0 | 66.3 | 14.6 |
| -3.0 | -3.7 | 88.5 | 88.5 | 25.5 | 79.7 | 21.3 | 70.8 | 17.5 | 62.0 | 14.2 |
| -5.0 | -5.6 | 84.5 | 84.5 | 25.1 | 76.1 | 21.0 | 67.6 | 17.2 | 59.2 | 14.0 |
| -7.0 | -7.6 | 80.2 | 80.2 | 24.7 | 72.2 | 20.6 | 64.2 | 16.9 | 56.1 | 13.8 |
| -10 | -10.5 | 73.8 | 73.8 | 24.0 | 66.4 | 20.0 | 59.0 | 16.5 | 51.7 | 13.4 |
| -14.5 | -15.0 | 63.5 | 63.5 | 23.0 | 57.2 | 19.2 | 50.8 | 15.8 | 44.5 | 12.8 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 108.0 | 64.8 | 11.2 | 54.0 | 9.11 | 43.2 | 7.46 | 32.4 | 6.22 |
| 13.0 | 11.8 | 108.0 | 64.8 | 11.4 | 54.0 | 9.25 | 43.2 | 7.51 | 32.4 | 6.22 |
| 11.0 | 9.8 | 108.0 | 64.8 | 11.7 | 54.0 | 9.42 | 43.2 | 7.59 | 32.4 | 6.23 |
| 9.0 | 7.9 | 108.0 | 64.8 | 12.0 | 54.0 | 9.60 | 43.2 | 7.68 | 32.4 | 6.24 |
| 7.0 | 6.0 | 108.0 | 64.8 | 12.4 | 54.0 | 9.82 | 43.2 | 7.79 | 32.4 | 6.27 |
| 5.0 | 4.1 | 104.3 | 62.6 | 12.2 | 52.2 | 9.67 | 41.7 | 7.67 | 31.3 | 6.17 |
| 3.0 | 2.2 | 100.6 | 60.4 | 12.0 | 50.3 | 9.52 | 40.2 | 7.55 | 30.2 | 6.08 |
| 0.0 | -0.7 | 94.7 | 56.8 | 11.7 | 47.4 | 9.30 | 37.9 | 7.37 | 28.4 | 5.93 |
| -3.0 | -3.7 | 88.5 | 53.1 | 11.4 | 44.3 | 9.06 | 35.4 | 7.18 | 26.6 | 5.78 |
| -5.0 | -5.6 | 84.5 | 50.7 | 11.2 | 42.3 | 8.91 | 33.8 | 7.07 | 25.4 | 5.69 |
| -7.0 | -7.6 | 80.2 | 48.1 | 11.0 | 40.1 | 8.75 | 32.1 | 6.94 | 24.1 | 5.59 |
| -10 | -10.5 | 73.8 | 44.3 | 10.7 | 36.9 | 8.53 | 29.5 | 6.76 | 22.1 | 5.44 |
| -14.5 | -15.0 | 63.5 | 38.1 | 10.3 | 31.8 | 8.17 | 25.4 | 6.48 | 19.1 | 5.22 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP3614FT8/FT7/FT5 (36HP, 101 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 94.0 | 94.0 | 27.4 | 84.6 | 22.4 | 75.2 | 18.1 | 65.8 | 14.5 |
| 39 °C | 95.5 | 95.5 | 27.0 | 86.0 | 22.1 | 76.4 | 17.9 | 66.9 | 14.2 |
| 37 °C | 98.3 | 98.3 | 26.2 | 88.5 | 21.4 | 78.6 | 17.3 | 68.8 | 13.8 |
| 35 °C | 101.0 | 101.0 | 25.4 | 90.9 | 20.8 | 80.8 | 16.8 | 70.7 | 13.4 |
| 33 °C | 101.0 | 101.0 | 23.4 | 90.9 | 19.2 | 80.8 | 15.6 | 70.7 | 12.5 |
| 31 °C | 101.0 | 101.0 | 21.7 | 90.9 | 17.8 | 80.8 | 14.5 | 70.7 | 11.6 |
| 30 °C | 101.0 | 101.0 | 20.9 | 90.9 | 17.2 | 80.8 | 14.0 | 70.7 | 11.2 |
| 29 °C | 101.0 | 101.0 | 20.2 | 90.9 | 16.6 | 80.8 | 13.5 | 70.7 | 10.9 |
| 27 °C | 101.0 | 101.0 | 18.8 | 90.9 | 15.5 | 80.8 | 12.6 | 70.7 | 10.2 |
| 25 °C | 101.0 | 101.0 | 17.6 | 90.9 | 14.5 | 80.8 | 11.8 | 70.7 | 9.57 |
| 23 °C | 101.0 | 101.0 | 16.4 | 90.9 | 13.5 | 80.8 | 11.1 | 70.7 | 8.98 |
| 21 °C | 101.0 | 101.0 | 16.0 | 90.9 | 13.3 | 80.8 | 10.9 | 70.7 | 8.83 |
| 20 °C | 101.0 | 101.0 | 15.9 | 90.9 | 13.1 | 80.8 | 10.8 | 70.7 | 8.76 |
| 19 °C | 101.0 | 101.0 | 15.7 | 90.9 | 13.0 | 80.8 | 10.7 | 70.7 | 8.70 |
| 17 °C | 101.0 | 101.0 | 15.5 | 90.9 | 12.8 | 80.8 | 10.5 | 70.7 | 8.58 |
| 15 °C | 101.0 | 101.0 | 15.3 | 90.9 | 12.6 | 80.8 | 10.4 | 70.7 | 8.48 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 94.0 | 56.4 | 11.4 | 47.0 | 9.05 | 37.6 | 7.31 | 28.2 | 6.21 |
| 39 °C | 95.5 | 57.3 | 11.3 | 47.8 | 8.92 | 38.2 | 7.20 | 28.7 | 6.12 |
| 37 °C | 98.3 | 59.0 | 10.9 | 49.2 | 8.65 | 39.3 | 6.98 | 29.5 | 5.93 |
| 35 °C | 101.0 | 60.6 | 10.6 | 50.5 | 8.38 | 40.4 | 6.76 | 30.3 | 5.75 |
| 33 °C | 101.0 | 60.6 | 9.90 | 50.5 | 7.89 | 40.4 | 6.42 | 30.3 | 5.51 |
| 31 °C | 101.0 | 60.6 | 9.28 | 50.5 | 7.44 | 40.4 | 6.11 | 30.3 | 5.28 |
| 30 °C | 101.0 | 60.6 | 8.99 | 50.5 | 7.23 | 40.4 | 5.96 | 30.3 | 5.17 |
| 29 °C | 101.0 | 60.6 | 8.72 | 50.5 | 7.03 | 40.4 | 5.81 | 30.3 | 5.06 |
| 27 °C | 101.0 | 60.6 | 8.20 | 50.5 | 6.65 | 40.4 | 5.52 | 30.3 | 4.84 |
| 25 °C | 101.0 | 60.6 | 7.72 | 50.5 | 6.28 | 40.4 | 5.25 | 30.3 | 4.63 |
| 23 °C | 101.0 | 60.6 | 7.27 | 50.5 | 5.94 | 40.4 | 4.99 | 30.3 | 4.42 |
| 21 °C | 101.0 | 60.6 | 7.17 | 50.5 | 5.87 | 40.4 | 4.95 | 30.3 | 4.40 |
| 20 °C | 101.0 | 60.6 | 7.12 | 50.5 | 5.85 | 40.4 | 4.94 | 30.3 | 4.40 |
| 19 °C | 101.0 | 60.6 | 7.08 | 50.5 | 5.82 | 40.4 | 4.92 | 30.3 | 4.39 |
| 17 °C | 101.0 | 60.6 | 7.00 | 50.5 | 5.77 | 40.4 | 4.90 | 30.3 | 4.38 |
| 15 °C | 101.0 | 60.6 | 6.93 | 50.5 | 5.73 | 40.4 | 4.88 | 30.3 | 4.37 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 113.0 | 113.0 | 23.7 | 101.7 | 20.1 | 90.4 | 16.8 | 79.1 | 14.0 |
| 13.0 | 11.8 | 113.0 | 113.0 | 24.5 | 101.7 | 20.7 | 90.4 | 17.3 | 79.1 | 14.3 |
| 11.0 | 9.8 | 113.0 | 113.0 | 25.3 | 101.7 | 21.4 | 90.4 | 17.8 | 79.1 | 14.7 |
| 9.0 | 7.9 | 113.0 | 113.0 | 26.3 | 101.7 | 22.1 | 90.4 | 18.4 | 79.1 | 15.1 |
| 7.0 | 6.0 | 113.0 | 113.0 | 27.4 | 101.7 | 23.0 | 90.4 | 19.1 | 79.1 | 15.6 |
| 5.0 | 4.1 | 109.2 | 109.2 | 26.9 | 98.3 | 22.6 | 87.4 | 18.8 | 76.4 | 15.4 |
| 3.0 | 2.2 | 105.2 | 105.2 | 26.5 | 94.7 | 22.3 | 84.2 | 18.5 | 73.6 | 15.1 |
| 0.0 | -0.7 | 99.1 | 99.1 | 25.9 | 89.2 | 21.7 | 79.3 | 18.0 | 69.4 | 14.8 |
| -3.0 | -3.7 | 92.6 | 92.6 | 25.2 | 83.3 | 21.2 | 74.1 | 17.6 | 64.8 | 14.4 |
| -5.0 | -5.6 | 88.4 | 88.4 | 24.8 | 79.6 | 20.8 | 70.7 | 17.3 | 61.9 | 14.2 |
| -7.0 | -7.6 | 83.9 | 83.9 | 24.4 | 75.5 | 20.5 | 67.1 | 17.0 | 58.7 | 13.9 |
| -10 | -10.5 | 77.2 | 77.2 | 23.7 | 69.5 | 19.9 | 61.8 | 16.5 | 54.0 | 13.5 |
| -14.5 | -15.0 | 66.4 | 66.4 | 22.8 | 59.8 | 19.1 | 53.1 | 15.9 | 46.5 | 13.0 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 113.0 | 67.8 | 11.5 | 56.5 | 9.37 | 45.2 | 7.65 | 33.9 | 6.32 |
| 13.0 | 11.8 | 113.0 | 67.8 | 11.7 | 56.5 | 9.51 | 45.2 | 7.72 | 33.9 | 6.32 |
| 11.0 | 9.8 | 113.0 | 67.8 | 12.0 | 56.5 | 9.68 | 45.2 | 7.80 | 33.9 | 6.34 |
| 9.0 | 7.9 | 113.0 | 67.8 | 12.3 | 56.5 | 9.87 | 45.2 | 7.90 | 33.9 | 6.37 |
| 7.0 | 6.0 | 113.0 | 67.8 | 12.6 | 56.5 | 10.1 | 45.2 | 8.01 | 33.9 | 6.40 |
| 5.0 | 4.1 | 109.2 | 65.5 | 12.4 | 54.6 | 9.93 | 43.7 | 7.89 | 32.8 | 6.30 |
| 3.0 | 2.2 | 105.2 | 63.1 | 12.2 | 52.6 | 9.78 | 42.1 | 7.77 | 31.6 | 6.21 |
| 0.0 | -0.7 | 99.1 | 59.5 | 11.9 | 49.6 | 9.54 | 39.6 | 7.58 | 29.7 | 6.06 |
| -3.0 | -3.7 | 92.6 | 55.6 | 11.6 | 46.3 | 9.30 | 37.0 | 7.39 | 27.8 | 5.90 |
| -5.0 | -5.6 | 88.4 | 53.0 | 11.4 | 44.2 | 9.15 | 35.4 | 7.27 | 26.5 | 5.81 |
| -7.0 | -7.6 | 83.9 | 50.3 | 11.2 | 42.0 | 8.99 | 33.6 | 7.14 | 25.2 | 5.70 |
| -10 | -10.5 | 77.2 | 46.3 | 10.9 | 38.6 | 8.75 | 30.9 | 6.95 | 23.2 | 5.56 |
| -14.5 | -15.0 | 66.4 | 39.8 | 10.5 | 33.2 | 8.39 | 26.6 | 6.67 | 19.9 | 5.33 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP3814FT8/FT7/FT5 (38HP, 106.5 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 99.1 | 99.1 | 30.1 | 89.2 | 24.6 | 79.3 | 19.9 | 69.4 | 15.8 |
| 39 °C | 100.7 | 100.7 | 29.6 | 90.6 | 24.2 | 80.6 | 19.6 | 70.5 | 15.6 |
| 37 °C | 103.7 | 103.7 | 28.7 | 93.3 | 23.5 | 83.0 | 19.0 | 72.6 | 15.1 |
| 35 °C | 106.5 | 106.5 | 27.9 | 95.9 | 22.8 | 85.2 | 18.4 | 74.6 | 14.6 |
| 33 °C | 106.5 | 106.5 | 25.7 | 95.9 | 21.1 | 85.2 | 17.0 | 74.6 | 13.6 |
| 31 °C | 106.5 | 106.5 | 23.8 | 95.9 | 19.6 | 85.2 | 15.9 | 74.6 | 12.7 |
| 30 °C | 106.5 | 106.5 | 23.0 | 95.9 | 18.9 | 85.2 | 15.3 | 74.6 | 12.3 |
| 29 °C | 106.5 | 106.5 | 22.2 | 95.9 | 18.2 | 85.2 | 14.8 | 74.6 | 11.9 |
| 27 °C | 106.5 | 106.5 | 20.6 | 95.9 | 17.0 | 85.2 | 13.8 | 74.6 | 11.1 |
| 25 °C | 106.5 | 106.5 | 19.3 | 95.9 | 15.9 | 85.2 | 12.9 | 74.6 | 10.5 |
| 23 °C | 106.5 | 106.5 | 18.0 | 95.9 | 14.8 | 85.2 | 12.1 | 74.6 | 9.82 |
| 21 °C | 106.5 | 106.5 | 17.6 | 95.9 | 14.5 | 85.2 | 11.9 | 74.6 | 9.65 |
| 20 °C | 106.5 | 106.5 | 17.4 | 95.9 | 14.4 | 85.2 | 11.8 | 74.6 | 9.57 |
| 19 °C | 106.5 | 106.5 | 17.3 | 95.9 | 14.3 | 85.2 | 11.7 | 74.6 | 9.50 |
| 17 °C | 106.5 | 106.5 | 17.0 | 95.9 | 14.0 | 85.2 | 11.5 | 74.6 | 9.37 |
| 15 °C | 106.5 | 106.5 | 16.7 | 95.9 | 13.8 | 85.2 | 11.4 | 74.6 | 9.27 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 99.1 | 59.5 | 12.5 | 49.6 | 9.88 | 39.6 | 7.98 | 29.7 | 6.80 |
| 39 °C | 100.7 | 60.4 | 12.3 | 50.4 | 9.73 | 40.3 | 7.86 | 30.2 | 6.70 |
| 37 °C | 103.7 | 62.2 | 11.9 | 51.9 | 9.44 | 41.5 | 7.62 | 31.1 | 6.49 |
| 35 °C | 106.5 | 63.9 | 11.6 | 53.3 | 9.14 | 42.6 | 7.38 | 32.0 | 6.29 |
| 33 °C | 106.5 | 63.9 | 10.8 | 53.3 | 8.61 | 42.6 | 7.01 | 32.0 | 6.03 |
| 31 °C | 106.5 | 63.9 | 10.1 | 53.3 | 8.12 | 42.6 | 6.67 | 32.0 | 5.78 |
| 30 °C | 106.5 | 63.9 | 9.82 | 53.3 | 7.89 | 42.6 | 6.50 | 32.0 | 5.66 |
| 29 °C | 106.5 | 63.9 | 9.52 | 53.3 | 7.67 | 42.6 | 6.34 | 32.0 | 5.54 |
| 27 °C | 106.5 | 63.9 | 8.96 | 53.3 | 7.25 | 42.6 | 6.03 | 32.0 | 5.30 |
| 25 °C | 106.5 | 63.9 | 8.43 | 53.3 | 6.86 | 42.6 | 5.74 | 32.0 | 5.07 |
| 23 °C | 106.5 | 63.9 | 7.94 | 53.3 | 6.48 | 42.6 | 5.45 | 32.0 | 4.84 |
| 21 °C | 106.5 | 63.9 | 7.82 | 53.3 | 6.41 | 42.6 | 5.41 | 32.0 | 4.83 |
| 20 °C | 106.5 | 63.9 | 7.77 | 53.3 | 6.38 | 42.6 | 5.40 | 32.0 | 4.82 |
| 19 °C | 106.5 | 63.9 | 7.72 | 53.3 | 6.35 | 42.6 | 5.38 | 32.0 | 4.82 |
| 17 °C | 106.5 | 63.9 | 7.64 | 53.3 | 6.30 | 42.6 | 5.35 | 32.0 | 4.81 |
| 15 °C | 106.5 | 63.9 | 7.56 | 53.3 | 6.25 | 42.6 | 5.33 | 32.0 | 4.80 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 119.5 | 119.5 | 26.3 | 107.6 | 22.1 | 95.6 | 18.3 | 83.7 | 15.1 |
| 13.0 | 11.8 | 119.5 | 119.5 | 27.2 | 107.6 | 22.8 | 95.6 | 18.9 | 83.7 | 15.5 |
| 11.0 | 9.8 | 119.5 | 119.5 | 28.2 | 107.6 | 23.6 | 95.6 | 19.5 | 83.7 | 15.9 |
| 9.0 | 7.9 | 119.5 | 119.5 | 29.3 | 107.6 | 24.5 | 95.6 | 20.2 | 83.7 | 16.4 |
| 7.0 | 6.0 | 119.5 | 119.5 | 30.6 | 107.6 | 25.5 | 95.6 | 21.0 | 83.7 | 17.0 |
| 5.0 | 4.1 | 115.4 | 115.4 | 30.1 | 103.9 | 25.1 | 92.3 | 20.6 | 80.8 | 16.7 |
| 3.0 | 2.2 | 111.3 | 111.3 | 29.7 | 100.2 | 24.7 | 89.0 | 20.3 | 77.9 | 16.5 |
| 0.0 | -0.7 | 104.8 | 104.8 | 29.0 | 94.3 | 24.1 | 83.8 | 19.8 | 73.4 | 16.1 |
| -3.0 | -3.7 | 98.0 | 98.0 | 28.2 | 88.2 | 23.5 | 78.4 | 19.3 | 68.6 | 15.7 |
| -5.0 | -5.6 | 93.5 | 93.5 | 27.8 | 84.2 | 23.1 | 74.8 | 19.0 | 65.5 | 15.4 |
| -7.0 | -7.6 | 88.7 | 88.7 | 27.3 | 79.8 | 22.7 | 71.0 | 18.7 | 62.1 | 15.1 |
| -10 | -10.5 | 81.6 | 81.6 | 26.6 | 73.4 | 22.1 | 65.3 | 18.2 | 57.1 | 14.7 |
| -14.5 | -15.0 | 70.2 | 70.2 | 25.5 | 63.2 | 21.2 | 56.2 | 17.4 | 49.1 | 14.1 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 119.5 | 71.7 | 12.3 | 59.8 | 10.0 | 47.8 | 8.22 | 35.9 | 6.89 |
| 13.0 | 11.8 | 119.5 | 71.7 | 12.6 | 59.8 | 10.2 | 47.8 | 8.28 | 35.9 | 6.88 |
| 11.0 | 9.8 | 119.5 | 71.7 | 12.9 | 59.8 | 10.4 | 47.8 | 8.36 | 35.9 | 6.89 |
| 9.0 | 7.9 | 119.5 | 71.7 | 13.2 | 59.8 | 10.6 | 47.8 | 8.46 | 35.9 | 6.90 |
| 7.0 | 6.0 | 119.5 | 71.7 | 13.6 | 59.8 | 10.8 | 47.8 | 8.58 | 35.9 | 6.93 |
| 5.0 | 4.1 | 115.4 | 69.2 | 13.4 | 57.7 | 10.6 | 46.2 | 8.45 | 34.6 | 6.82 |
| 3.0 | 2.2 | 111.3 | 66.8 | 13.2 | 55.7 | 10.5 | 44.5 | 8.32 | 33.4 | 6.72 |
| 0.0 | -0.7 | 104.8 | 62.9 | 12.9 | 52.4 | 10.2 | 41.9 | 8.12 | 31.4 | 6.56 |
| -3.0 | -3.7 | 98.0 | 58.8 | 12.6 | 49.0 | 10.0 | 39.2 | 7.91 | 29.4 | 6.39 |
| -5.0 | -5.6 | 93.5 | 56.1 | 12.3 | 46.8 | 9.80 | 37.4 | 7.78 | 28.1 | 6.29 |
| -7.0 | -7.6 | 88.7 | 53.2 | 12.1 | 44.4 | 9.63 | 35.5 | 7.64 | 26.6 | 6.17 |
| -10 | -10.5 | 81.6 | 49.0 | 11.8 | 40.8 | 9.38 | 32.6 | 7.45 | 24.5 | 6.01 |
| -14.5 | -15.0 | 70.2 | 42.1 | 11.3 | 35.1 | 8.99 | 28.1 | 7.14 | 21.1 | 5.76 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP4014FT8/FT7/FT5 (40HP, 112 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 104.2 | 104.2 | 32.8 | 93.8 | 26.8 | 83.4 | 21.6 | 72.9 | 17.2 |
| 39 °C | 105.9 | 105.9 | 32.4 | 95.3 | 26.4 | 84.7 | 21.3 | 74.1 | 16.9 |
| 37 °C | 109.1 | 109.1 | 31.4 | 98.2 | 25.6 | 87.3 | 20.7 | 76.4 | 16.4 |
| 35 °C | 112.0 | 112.0 | 30.4 | 100.8 | 24.8 | 89.6 | 20.0 | 78.4 | 15.9 |
| 33 °C | 112.0 | 112.0 | 28.1 | 100.8 | 23.0 | 89.6 | 18.5 | 78.4 | 14.8 |
| 31 °C | 112.0 | 112.0 | 26.0 | 100.8 | 21.3 | 89.6 | 17.3 | 78.4 | 13.8 |
| 30 °C | 112.0 | 112.0 | 25.1 | 100.8 | 20.6 | 89.6 | 16.7 | 78.4 | 13.4 |
| 29 °C | 112.0 | 112.0 | 24.2 | 100.8 | 19.8 | 89.6 | 16.1 | 78.4 | 12.9 |
| 27 °C | 112.0 | 112.0 | 22.5 | 100.8 | 18.5 | 89.6 | 15.0 | 78.4 | 12.1 |
| 25 °C | 112.0 | 112.0 | 21.0 | 100.8 | 17.3 | 89.6 | 14.1 | 78.4 | 11.4 |
| 23 °C | 112.0 | 112.0 | 19.6 | 100.8 | 16.2 | 89.6 | 13.2 | 78.4 | 10.7 |
| 21 °C | 112.0 | 112.0 | 19.2 | 100.8 | 15.8 | 89.6 | 12.9 | 78.4 | 10.5 |
| 20 °C | 112.0 | 112.0 | 19.0 | 100.8 | 15.7 | 89.6 | 12.8 | 78.4 | 10.4 |
| 19 °C | 112.0 | 112.0 | 18.8 | 100.8 | 15.5 | 89.6 | 12.7 | 78.4 | 10.3 |
| 17 °C | 112.0 | 112.0 | 18.5 | 100.8 | 15.3 | 89.6 | 12.5 | 78.4 | 10.2 |
| 15 °C | 112.0 | 112.0 | 18.2 | 100.8 | 15.1 | 89.6 | 12.3 | 78.4 | 10.1 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 104.2 | 62.5 | 13.6 | 52.1 | 10.7 | 41.7 | 8.66 | 31.3 | 7.39 |
| 39 °C | 105.9 | 63.5 | 13.4 | 53.0 | 10.6 | 42.4 | 8.53 | 31.8 | 7.28 |
| 37 °C | 109.1 | 65.5 | 12.9 | 54.6 | 10.2 | 43.6 | 8.27 | 32.7 | 7.06 |
| 35 °C | 112.0 | 67.2 | 12.5 | 56.0 | 9.91 | 44.8 | 8.01 | 33.6 | 6.84 |
| 33 °C | 112.0 | 67.2 | 11.7 | 56.0 | 9.33 | 44.8 | 7.61 | 33.6 | 6.56 |
| 31 °C | 112.0 | 67.2 | 11.0 | 56.0 | 8.80 | 44.8 | 7.23 | 33.6 | 6.29 |
| 30 °C | 112.0 | 67.2 | 10.7 | 56.0 | 8.55 | 44.8 | 7.06 | 33.6 | 6.16 |
| 29 °C | 112.0 | 67.2 | 10.3 | 56.0 | 8.32 | 44.8 | 6.88 | 33.6 | 6.03 |
| 27 °C | 112.0 | 67.2 | 9.71 | 56.0 | 7.86 | 44.8 | 6.55 | 33.6 | 5.77 |
| 25 °C | 112.0 | 67.2 | 9.14 | 56.0 | 7.43 | 44.8 | 6.23 | 33.6 | 5.52 |
| 23 °C | 112.0 | 67.2 | 8.61 | 56.0 | 7.03 | 44.8 | 5.92 | 33.6 | 5.27 |
| 21 °C | 112.0 | 67.2 | 8.48 | 56.0 | 6.95 | 44.8 | 5.88 | 33.6 | 5.26 |
| 20 °C | 112.0 | 67.2 | 8.43 | 56.0 | 6.92 | 44.8 | 5.86 | 33.6 | 5.25 |
| 19 °C | 112.0 | 67.2 | 8.37 | 56.0 | 6.88 | 44.8 | 5.84 | 33.6 | 5.25 |
| 17 °C | 112.0 | 67.2 | 8.28 | 56.0 | 6.83 | 44.8 | 5.81 | 33.6 | 5.24 |
| 15 °C | 112.0 | 67.2 | 8.20 | 56.0 | 6.78 | 44.8 | 5.79 | 33.6 | 5.23 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 127.0 | 127.0 | 29.1 | 114.3 | 24.2 | 101.6 | 20.0 | 88.9 | 16.3 |
| 13.0 | 11.8 | 127.0 | 127.0 | 30.2 | 114.3 | 25.1 | 101.6 | 20.6 | 88.9 | 16.7 |
| 11.0 | 9.8 | 127.0 | 127.0 | 31.4 | 114.3 | 26.0 | 101.6 | 21.3 | 88.9 | 17.3 |
| 9.0 | 7.9 | 127.0 | 127.0 | 32.7 | 114.3 | 27.1 | 101.6 | 22.1 | 88.9 | 17.8 |
| 7.0 | 6.0 | 127.0 | 127.0 | 34.3 | 114.3 | 28.3 | 101.6 | 23.0 | 88.9 | 18.5 |
| 5.0 | 4.1 | 122.7 | 122.7 | 33.7 | 110.4 | 27.9 | 98.2 | 22.7 | 85.9 | 18.2 |
| 3.0 | 2.2 | 118.3 | 118.3 | 33.2 | 106.5 | 27.4 | 94.6 | 22.3 | 82.8 | 17.9 |
| 0.0 | -0.7 | 111.4 | 111.4 | 32.4 | 100.3 | 26.8 | 89.1 | 21.8 | 78.0 | 17.5 |
| -3.0 | -3.7 | 104.1 | 104.1 | 31.6 | 93.7 | 26.1 | 83.3 | 21.2 | 72.9 | 17.1 |
| -5.0 | -5.6 | 99.4 | 99.4 | 31.1 | 89.5 | 25.7 | 79.5 | 20.9 | 69.6 | 16.8 |
| -7.0 | -7.6 | 94.3 | 94.3 | 30.5 | 84.9 | 25.2 | 75.4 | 20.5 | 66.0 | 16.5 |
| -10 | -10.5 | 86.7 | 86.7 | 29.7 | 78.0 | 24.5 | 69.4 | 20.0 | 60.7 | 16.1 |
| -14.5 | -15.0 | 74.6 | 74.6 | 28.5 | 67.1 | 23.5 | 59.7 | 19.2 | 52.2 | 15.4 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 127.0 | 76.2 | 13.2 | 63.5 | 10.7 | 50.8 | 8.82 | 38.1 | 7.51 |
| 13.0 | 11.8 | 127.0 | 76.2 | 13.5 | 63.5 | 10.9 | 50.8 | 8.87 | 38.1 | 7.49 |
| 11.0 | 9.8 | 127.0 | 76.2 | 13.8 | 63.5 | 11.1 | 50.8 | 8.95 | 38.1 | 7.48 |
| 9.0 | 7.9 | 127.0 | 76.2 | 14.2 | 63.5 | 11.3 | 50.8 | 9.05 | 38.1 | 7.48 |
| 7.0 | 6.0 | 127.0 | 76.2 | 14.7 | 63.5 | 11.6 | 50.8 | 9.17 | 38.1 | 7.49 |
| 5.0 | 4.1 | 122.7 | 73.6 | 14.4 | 61.4 | 11.4 | 49.1 | 9.03 | 36.8 | 7.38 |
| 3.0 | 2.2 | 118.3 | 71.0 | 14.2 | 59.2 | 11.2 | 47.3 | 8.89 | 35.5 | 7.27 |
| 0.0 | -0.7 | 111.4 | 66.8 | 13.9 | 55.7 | 10.9 | 44.6 | 8.68 | 33.4 | 7.09 |
| -3.0 | -3.7 | 104.1 | 62.5 | 13.5 | 52.1 | 10.7 | 41.6 | 8.46 | 31.2 | 6.91 |
| -5.0 | -5.6 | 99.4 | 59.6 | 13.3 | 49.7 | 10.5 | 39.8 | 8.32 | 29.8 | 6.80 |
| -7.0 | -7.6 | 94.3 | 56.6 | 13.1 | 47.2 | 10.3 | 37.7 | 8.17 | 28.3 | 6.68 |
| -10 | -10.5 | 86.7 | 52.0 | 12.7 | 43.4 | 10.0 | 34.7 | 7.96 | 26.0 | 6.50 |
| -14.5 | -15.0 | 74.6 | 44.8 | 12.2 | 37.3 | 9.62 | 29.8 | 7.63 | 22.4 | 6.23 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

MMY-AP4214FT8/FT7/FT5 (42HP, 118 kW system)

## Cooling

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 109.8 | 109.8 | 35.8 | 98.8 | 29.2 | 87.8 | 23.5 | 76.9 | 18.6 |
| 39 °C | 111.6 | 111.6 | 35.2 | 100.4 | 28.7 | 89.3 | 23.1 | 78.1 | 18.4 |
| 37 °C | 114.9 | 114.9 | 34.2 | 103.4 | 27.9 | 91.9 | 22.4 | 80.4 | 17.8 |
| 35 °C | 118.0 | 118.0 | 33.1 | 106.2 | 27.0 | 94.4 | 21.7 | 82.6 | 17.2 |
| 33 °C | 118.0 | 118.0 | 30.5 | 106.2 | 25.0 | 94.4 | 20.1 | 82.6 | 16.0 |
| 31 °C | 118.0 | 118.0 | 28.3 | 106.2 | 23.2 | 94.4 | 18.7 | 82.6 | 15.0 |
| 30 °C | 118.0 | 118.0 | 27.3 | 106.2 | 22.3 | 94.4 | 18.1 | 82.6 | 14.5 |
| 29 °C | 118.0 | 118.0 | 26.3 | 106.2 | 21.6 | 94.4 | 17.5 | 82.6 | 14.0 |
| 27 °C | 118.0 | 118.0 | 24.5 | 106.2 | 20.1 | 94.4 | 16.3 | 82.6 | 13.1 |
| 25 °C | 118.0 | 118.0 | 22.8 | 106.2 | 18.8 | 94.4 | 15.3 | 82.6 | 12.3 |
| 23 °C | 118.0 | 118.0 | 21.3 | 106.2 | 17.5 | 94.4 | 14.3 | 82.6 | 11.5 |
| 21 °C | 118.0 | 118.0 | 20.8 | 106.2 | 17.2 | 94.4 | 14.0 | 82.6 | 11.3 |
| 20 °C | 118.0 | 118.0 | 20.6 | 106.2 | 17.0 | 94.4 | 13.9 | 82.6 | 11.2 |
| 19 °C | 118.0 | 118.0 | 20.4 | 106.2 | 16.9 | 94.4 | 13.8 | 82.6 | 11.2 |
| 17 °C | 118.0 | 118.0 | 20.1 | 106.2 | 16.6 | 94.4 | 13.6 | 82.6 | 11.0 |
| 15 °C | 118.0 | 118.0 | 19.8 | 106.2 | 16.4 | 94.4 | 13.4 | 82.6 | 10.9 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit 100 % Cooling Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 40 °C | 109.8 | 65.9 | 14.7 | 54.9 | 11.6 | 43.9 | 9.36 | 32.9 | 8.02 |
| 39 °C | 111.6 | 67.0 | 14.5 | 55.8 | 11.4 | 44.6 | 9.23 | 33.5 | 7.90 |
| 37 °C | 114.9 | 68.9 | 14.0 | 57.5 | 11.1 | 46.0 | 8.95 | 34.5 | 7.66 |
| 35 °C | 118.0 | 70.8 | 13.6 | 59.0 | 10.7 | 47.2 | 8.66 | 35.4 | 7.42 |
| 33 °C | 118.0 | 70.8 | 12.7 | 59.0 | 10.1 | 47.2 | 8.23 | 35.4 | 7.12 |
| 31 °C | 118.0 | 70.8 | 11.9 | 59.0 | 9.52 | 47.2 | 7.83 | 35.4 | 6.83 |
| 30 °C | 118.0 | 70.8 | 11.5 | 59.0 | 9.25 | 47.2 | 7.64 | 35.4 | 6.69 |
| 29 °C | 118.0 | 70.8 | 11.2 | 59.0 | 8.99 | 47.2 | 7.45 | 35.4 | 6.55 |
| 27 °C | 118.0 | 70.8 | 10.5 | 59.0 | 8.50 | 47.2 | 7.09 | 35.4 | 6.27 |
| 25 °C | 118.0 | 70.8 | 9.89 | 59.0 | 8.04 | 47.2 | 6.74 | 35.4 | 6.00 |
| 23 °C | 118.0 | 70.8 | 9.31 | 59.0 | 7.60 | 47.2 | 6.41 | 35.4 | 5.73 |
| 21 °C | 118.0 | 70.8 | 9.17 | 59.0 | 7.52 | 47.2 | 6.36 | 35.4 | 5.71 |
| 20 °C | 118.0 | 70.8 | 9.11 | 59.0 | 7.48 | 47.2 | 6.34 | 35.4 | 5.70 |
| 19 °C | 118.0 | 70.8 | 9.06 | 59.0 | 7.44 | 47.2 | 6.32 | 35.4 | 5.70 |
| 17 °C | 118.0 | 70.8 | 8.96 | 59.0 | 7.38 | 47.2 | 6.29 | 35.4 | 5.69 |
| 15 °C | 118.0 | 70.8 | 8.87 | 59.0 | 7.33 | 47.2 | 6.27 | 35.4 | 5.68 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0 °C dry-bulb / 19.0 °C wet bulb

## Heating

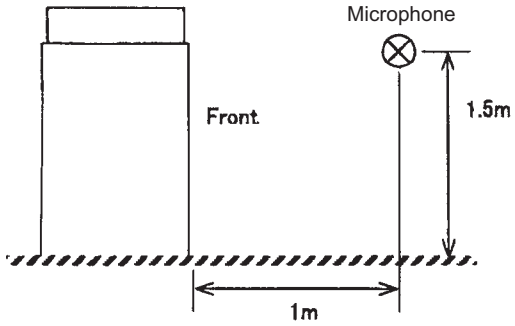
| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 % Capacity | | 90 % Capacity | | 80 % Capacity | | 70 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 132.0 | 132.0 | 31.0 | 118.8 | 25.6 | 105.6 | 20.9 | 92.4 | 16.9 |
| 13.0 | 11.8 | 132.0 | 132.0 | 32.2 | 118.8 | 26.6 | 105.6 | 21.6 | 92.4 | 17.4 |
| 11.0 | 9.8 | 132.0 | 132.0 | 33.7 | 118.8 | 27.7 | 105.6 | 22.4 | 92.4 | 18.0 |
| 9.0 | 7.9 | 132.0 | 132.0 | 35.2 | 118.8 | 28.9 | 105.6 | 23.3 | 92.4 | 18.6 |
| 7.0 | 6.0 | 132.0 | 132.0 | 36.9 | 118.8 | 30.2 | 105.6 | 24.4 | 92.4 | 19.4 |
| 5.0 | 4.1 | 127.5 | 127.5 | 36.3 | 114.8 | 29.7 | 102.0 | 24.0 | 89.3 | 19.1 |
| 3.0 | 2.2 | 122.9 | 122.9 | 35.8 | 110.6 | 29.3 | 98.3 | 23.6 | 86.0 | 18.8 |
| 0.0 | -0.7 | 115.8 | 115.8 | 34.9 | 104.2 | 28.6 | 92.6 | 23.1 | 81.1 | 18.3 |
| -3.0 | -3.7 | 108.2 | 108.2 | 34.0 | 97.4 | 27.9 | 86.6 | 22.5 | 75.7 | 17.9 |
| -5.0 | -5.6 | 103.3 | 103.3 | 33.5 | 93.0 | 27.4 | 82.6 | 22.1 | 72.3 | 17.6 |
| -7.0 | -7.6 | 98.0 | 98.0 | 32.9 | 88.2 | 26.9 | 78.4 | 21.7 | 68.6 | 17.3 |
| -10 | -10.5 | 90.1 | 90.1 | 32.0 | 81.1 | 26.2 | 72.1 | 21.1 | 63.1 | 16.8 |
| -14.5 | -15.0 | 77.6 | 77.6 | 30.7 | 69.8 | 25.1 | 62.1 | 20.3 | 54.3 | 16.1 |

| Outdoor Unit Dry-Bulb (°C) | Outdoor Unit Wet-Bulb (°C) | Outdoor Unit 100 % Heating Capacity (kW) | Compressor + Outdoor Fan Power consumption (kW) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 % Capacity | | 50 % Capacity | | 40 % Capacity | | 30 % Capacity | |
| | | | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) | TC (kW) | PI (kW) |
| 15.0 | 13.7 | 132.0 | 79.2 | 13.6 | 66.0 | 11.0 | 52.8 | 9.09 | 39.6 | 7.88 |
| 13.0 | 11.8 | 132.0 | 79.2 | 13.9 | 66.0 | 11.2 | 52.8 | 9.14 | 39.6 | 7.84 |
| 11.0 | 9.8 | 132.0 | 79.2 | 14.3 | 66.0 | 11.4 | 52.8 | 9.21 | 39.6 | 7.81 |
| 9.0 | 7.9 | 132.0 | 79.2 | 14.7 | 66.0 | 11.6 | 52.8 | 9.30 | 39.6 | 7.80 |
| 7.0 | 6.0 | 132.0 | 79.2 | 15.2 | 66.0 | 11.9 | 52.8 | 9.42 | 39.6 | 7.79 |
| 5.0 | 4.1 | 127.5 | 76.5 | 15.0 | 63.8 | 11.7 | 51.0 | 9.27 | 38.3 | 7.67 |
| 3.0 | 2.2 | 122.9 | 73.7 | 14.7 | 61.5 | 11.5 | 49.2 | 9.13 | 36.9 | 7.55 |
| 0.0 | -0.7 | 115.8 | 69.5 | 14.4 | 57.9 | 11.2 | 46.3 | 8.91 | 34.7 | 7.37 |
| -3.0 | -3.7 | 108.2 | 64.9 | 14.0 | 54.1 | 11.0 | 43.3 | 8.69 | 32.5 | 7.19 |
| -5.0 | -5.6 | 103.3 | 62.0 | 13.8 | 51.7 | 10.8 | 41.3 | 8.54 | 31.0 | 7.07 |
| -7.0 | -7.6 | 98.0 | 58.8 | 13.5 | 49.0 | 10.6 | 39.2 | 8.39 | 29.4 | 6.94 |
| -10 | -10.5 | 90.1 | 54.1 | 13.2 | 45.1 | 10.3 | 36.0 | 8.17 | 27.0 | 6.76 |
| -14.5 | -15.0 | 77.6 | 46.6 | 12.6 | 38.8 | 9.89 | 31.0 | 7.83 | 23.3 | 6.48 |

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 20.0 °C dry-bulb

# 5-11. Sound pressure level data

## Outdoor unit




**[Conditions]**

**Cooling**
Outdoor temperature: 25ºCDB, 16ºCWB
Indoor air temperature: 27ºCDB, 19ºCWB

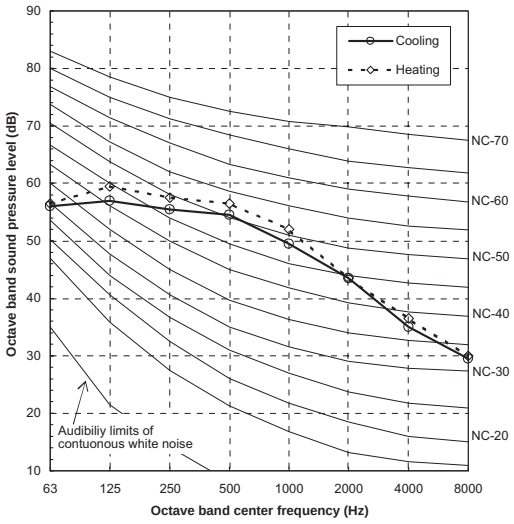
**Heating**
Outdoor temperature: 7ºCDB, 6ºCWB
Indoor air temperature: 20ºCDB

This sound pressure level are measured in an anechoic chamber in accordance.

## Single unit

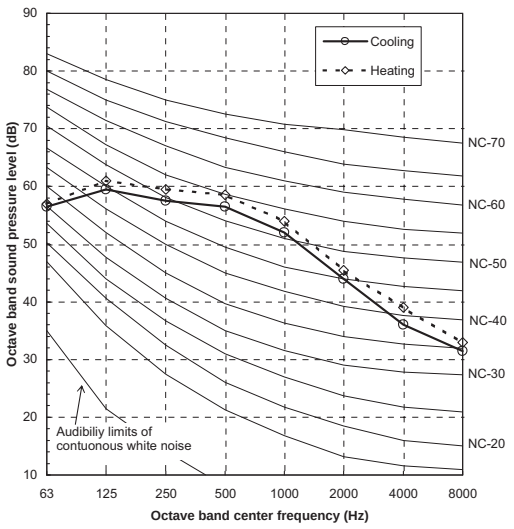
**MMY-MAP0804FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 55.0 | 57.0 |



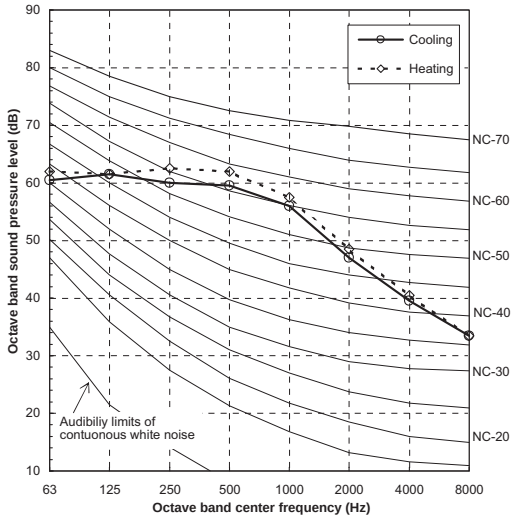

**MMY-MAP1004FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 57.0 | 59.0 |



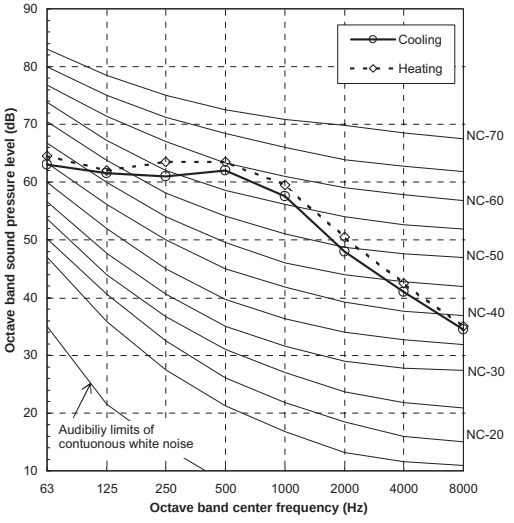

**MMY-MAP1204FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 60.0 | 62.0 |




**MMY-MAP1404FT8/FT7/FT5**

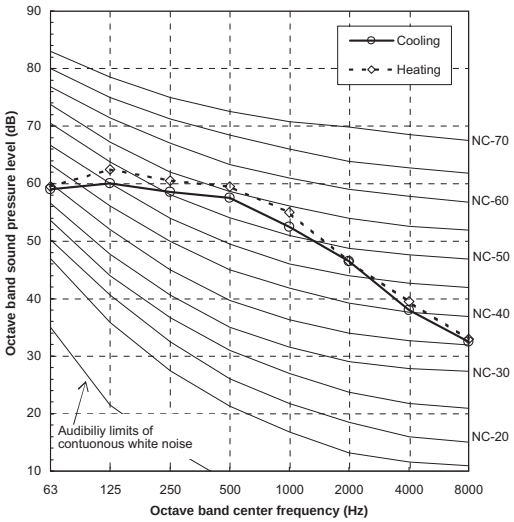
| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 62.0 | 64.0 |



## Combination

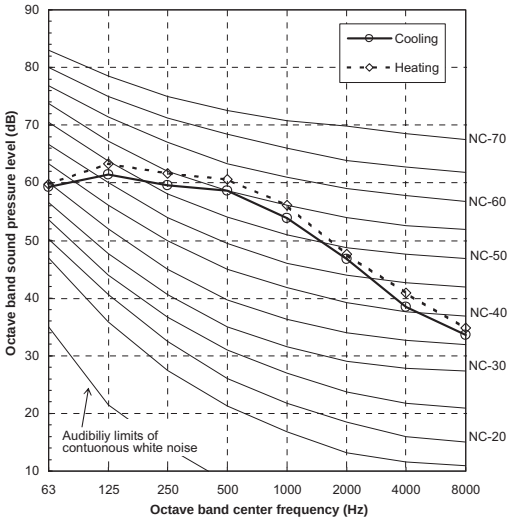
**MMY-AP1614FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 58.0 | 60.0 |



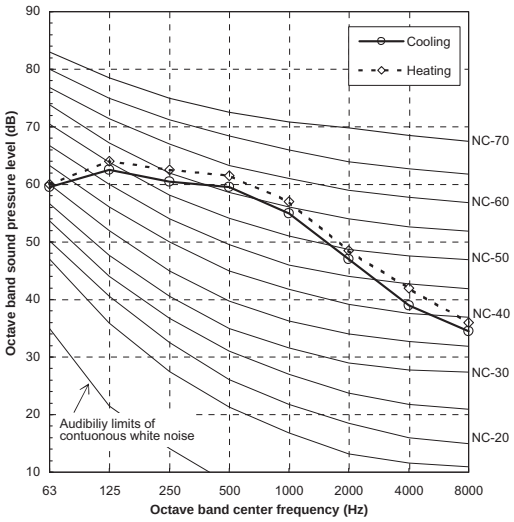

**MMY-AP1814FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 59.5 | 61.5 |



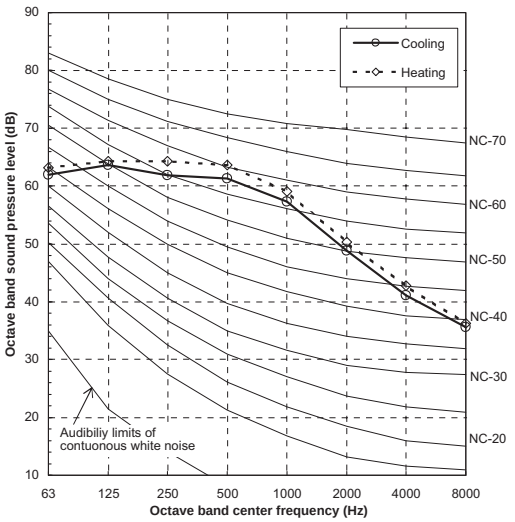

**MMY-AP2014FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 60.0 | 62.0 |



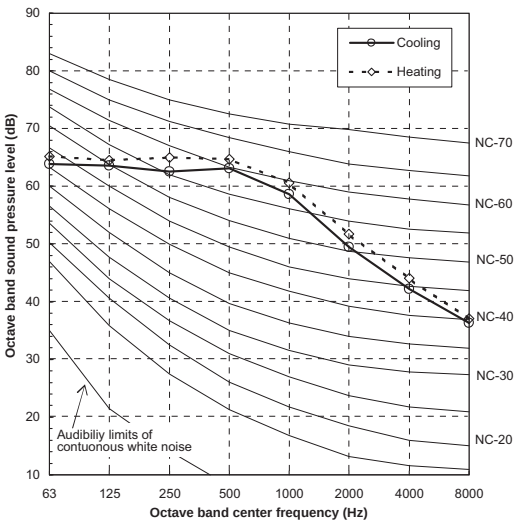

**MMY-AP2214FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 62.0 | 64.0 |



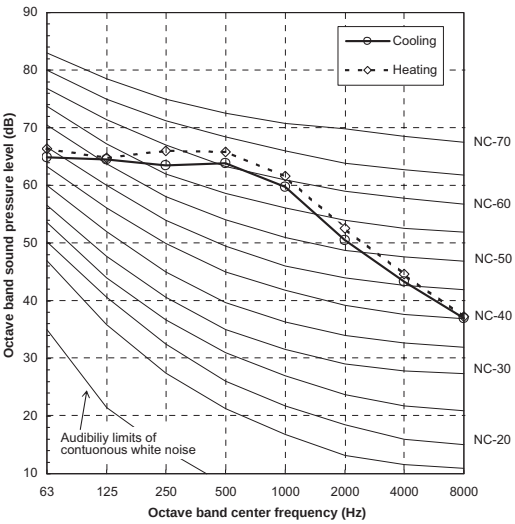

**MMY-AP2414FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 63.5 | 65.5 |



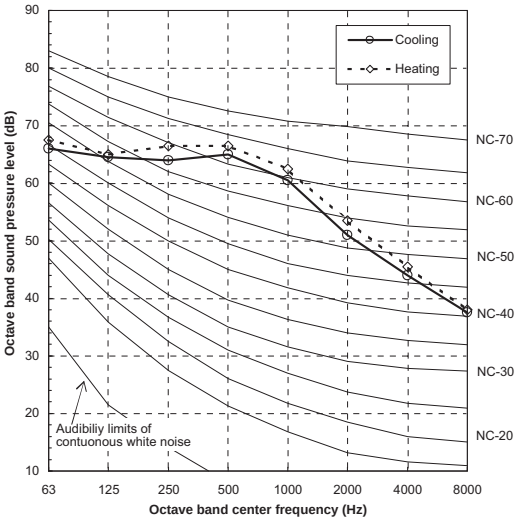

**MMY-AP2614FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 64.5 | 66.5 |



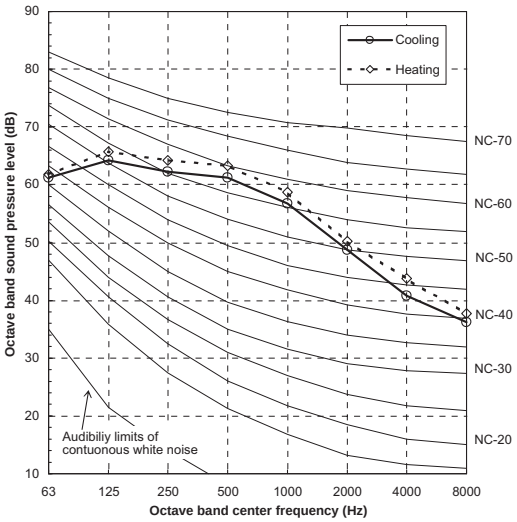
**MMY-AP2814FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 65.0 | 67.0 |



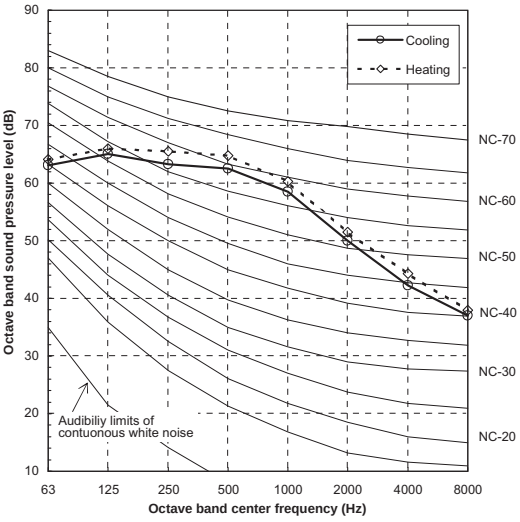

**MMY-AP3014FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 62.0 | 64.0 |



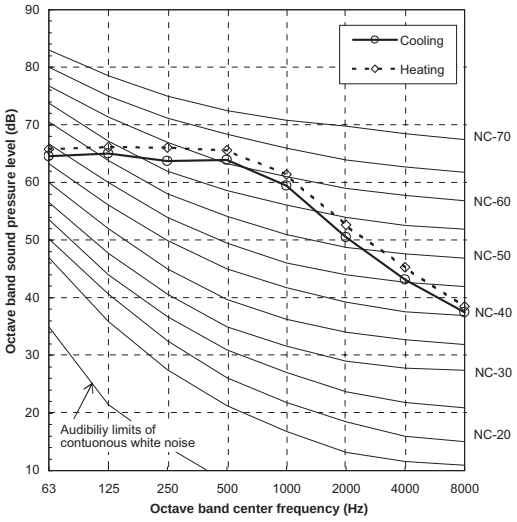

**MMY-AP3214FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 63.0 | 65.0 |



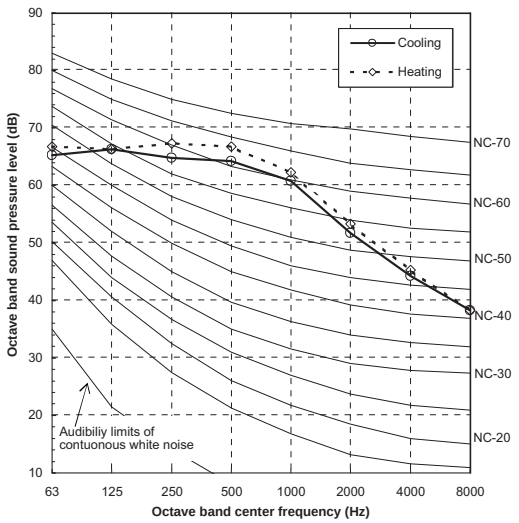

**MMY-AP3414FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 64.5 | 66.5 |



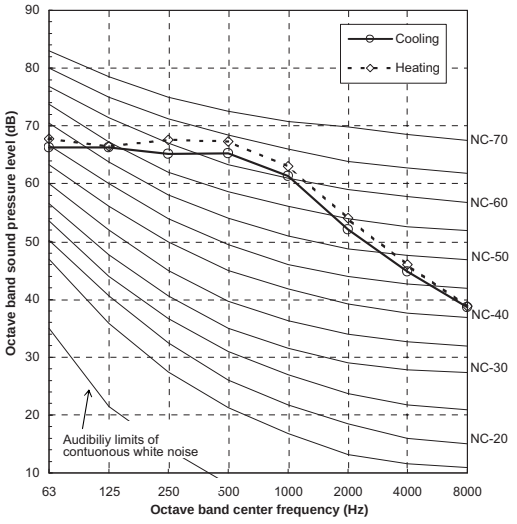

**MMY-AP3614FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 65.0 | 67.0 |



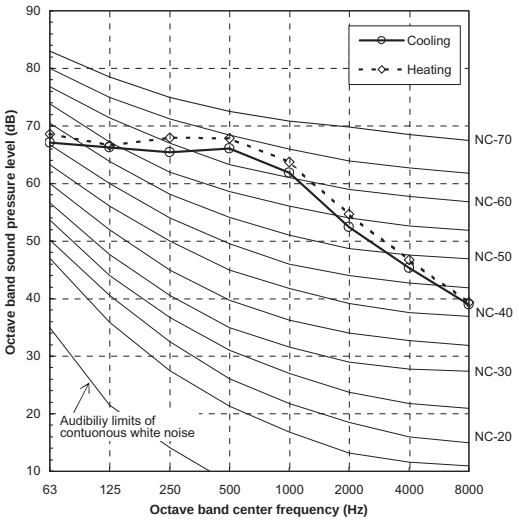

**MMY-AP3814FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 65.5 | 67.5 |



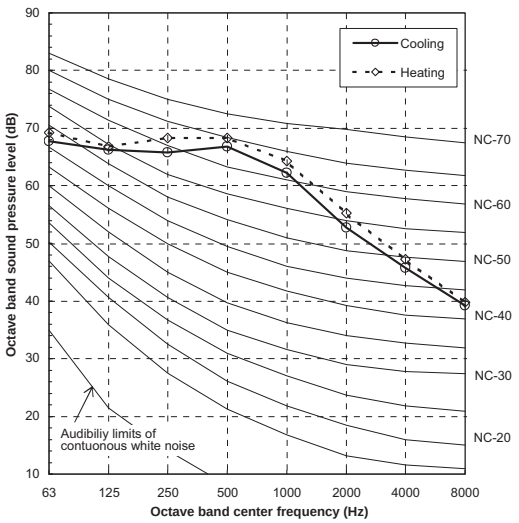
**MMY-AP4014FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 66.5 | 68.5 |




**MMY-AP4214FT8/FT7/FT5**

| Sound pressure level (dB(A)) | Cooling | Heating |
|---|---|---|
| | 67.0 | 69.0 |



# SHRM-i Engineering Data Book

**Model name:**

## MMY-MAP_4FT8
## MMY-MAP_4FT7
## MMY-MAP_4FT5

**August, 2013 Second Edition**

TOSHIBA CARRIER CORPORATION