TOSHIBA

Leading Innovation

E16-006-1

Model name:

MMY-MAP_6FT8P-E

SHRM

SUPER HEAT RECOVERY MULTI

Engineering Data Book

Full Version

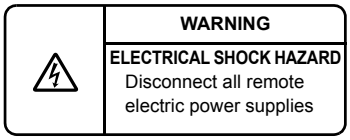
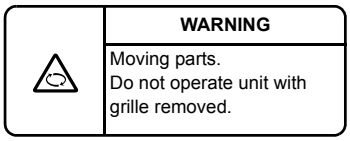
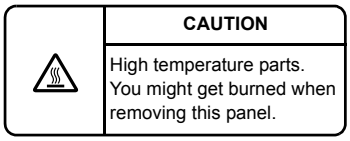
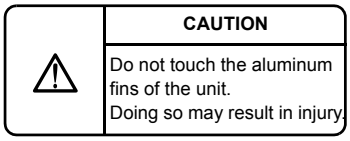
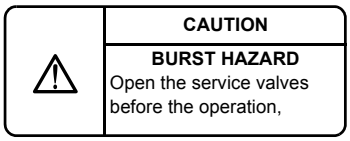
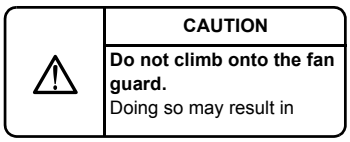
Notice: Toshiba is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements. All features and specifications are subject to change without prior notice.

Contents

Safety caution

- **Before use, read carefully through the “Safety caution” section to ensure correct operation.**
- **The important contents concerned to the safety are described in the “Safety cautions”. Be sure to keep them. For Indications and their meanings, see the following description.**

Warning Indications on the Air Conditioner Unit

Warning indication	Description
	**WARNING** **ELECTRICAL SHOCK HAZARD** Disconnect all remote electric power supplies before servicing.
	**WARNING** Moving parts. Do not operate unit with grille removed. Stop the unit before the servicing.
	**CAUTION** High temperature parts. You might get burned when removing this panel.
	**CAUTION** Do not touch the aluminium fins of the unit. Doing so may result in injury.
	**CAUTION** **BURST HAZARD** Open the service valves before the operation, otherwise there might be the burst.
	**CAUTION** **Do not climb onto the fan guard.** Doing so may result in injury.

Explanation of indications

⚠ WARNING

Indicates possibilities that a death or serious injury of personnel is caused by an incorrect handling.

⚠ CAUTION

Indicates contents that an injury (*1) or property damage (*2) only may be caused when an incorrect work has been executed.

*1: "Injury" means a hurt, a burn, or an electric shock which does not require hospitalization or a long-term going to the hospital.
*2: "Property damage means an enlarged damage concerned to property, or breakage of materials.

- **After installation work has finished, check there is no trouble by a test operation, and explain using method and maintenance method to the customers based on the Owner's Manual.**
  Please ask the customers to keep this Installation Manual together with the Owner's Manual.

⚠ WARNING

Ask a shop or a professional dealer to install the air conditioner.
If you will install by yourself, a fire, an electric shock, or water leak is caused.

Take measures so that the refrigerant does not exceed the limit concentration even if it leaks when installing the air conditioner in a small room.
For the measures not to exceed the limit of concentration, contact the dealer. If the refrigerant leaks and it exceeds the limit of concentration, an accident of oxygen shortage is caused.

Install the air conditioner at a place which is satisfactorily bearable to weight.
If strength is insufficient, the unit may fall down resulting in human injury.

Perform a specified installation work against a strong wind such as typhoon or earthquake.
If the air conditioner is imperfectly installed, an accident by falling or dropping may be caused.

If refrigerant gas leaks during installation work, ventilate the room.
If the leaked refrigerant gas approaches to fire, noxious gas may generate.

After installation work, confirm that refrigerant gas does not leak.
If refrigerant gas leaks in the room, and approaches to fire such as fan heater, stove or kitchen range, generation of noxious gas may be caused.

Never recover refrigerant in the outdoor unit.
Be sure to use a refrigerant recovery device to recover refrigerant in reinstallation or repair work.
Recovery of refrigerant in the outdoor unit is unavailable; otherwise a serious accident such as crack or human injury is caused.

A person qualified for the electric work should deal with the electric construction conforming to the regulations of the local electric company and the Installation Manual. Be sure to use the exclusive circuit.
If there is capacity shortage of the power supply circuit or incomplete installation, a fire or an electric shock is caused.

For cabling, use the specified cables and connect them securely so that external force of cable does not transmit to the terminal connecting section.
If connection or fixing is incomplete, a fire, etc. may be caused.

Be sure to connect earth wire.
Do not connect earth wire to gas pipe, water pipe, lightning rod, nor earth wire of telephone.
If grounding is incomplete, an electric shock is caused.

⚠ CAUTION

Do not install the air conditioner at a place where combustible gas may leak.
If gas leaks and is collected at surrounding the unit, the production of fire may be caused.

Be sure to attach an earth leakage breaker; otherwise an electric shock may be caused.

Using a torque wrench, tighten the flare nut in the specified method.
If the flare nut is exceedingly tightened, the flare nut is broken and a refrigerant leakage may be caused after a long time has passed.

WARNINGS ON REFRIGERANT LEAKAGE

Check of Concentration Limit

The room in which the air conditioner is to be installed requires a design that in the event of refrigerant gas leaking out, its concentration will not exceed a set limit.

The refrigerant R410A which is used in the air conditioner is safe, without the toxicity or combustibility of ammonia, and is not restricted by laws to be imposed which protect the ozone layer. However, since it contains more than air, it poses the risk of suffocation if its concentration should rise excessively.

Suffocation from leakage of R410A is almost nonexistent. With the recent increase in the number of high concentration buildings, however, the installation of multi air conditioner systems is on the increase because of the need for effective use of floor space, individual control, energy conservation by curtailing heat and carrying power etc.

Most importantly, the multi air conditioner system is able to replenish a large amount of refrigerant compared with conventional individual air conditioners. If a single unit of the multi conditioner system is to be installed in a small room, select a suitable model and installation procedure so that if the refrigerant accidentally leaks out, its concentration does not reach the limit (and in the event of an emergency, measures can be made before injury can occur).

In a room where the concentration may exceed the limit, create an opening with adjacent rooms, or install mechanical ventilation combined with a gas leak detection device.

The concentration is as given below.

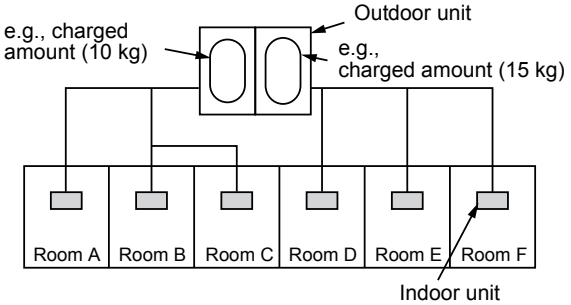
$$\frac{\text{Total amount of refrigerant (kg)}}{\text{Min. volume of the indoor unit installed room (m}^3\text{)}} \leq \text{Concentration limit (kg/m}^3\text{)}$$

Concentration limit

Compliance to the local applicable regulations and standards for the concentration limit is required.

NOTE 1:

If there are 2 or more refrigerating systems in a single refrigerating device, the amounts of refrigerant should be as charged in each independent device.



For the amount of charge in this example:

The possible amount of leaked refrigerant gas in rooms A, B and C is 10 kg.

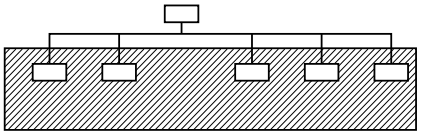
The possible amount of leaked refrigerant gas in rooms D, E and F is 15 kg.

Important

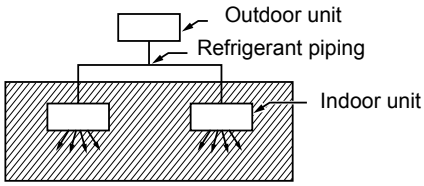
NOTE 2:

The standards for minimum room volume are as follows.

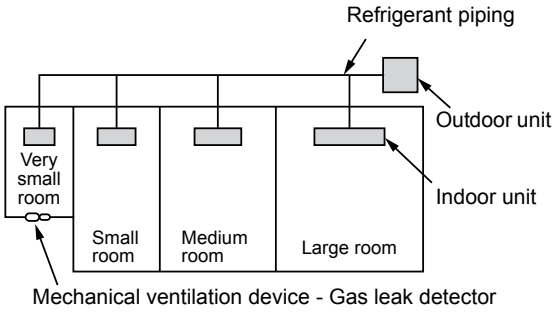
(1) No partition (shaded portion)



(2) When there is an effective opening with the adjacent room for ventilation of leaking refrigerant gas (opening without a door, or an opening 0.15 % or larger than the respective floor spaces at the top or bottom of the door).

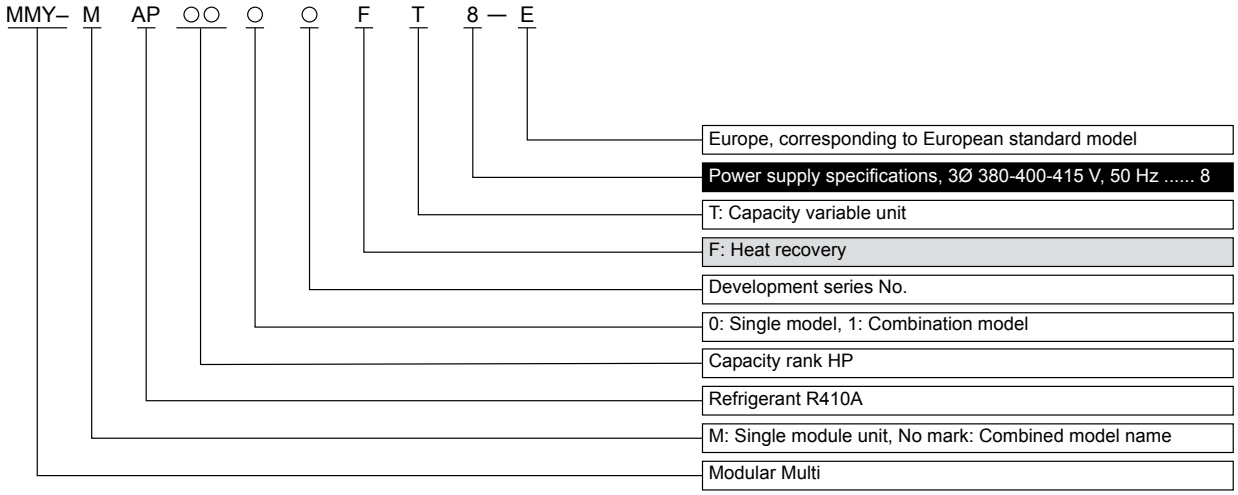


(3) If an indoor unit is installed in each partitioned room and the refrigerant tubing is interconnected, the smallest room of course becomes the object. But when a mechanical ventilation is installed interlocked with a gas leakage detector in the smallest room where the density limit is exceeded, the volume of the next smallest room becomes the object.



1-1. Allocation standard of model name

SHRM-e



1-2. Summary of system equipments

1-2-1.Outdoor units

Corresponding HP			8HP	10HP	12HP	14HP	16HP	18HP	20HP
Model name		MMY-	MAP0806FT8P-E	MAP1006FT8P-E	MAP1206FT8P-E	MAP1406FT8P-E	MAP1606FT8P-E	MAP1806FT8P-E	MAP2006FT8P-E
Cooling capacity	nominal	(kW)	22.4	28.0	33.5	40.0	45.0	50.4	56.0
Heating capacity	nominal	(kW)	22.4	28.0	33.5	40.0	45.0	50.4	56.0
	maximum	(kW)	25.0	31.5	37.5	45.0	50.0	56.5	58.0
Power supply			3 phase 50Hz 400V(380-415V)						
No. of connectable indoor units (*)			18	22	27	31	36	40	41

■ Combination of outdoor units

Corresponding HP			22HP	24HP	26HP	28HP	30HP	32HP	34HP
Model name		MMY-	AP2216FT8P-E	AP2416FT8P-E	AP2616FT8P-E	AP2816FT8P-E	AP3016FT8P-E	AP3216FT8P-E	AP3416FT8P-E
Cooling capacity	nominal	(kW)	61.5	68.0	73.5	80.0	85.0	90.4	95.4
Heating capacity	nominal	(kW)	61.5	68.0	73.5	80.0	85.0	90.4	95.4
	maximum	(kW)	69.0	76.5	82.5	90.0	95.0	101.5	106.5
Power supply			3 phase 50Hz 400V(380-415V)						
Combined outdoor units			12HP	14HP	14HP	14HP	16HP	18HP	18HP
			10HP	10HP	12HP	14HP	14HP	14HP	16HP
			-	-	-	-	-	-	-
No. of connectable indoor units (*)			49	54	58	63	64	64	64

Corresponding HP			36HP	38HP	40HP	42HP	44HP	46HP	48HP
Model name		MMY-	AP3616FT8P-E	AP3816FT8P-E	AP4016FT8P-E	AP4216FT8P-E	AP4416FT8P-E	AP4616FT8P-E	AP4816FT8P-E
Cooling capacity	nominal	(kW)	100.8	106.4	112.0	120.0	125.0	130.4	135.4
Heating capacity	nominal	(kW)	100.8	106.4	112.0	120.0	125.0	130.4	135.4
	maximum	(kW)	113.0	114.5	116.0	135.0	140.0	146.0	151.5
Power supply			3 phase 50Hz 400V(380-415V)						
Combined outdoor units			18HP	20HP	20HP	14HP	16HP	18HP	18HP
			18HP	18HP	20HP	14HP	14HP	14HP	16HP
			-	-	-	14HP	14HP	14HP	14HP
No. of connectable indoor units (*)			64	64	64	64	64	64	64

Corresponding HP			50HP	52HP	54HP
Model name		MMY-	AP5016FT8P-E	AP5216FT8P-E	AP5416FT8P-E
Cooling capacity	nominal	(kW)	140.8	145.8	151.2
Heating capacity	nominal	(kW)	140.8	145.8	151.2
	maximum	(kW)	158.0	163.0	169.5
Power supply			3 phase 50Hz 400V(380-415V)		
Combined outdoor units			18HP	18HP	18HP
			18HP	18HP	18HP
			14HP	16HP	18HP
No. of connectable indoor units (*)			64	64	64

(*) Under centralized control maximum 54 unit.

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-AP0094HP1-E	009	1	2.8	3.2
		MMU-AP0124HP1-E	012	1.25	3.6	4.0
		MMU-AP0154HP1-E	015	1.7	4.5	5.0
		MMU-AP0184HP1-E	018	2	5.6	6.3
		MMU-AP0244HP1-E	024	2.5	7.1	8.0
		MMU-AP0274HP1-E	027	3	8.0	9.0
		MMU-AP0304HP1-E	030	3.2	9.0	10.0
		MMU-AP0364HP1-E	036	4	11.2	12.5
		MMU-AP0484HP1-E	048	5	14.0	16.0
		MMU-AP0564HP1-E	056	6	16.0	18.0
Compact 4-way Cassette (600 x 600) Type		MMU-AP0056MH1-E	005	0.6	1.7	1.9
		MMU-AP0074MH1-E	007	0.8	2.2	2.5
		MMU-AP0094MH1-E	009	1	2.8	3.2
		MMU-AP0124MH1-E	012	1.25	3.6	4.0
		MMU-AP0154MH1-E	015	1.7	4.5	5.0
		MMU-AP0184MH1-E	018	2	5.6	6.3
Compact 4-way Cassette		MMU-AP0057MH-E	005	0.6	1.7	1.9
		MMU-AP0077MH-E	007	0.8	2.2	2.5
		MMU-AP0097MH-E	009	1	2.8	3.2
		MMU-AP0127MH-E	012	1.25	3.6	4.0
		MMU-AP0157MH-E	015	1.7	4.5	5.0
		MMU-AP0187MH-E	018	2	5.6	6.3
2-way Air Discharge Cassette Type		MMU-AP0072WH1	007	0.8	2.2	2.5
		MMU-AP0092WH1	009	1	2.8	3.2
		MMU-AP0122WH1	012	1.25	3.6	4.0
		MMU-AP0152WH1	015	1.7	4.5	5.0
		MMU-AP0182WH1	018	2	5.6	6.3
		MMU-AP0242WH1	024	2.5	7.1	8.0
		MMU-AP0272WH1	027	3	8.0	9.0
		MMU-AP0302WH1	030	3.2	9.0	10.0
		MMU-AP0362WH1	036	4.0	11.2	12.5
		MMU-AP0482WH1	048	5.0	14.0	16.0
		MMU-AP0562WH1	056	6	16.0	18.0
1-way Air Discharge Cassette Type		MMU-AP0074YH1-E	007	0.8	2.2	2.5
		MMU-AP0094YH1-E	009	1.0	2.8	3.2
		MMU-AP0124YH1-E	012	1.3	3.6	4.0
		MMU-AP0154SH1-E	015	1.7	4.5	5.0
		MMU-AP0184SH1-E	018	2.0	5.6	6.3
		MMU-AP0244SH1-E	024	2.5	7.1	8.0
Concealed Duct Type		MMD-AP0076BHP1-E	007	0.80	2.2	2.5
		MMD-AP0096BHP1-E	009	1.00	2.8	3.2
		MMD-AP0126BHP1-E	012	1.25	3.6	4.0
		MMD-AP0156BHP1-E	015	1.70	4.5	5.0
		MMD-AP0186BHP1-E	018	2.00	5.6	6.3
		MMD-AP0246BHP1-E	024	2.50	7.1	8.0
		MMD-AP0276BHP1-E	027	3.00	8.0	9.0
		MMD-AP0306BHP1-E	030	3.20	9.0	10.0
		MMD-AP0366BHP1-E	036	4.00	11.2	12.5
		MMD-AP0486BHP1-E	048	5.00	14.0	16.0
		MMD-AP0566BHP1-E	056	6.00	16.0	18.0
Slim Duct Type		MMD-AP0056SPH1-E	005	0.6	1.7	1.9
		MMD-AP0074SPH1-E	007	0.80	2.2	2.5
		MMD-AP0094SPH1-E	009	1.00	2.8	3.2
		MMD-AP0124SPH1-E	012	1.25	3.6	4.0
		MMD-AP0154SPH1-E	015	1.70	4.5	5.0
		MMD-AP0184SPH1-E	018	2.00	5.6	6.3
		MMD-AP0244SPH1-E	024	2.25	7.1	8.0
		MMD-AP0274SPH1-E	027	3.0	8.0	9.0
Concealed Duct High Static Pressure Type		MMD-AP0186HP1-E	018	2.0	5.6	6.3
		MMD-AP0246HP1-E	024	2.5	7.1	8.0
		MMD-AP0276HP1-E	027	3.0	8.0	9.0
		MMD-AP0366HP1-E	036	4.0	11.2	12.5
		MMD-AP0486HP1-E	048	5.0	14.0	16.0
		MMD-AP0566HP1-E	056	6.0	16.0	18.0
		MMD-AP0726HP-E	072	8.0	22.4	25.0
		MMD-AP0966HP-E	096	10.0	28.0	31.5
Under Ceiling Type		MMC-AP0158HP-E	015	1.7	4.5	5.0
		MMC-AP0188HP-E	018	2.0	5.6	6.3
		MMC-AP0248HP-E	024	2.5	7.1	8.0
		MMC-AP0278HP-E	027	3.0	8.0	9.0
		MMC-AP0368HP-E	036	4.0	11.2	12.5
		MMC-AP0488HP-E	048	5.0	14.0	16.0
		MMC-AP0568HP-E	056	6.0	16.0	18.0

Indoor Unit

Type	Appearance	Model name	Capacity rank	Capacity Code	Cooling capacity(kW)	Heating capacity(kW)
High Wall Type 3 series		MMK-AP0073H1	007	0.8	2.2	2.5
		MMK-AP0093H1	009	1.0	2.8	3.2
		MMK-AP0123H1	012	1.25	3.6	4.0
		MMK-AP0153H1	015	1.70	4.5	5.0
		MMK-AP0183H1	018	2.00	5.6	6.3
		MMK-AP0243H1	024	2.50	7.1	8.0
High Wall Type 3 series (Without PMV)		MMK-AP0073HP1-E1	007	0.8	2.2	2.5
		MMK-AP0093HP1-E1	009	1.0	2.8	3.2
		MMK-AP0123HP1-E1	012	1.25	3.6	4.0
		MMK-AP0153HP1-E1	015	1.70	4.5	5.0
		MMK-AP0183HP1-E1	018	2.00	5.6	6.3
		MMK-AP0243HP1-E1	024	2.50	7.1	8.0
High Wall Type 4 series		MMK-AP0054MHP1-E	005	0.6	1.7	1.9
		MMK-AP0074MH1-E	007	0.8	2.2	2.5
		MMK-AP0094MH1-E	009	1	2.8	3.2
		MMK-AP0124MH1-E	012	1.25	3.6	4.0
High Wall Type 4 series (Without PMV)		MMK-AP0054MHP1-E1	005	0.6	1.7	1.9
		MMK-AP0074MHP1-E1	007	0.8	2.2	2.5
		MMK-AP0094MHP1-E1	009	1	2.8	3.2
		MMK-AP0124MHP1-E1	012	1.25	3.6	4.0
Floor Standing Concealed Type		MML-AP0074BH1-E	007	0.8	2.2	2.5
		MML-AP0094BH1-E	009	1	2.8	3.2
		MML-AP0124BH1-E	012	1.25	3.6	4.0
		MML-AP0154BH1-E	015	1.7	4.5	5.0
		MML-AP0184BH1-E	018	2	5.6	6.3
		MML-AP0244BH1-E	024	2.5	7.1	8.0
Floor Standing Cabinet Type		MML-AP0074H1-E	007	0.8	2.2	2.5
		MML-AP0094H1-E	009	1	2.8	3.2
		MML-AP0124H1-E	012	1.25	3.6	4.0
		MML-AP0154H1-E	015	1.7	4.5	5.0
		MML-AP0184H1-E	018	2	5.6	6.3
		MML-AP0244H1-E	024	2.5	7.1	8.0
Floor Standing Type		MMF-AP0156H1-E	015	1.7	4.5	5.0
		MMF-AP0186H1-E	018	2	5.6	6.3
		MMF-AP0246H1-E	024	2.5	7.1	8.0
		MMF-AP0276H1-E	027	3	8.0	9.0
		MMF-AP0366H1-E	036	4	11.2	12.5
		MMF-AP0486H1-E	048	5	14.0	16.0
		MMF-AP0566H1-E	056	6.0	16.0	18.0
Console Type		MML-AP0074NH1-E	007	0.8	2.2	2.5
		MML-AP0094NH1-E	009	1	2.8	3.2
		MML-AP0124NH1-E	012	1.3	3.6	4.0
		MML-AP0154NH1-E	015	1.7	4.5	5.0
		MML-AP0184NH1-E	018	2.0	5.6	6.3
Air to Air Heat exchanger with DX-coil Type		MMD-VN502HEX1E	009	1	4.10(1.30)*	5.53(2.33)*
		MMD-VN802HEX1E	015	1.7	6.56(2.06)*	8.61(3.61)*
		MMD-VN1002HEX1E	018	2	8.25(2.32)*	10.92(4.32)*
Air to Air Heat exchanger with DX-coil Humidifier Type		MMD-VNK502HEX1E	009	1	4.10(1.30)*	5.53(2.33)*
		MMD-VNK802HEX1E	015	1.7	6.56(2.06)*	8.61(3.61)*
		MMD-VNK1002HEX1E	018	2	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		
RBM-Y1801F4PE		
RBM-Y1801F6PE		

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	
	RBC-AMS54E-EN/ES	-EN : English, Italian, Polish, Greece, Russian, Turkish -ES : English, Spanish, Portuguese, French, Dutch, German
Simple wired remote controller	RBC-AS41E	
Wireless remote controller kit	RBC-AX32U(W)-E RBC-AX32U(WS)-E	For 4-way Air Discharge Cassette
	RBC-AX33CE	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	BMS-CM1280TLE	
Schedule timer	TCB-EXS21TLE	
Remote controller with schedule timer (7-day timer function)	RBC-AMS41E	
Wired remote controller for Air to Air Heat Exchanger with DX coil unit	NRC-01HE	

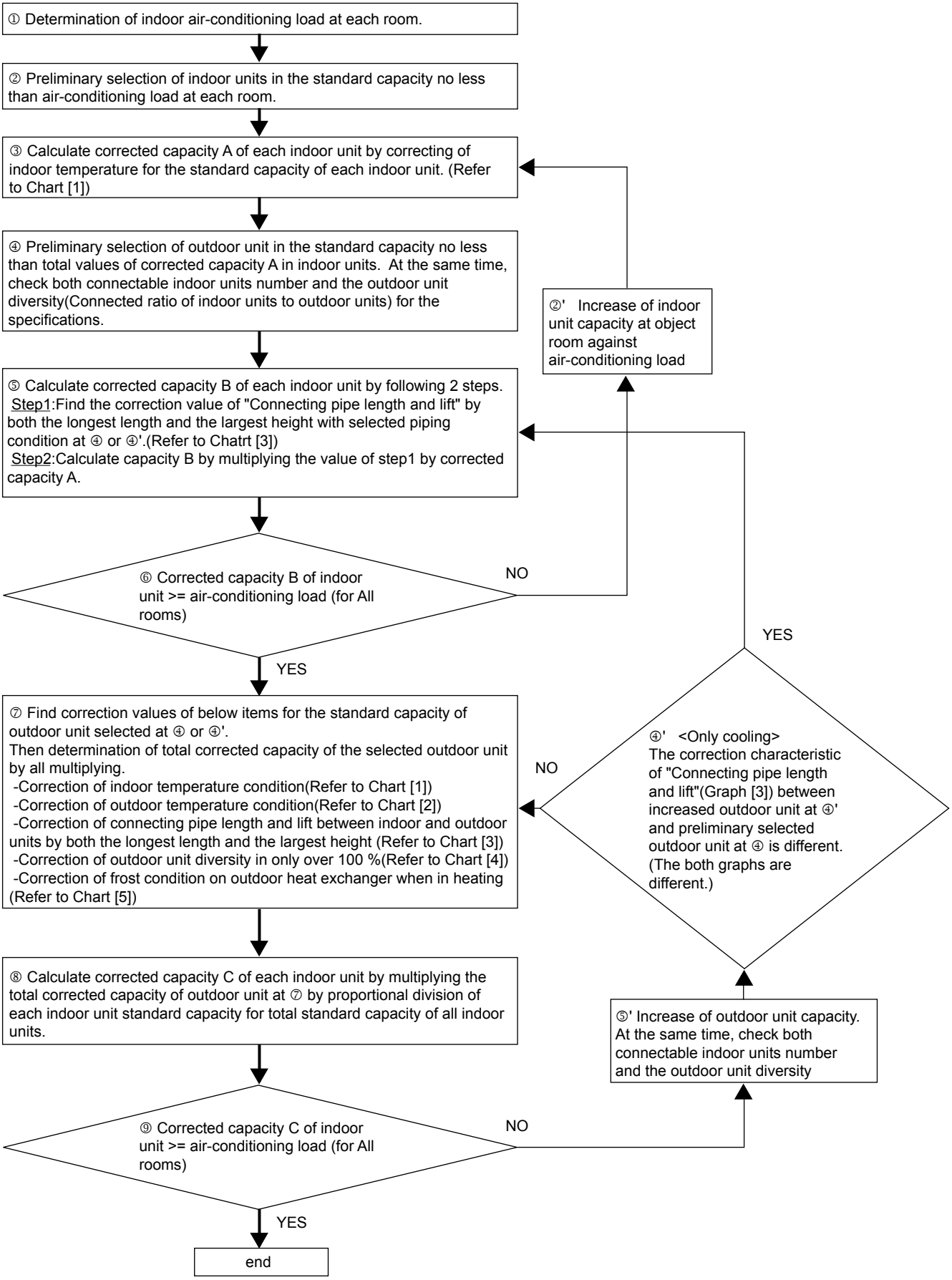
1-2-6. Optional PCB of outdoor unit

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-CT5121E	
Smart BMS manager	BMS-SM1280HTLE	
Smart BMS manager with data analyze	BMS-SM1280ETLE	
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-LSV9E BMS-STBN10E	
Modbus Interface	TCB-IFMB641TLE	
Analog Interface	TCB-IFCB640TLE	
BN Interface	BMS-IFBN640TLE	

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	0.6	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.outdoor unit connectable indoor units

Outdoor unit(Heat recovery)	Capacity code of outdoor unit	max.number of indoor units	Total capacity code of indoor units
MMY-MAP0806FT8P-E	8	18	5.6 to 10.8
MMY-MAP1006FT8P-E	10	22	7.0 to 13.5
MMY-MAP1206FT8P-E	12	27	8.4 to 16.2
MMY-MAP1406FT8P-E	14	31	9.8 to 18.9
MMY-MAP1606FT8P-E	16	36	11.2 to 21.6
MMY-MAP1806FT8P-E	18	40	12.6 to 24.3
MMY-MAP2006FT8P-E	20	41	14.0 to 25.0*
MMY-AP2216FT8P-E	22	49	15.4 to 29.7
MMY-AP2416FT8P-E	24	54	16.8 to 32.4
MMY-AP2616FT8P-E	26	58	18.2 to 35.1
MMY-AP2816FT8P-E	28	63	19.6 to 37.8
MMY-AP3016FT8P-E	30	64	21.0 to 40.5
MMY-AP3216FT8P-E	32	64	22.4 to 43.2
MMY-AP3416FT8P-E	34	64	23.8 to 45.9
MMY-AP3616FT8P-E	36	64	25.2 to 48.6
MMY-AP3816FT8P-E	38	64	26.6 to 49.4**
MMY-AP4016FT8P-E	40	64	28.0 to 50.0*
MMY-AP4216FT8P-E	42	64	29.4 to 56.7
MMY-AP4416FT8P-E	44	64	30.8 to 59.4
MMY-AP4616FT8P-E	46	64	32.2 to 62.1
MMY-AP4816FT8P-E	48	64	33.6 to 64.8
MMY-AP5016FT8P-E	50	64	35.0 to 67.5
MMY-AP5216FT8P-E	52	64	36.4 to 70.2
MMY-AP5416FT8P-E	54	64	37.8 to 72.9

70 to 135% of outdoor unit capacity
*20,40HP:70 to 125%
**38HP:70 to 130%

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 : 70 to 135 % of outdoor unit capacity
  *20,40HP: 70 to 125% , **38HP:70 to 130% 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

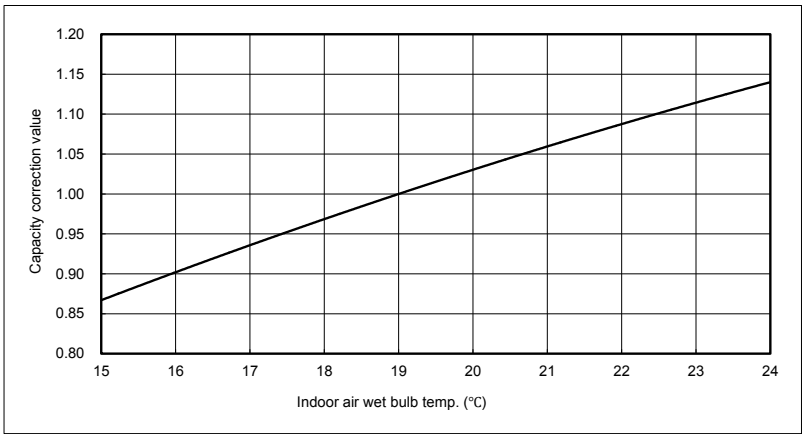
NOTE:
The case of “Air to Air Heat exchanger with DX-coil” Type is below.

- 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.)

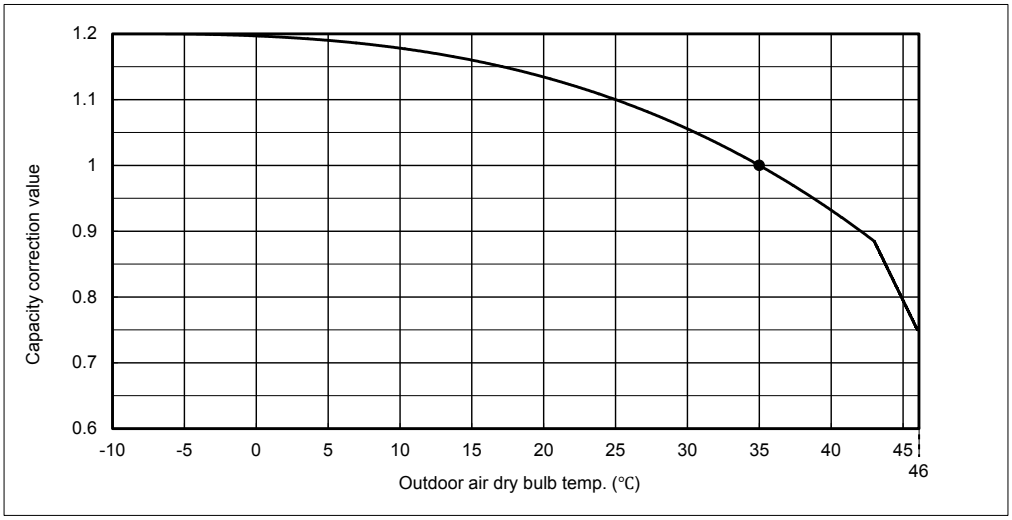
2-3. Cooling/heating capacity characteristics

2-3-1. Correctiion charts for cooling capacity calculation

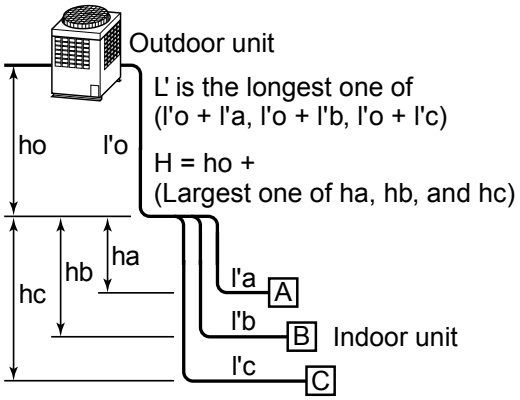
[Chart 1] Indoor air wet bulb temperature vs. capacity correction value



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



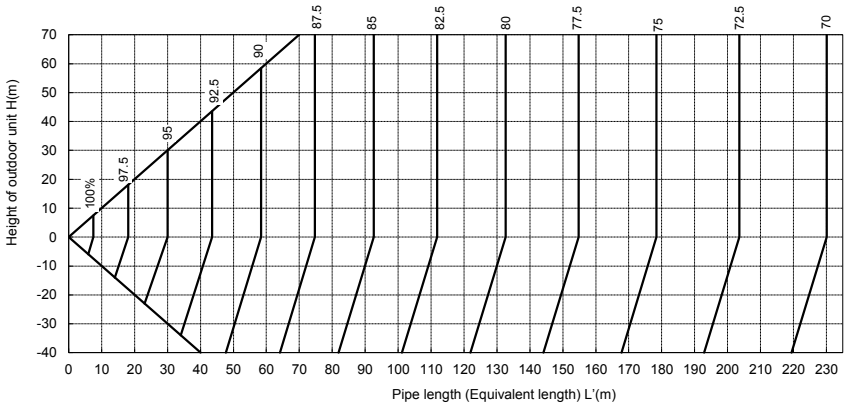
[Chart 3] Connecting pipe length and life difference between indoor and outdoor units vs. capacity correction valve.



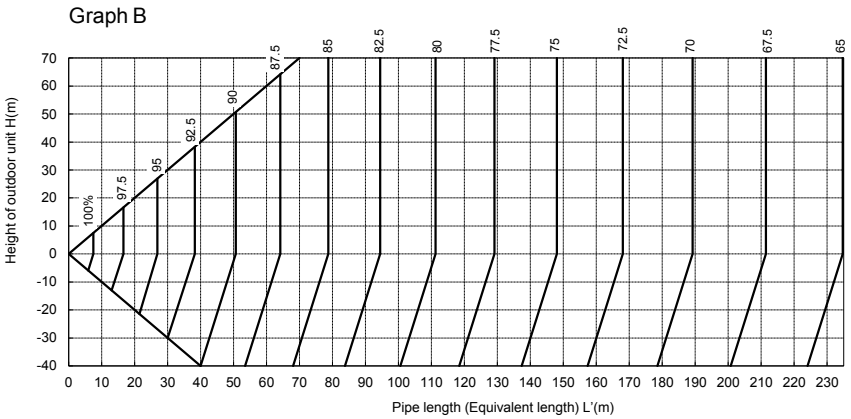
HP	Graph	combination	Pipe length (m)
8	B	8	210
10	C	10	210
12	A	12	210
14	A	14	210
16	B	16	210
18	C	18	210
20	C	20	210
22	A	12+10	220
24	A	14+10	220
26	B	14+12	220
28	B	14+14	220
30	B	16+14	220
32	C	18+14	220
34	C	18+16	220
36	A	18+18	220
38	A	20+18	220
40	B	20+20	220
42	D	14+14+14	230
44	D	16+14+14	185
46	D	18+14+14	140
48	D	18+16+14	140
50	D	18+18+14	140
52	D	18+18+16	140
54	D	18+18+18	140

* 1CDU=210
* 2CDU=220
* 3CDU (up to 40HP)=220
* 3CDU (42HP)=185
* 3CDU (more than 44HP)=140

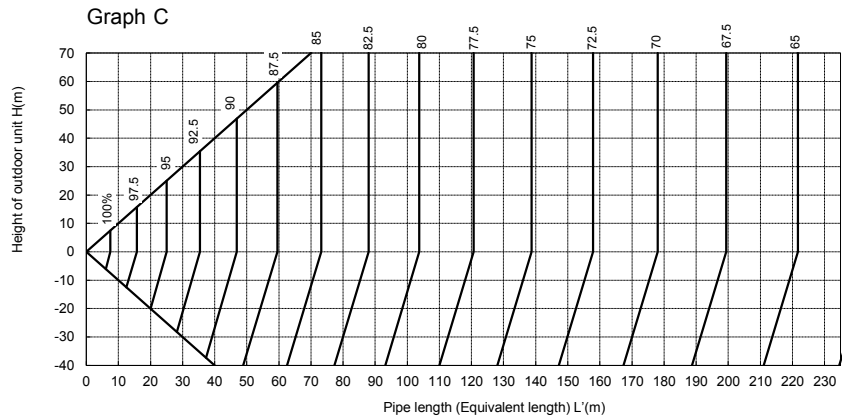
Graph A



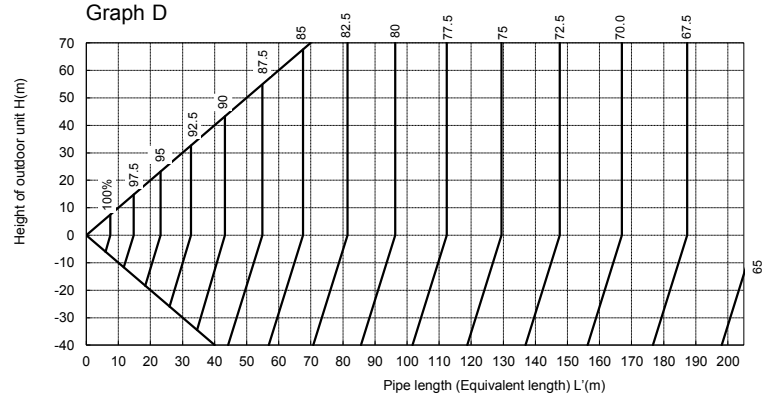
Graph B



Graph C



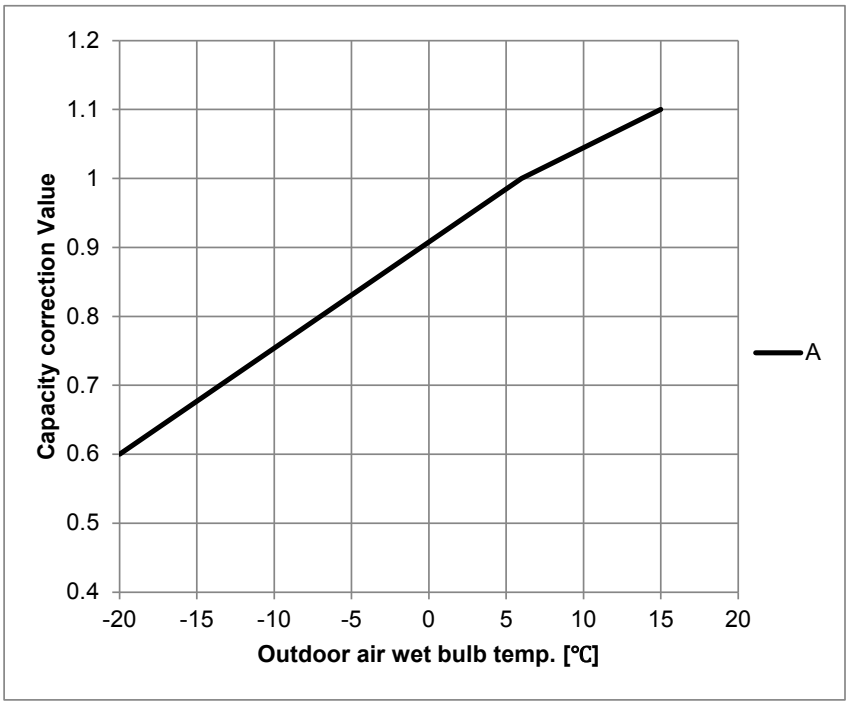
Graph D



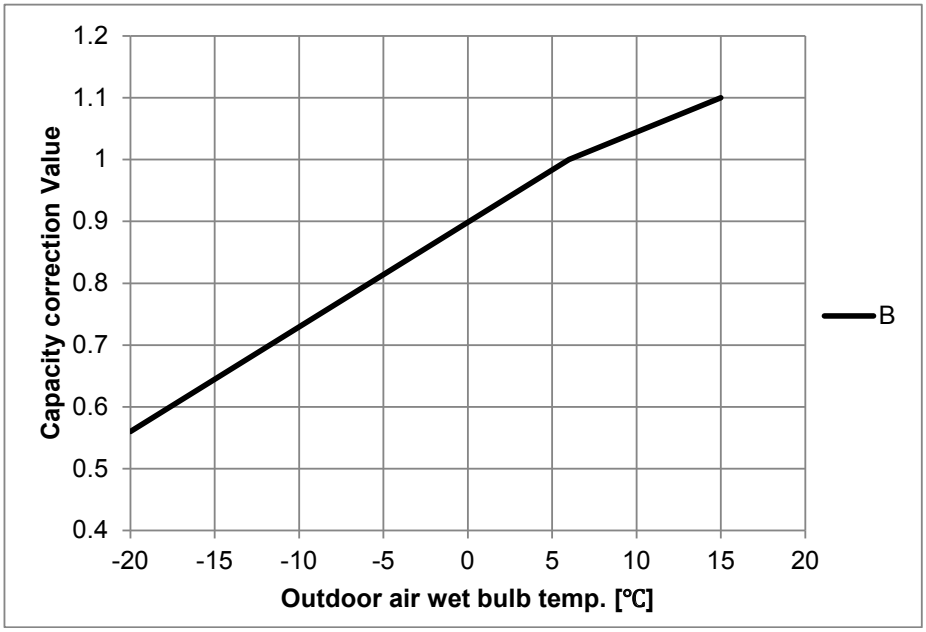
2-3-2. Correction charts for heating capacity calculation

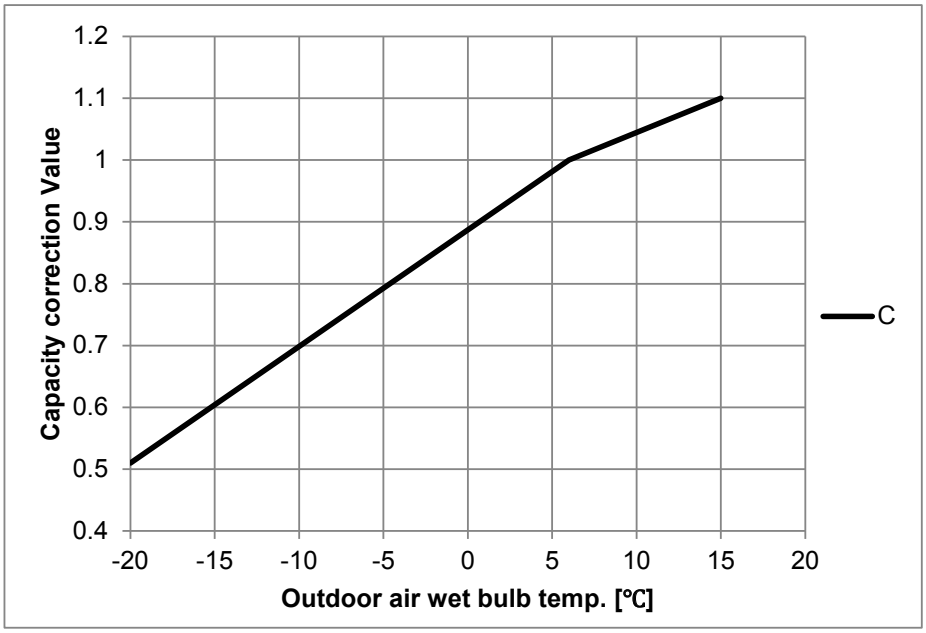
[Chart 1] Indoor air wet bulb temperature vs. capacity correction value

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

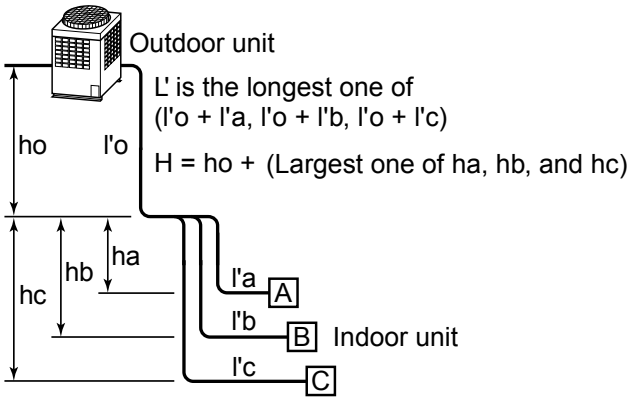


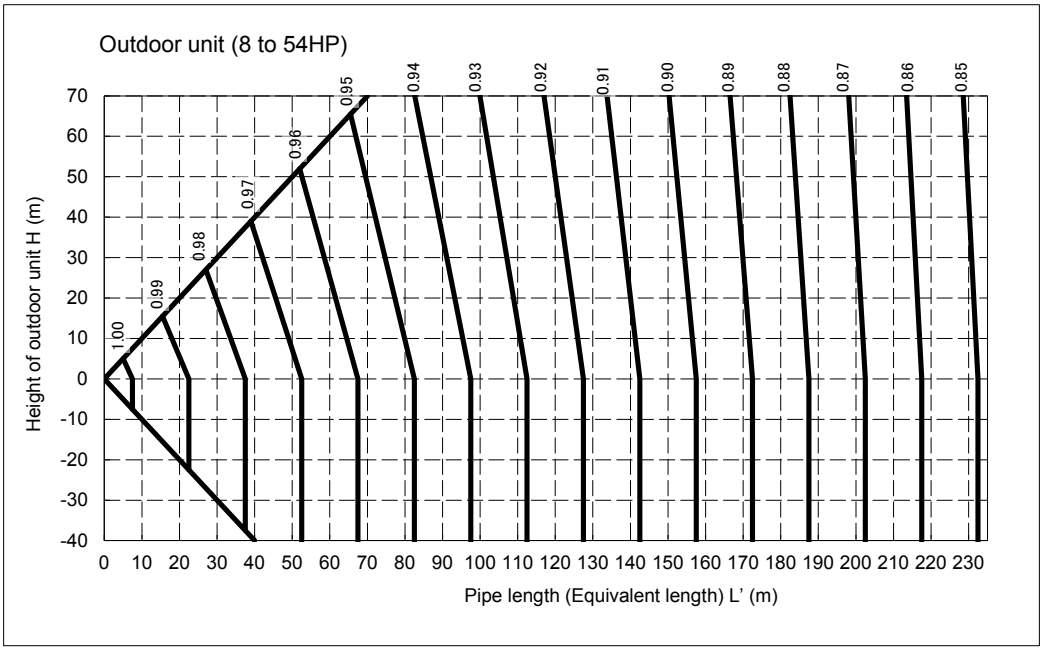
HP	combination	Graph
8	8	A
10	10	B
12	12	A
14	14	B
16	16	A
18	18	B
20	20	C
22	12+10	B
24	14+10	B
26	14+12	B
28	14+14	B
30	16+14	B
32	18+14	B
34	18+16	B
36	18+18	B
38	20+18	C
40	20+20	C
42	14+14+14	B
44	16+14+14	B
46	18+14+14	B
48	18+16+14	B
50	18+18+14	B
52	18+18+16	B
54	18+18+18	B


1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
Capacity correction Value
-20
-15
-10
-5
0
5
10
15
20
Outdoor air wet bulb temp. [℃]
B


1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
Capacity correction Value
-20
-15
-10
-5
0
5
10
15
20
Outdoor air wet bulb temp. [℃]
C

[Chart 3] Connecting pipe length and life difference between indoor and outdoor unit vs. capacity valve





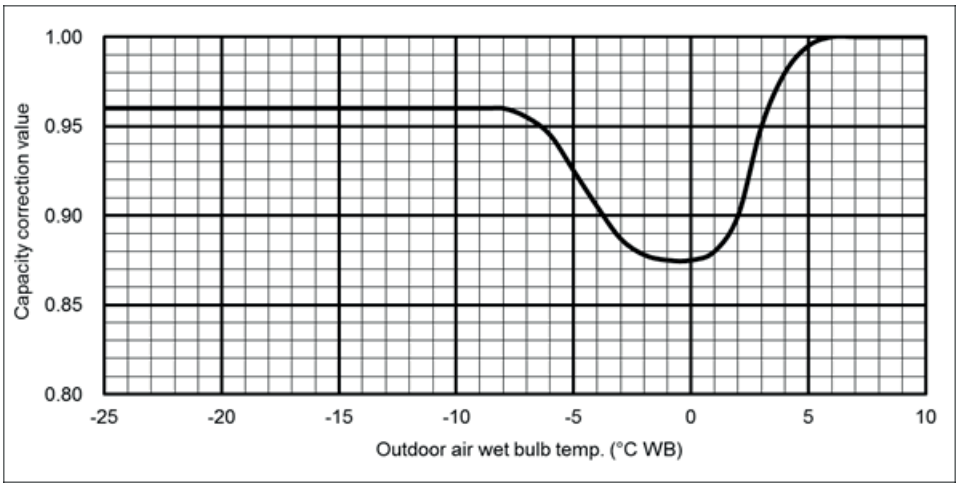
[4]* Correction of outdoor unit diversity

* 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.)

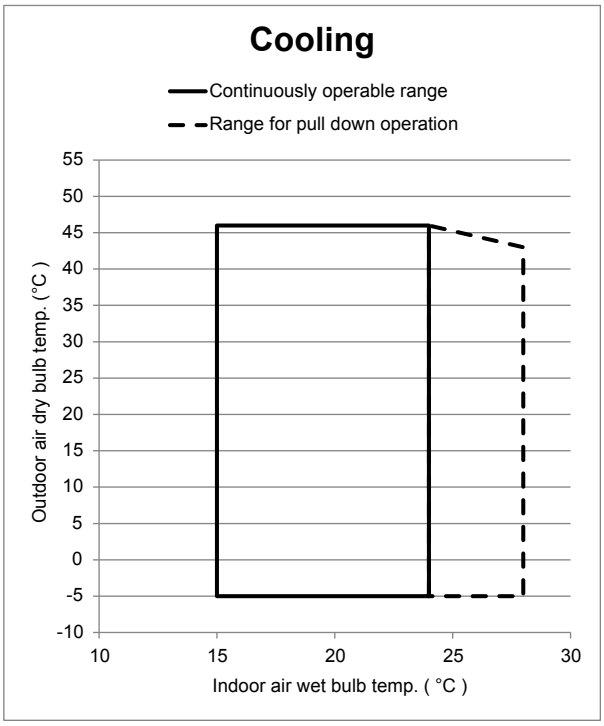
[Chart 5] Capacity correction in case of frost on the outdoor heat exchanger



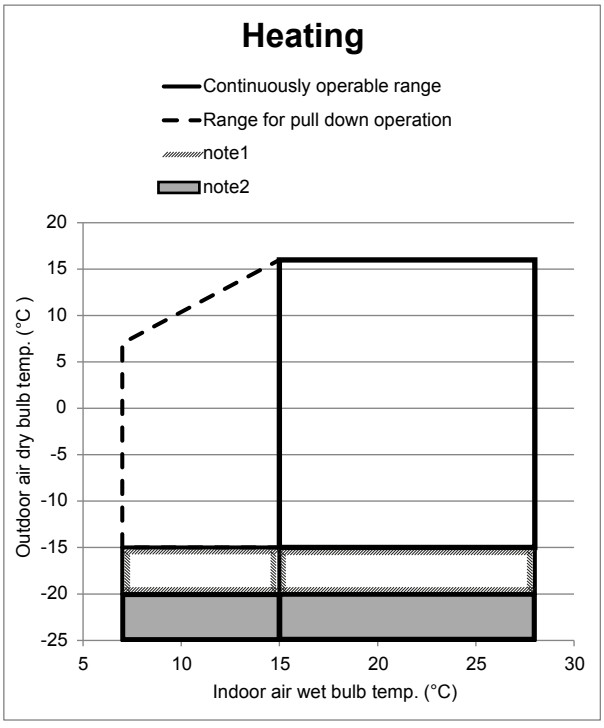
2-3-4. Rated conditions

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



Note : 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.

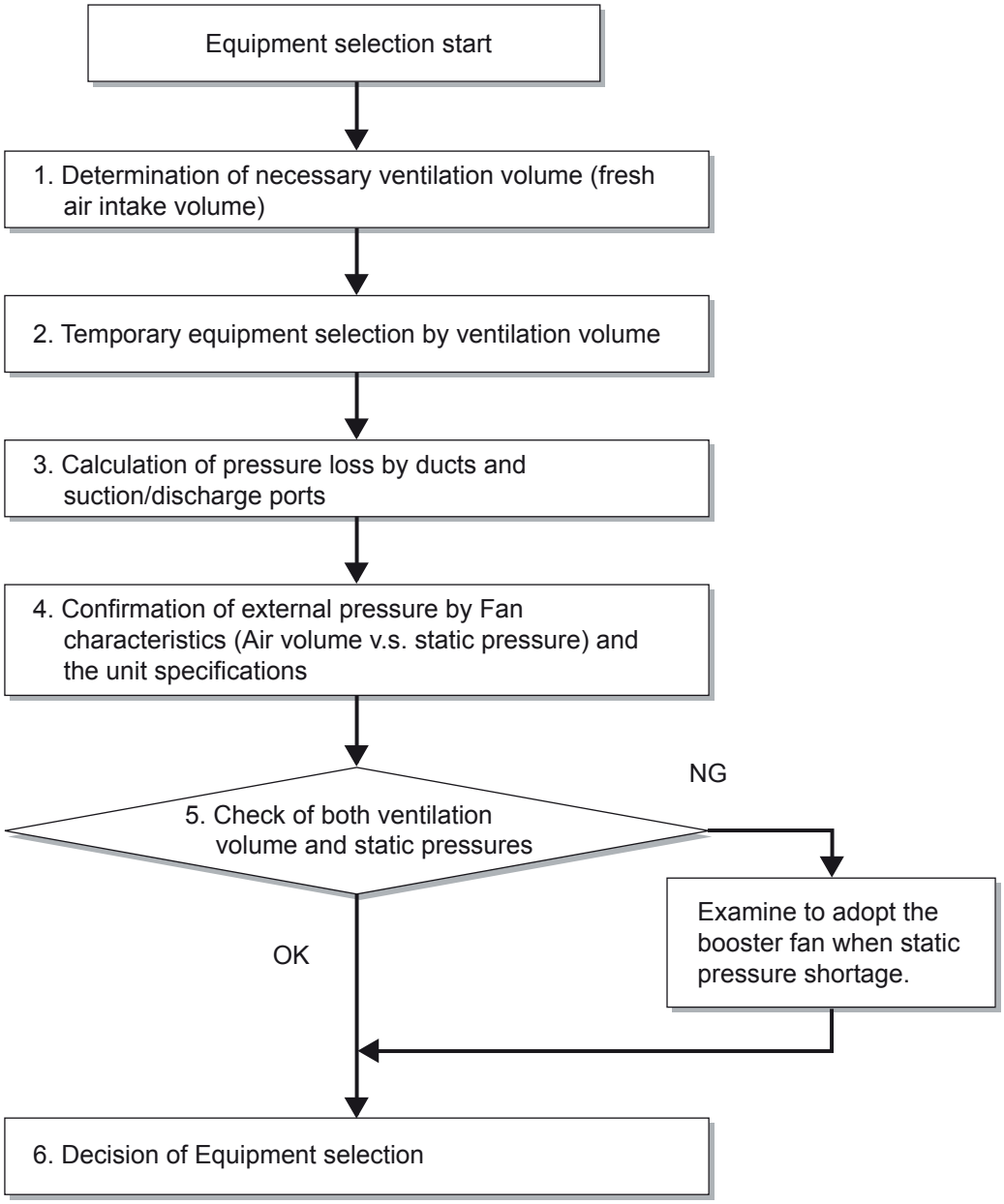


Note1 The unit will operate down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -15°C.
Therefore please consider installation location/surroundings and system design when expected to operate between -15°C and -20°C.
Avoid the following place
Places where ambient temperature falls below -15°C for more than 72 hours running/ The outdoor heat exchanger may be damaged by the frost.

Note2 Low ambient heating (-20°C or less) for extended periods of time is not allowed.

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.

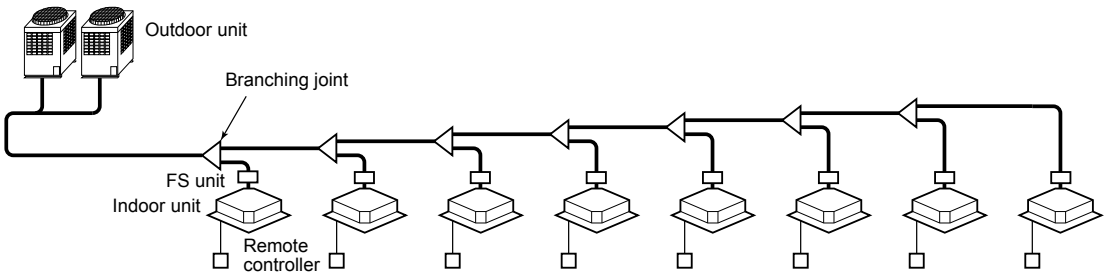
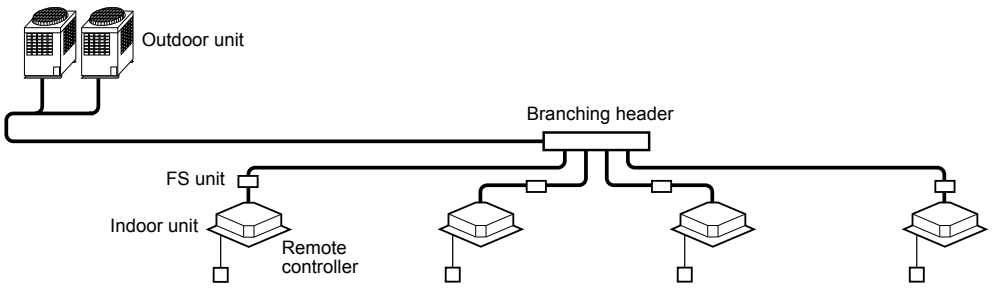
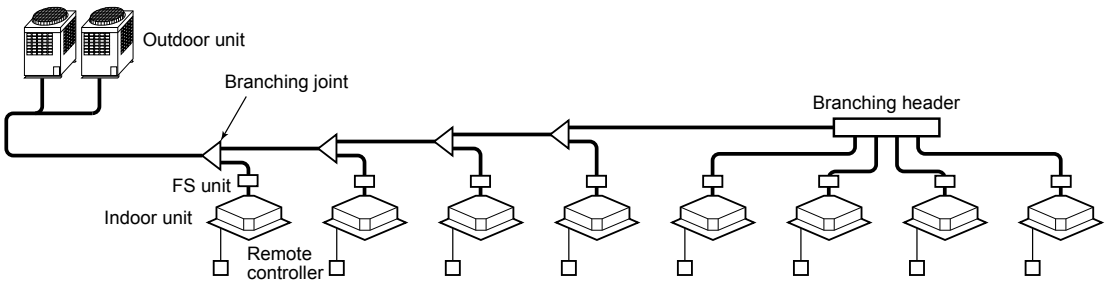
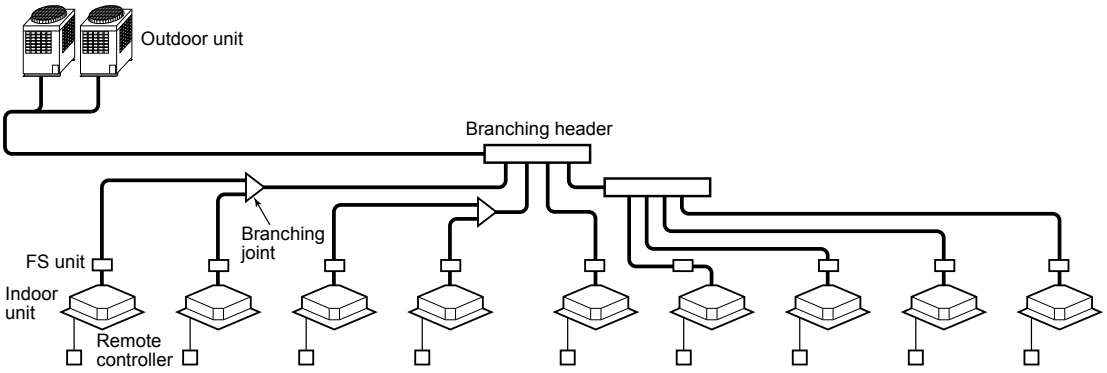
2-5-2. Example of equipment selection

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

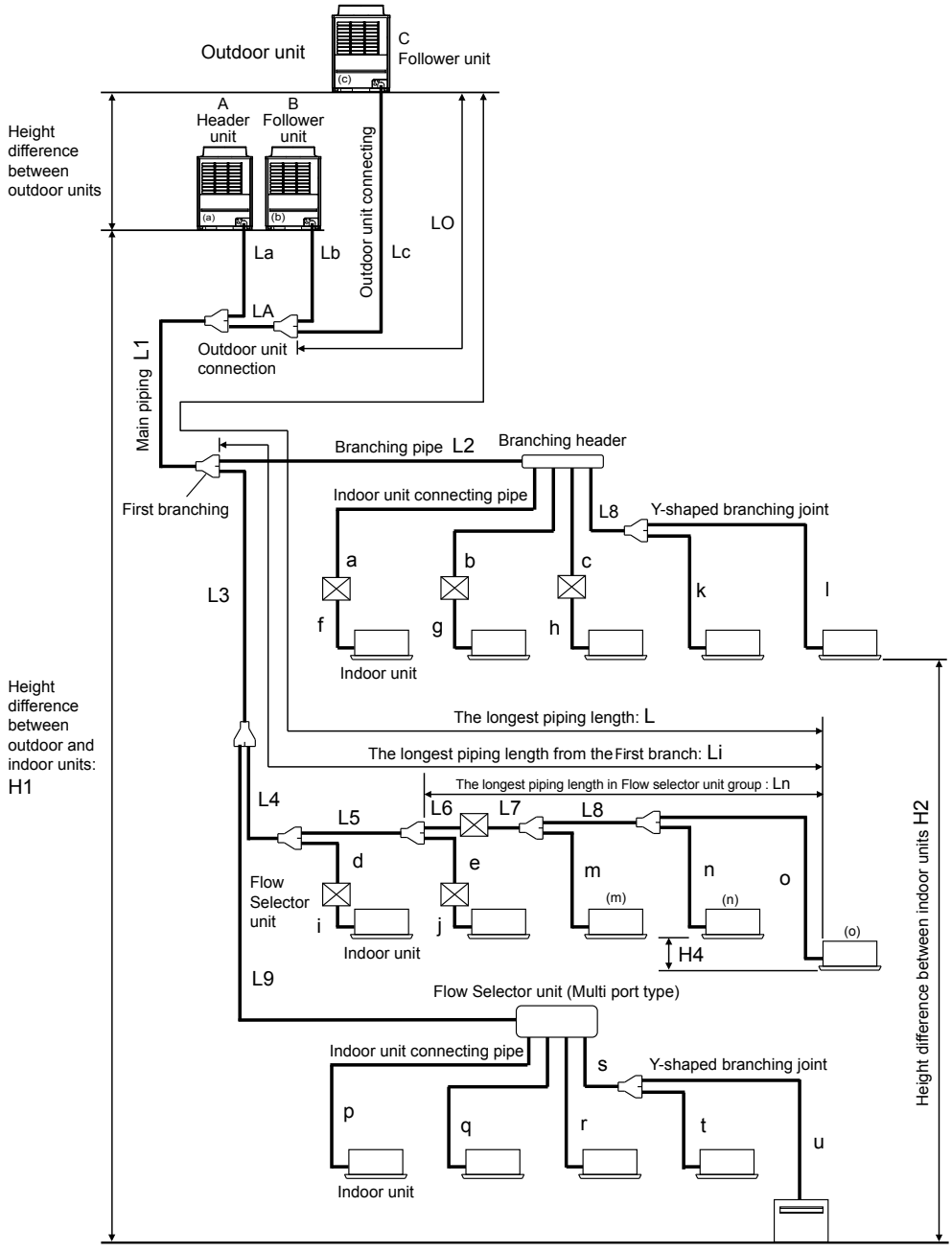
<Selection>
MMD-VN1002HEX1E/MMD-VNK1002HEX1E(High) is selected by the Fan characteristics.

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 Header branching system after header branching	

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



◆ System restriction

Outdoor unit combination	Up to 3 units	
Total capacity of outdoor units	Up to 54 HP	
Indoor unit connection	Up to 64 units (*1)	
Total capacity of indoor units (varies depending on the height difference between indoor units.)	H2 ≤ 15m	135% of outdoor units' capacity (*2)
	15m < H2	105% of outdoor units' capacity

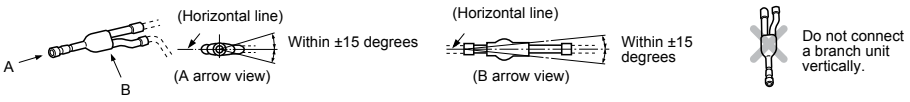
(*1) : In case without central control.
It is up to 54 units in case with central control.
(*2) : MAP200* : 125%, AP381* : 130%, AP401* : 125%

◆ Cautions for installation

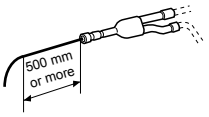
Be careful of the connecting arrangement of the header unit and follower units. Set the outdoor units in order of capacity from the one with the largest capacity. (A (Header unit) ≥ B ≥ C ≥ D)

- Be sure to use a header unit for the leading outdoor unit to be connected to the main pipe. (Figure 1 and 3)
- Be sure to use a T-shaped branch joint (RBM-BT14E/RBM-BT24E: separately purchased) to connect each outdoor unit.
- Be careful of the direction of the Outdoor unit connection piping kit for the liquid side. (As shown in Figure 2, a Outdoor unit connection piping kit cannot be attached so that the refrigerant of the main pipe flows directly intothe header unit.)
- When attaching a Y-shaped branch unit for the outdoor unit connection piping kit, attach it level with the ground (Be sure not to exceed ±15 degrees.). Regarding a T-shape branch joints for the liquid side, there is no restriction for its angle

At a level position

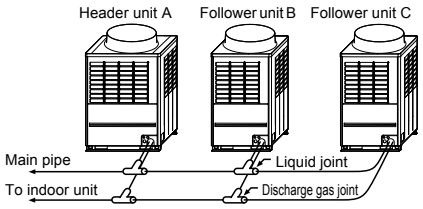


- Incase of using the Y-shaped branching joint for connectiono between outdoor units (Discharge gas joint and Suction gas joint). please keep the straight part of at least 500mm at the inlet.

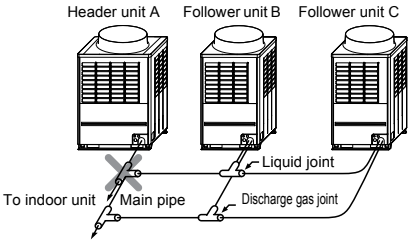


Discharge gas / Liquid pipes

▼Figure 1

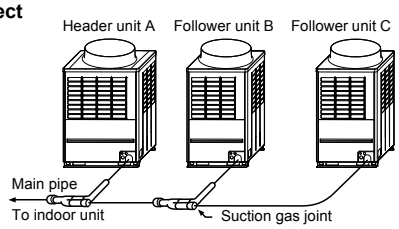


▼Figure 2



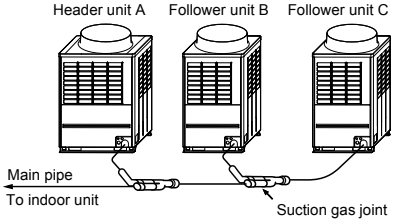
Suction side gas piping

▼Figure 3
Correct



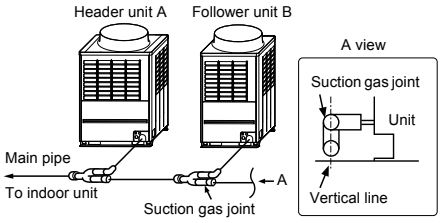
<Inverse connection suction gas joint>

▼Figure 4
Incorrect



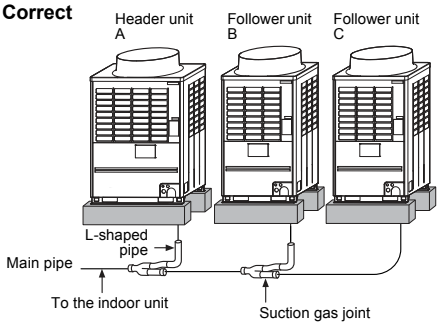
<Upright connection of suction gas joint>

▼Figure 5
Incorrect



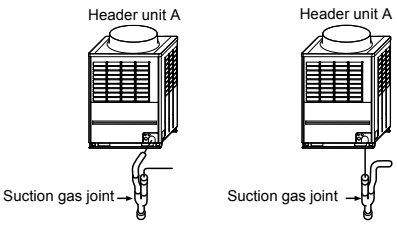
<When drawing pipes downward>

▼Figure 6
Correct



<Vertical connection of branch units>

▼Figure 7
Incorrect

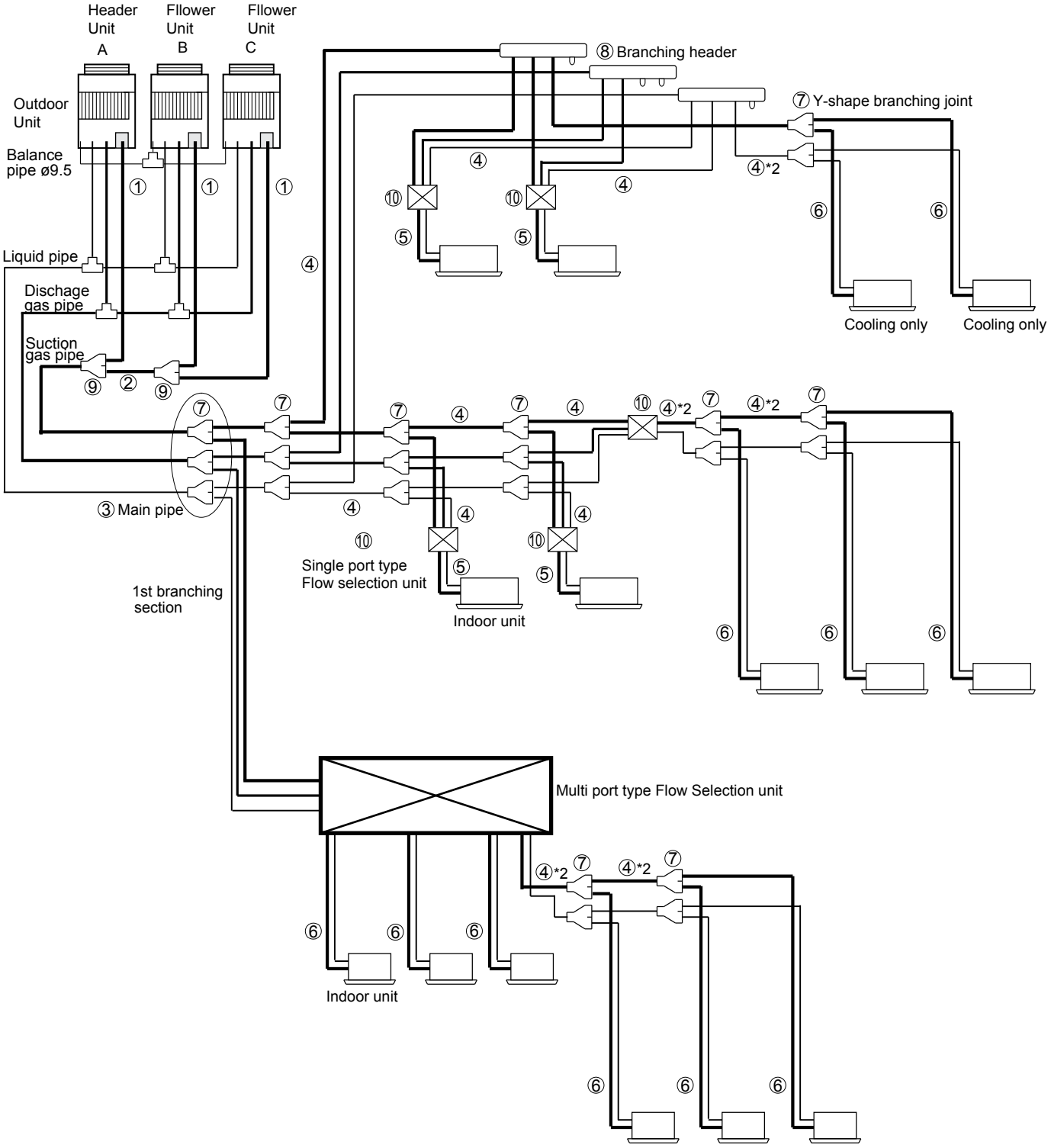


◆ Allowable length and allowable height difference of refrigerant piping

Item					Allowable value	Pipes
Pipe length	Total extension of pipe (liquid pipe, real length)	Less than 34 HP or less			300 m	LA + La + Lb + Lc + L1 + L2 + L3 + L4 + L5 + L6 + L7 + L8 +L9 + a + b + c + d + e + f + g + h + i + j + k + l + m + n + o+ p + q + r + s + t + u
		34 HP or more			1000 m (*9)	
	Farthest piping length **L** (*1) (*3)			Equivalent length	200 m (*2)	LA+Lc+L1+L3+L4+L5+L6+L7+L8+o
				Real length	180 m	
	Max. equivalent length of Main piping (*12)		H2 > 3 m	Equivalent length	100 m	L1
				Real length	85 m	
			H2 ≤ 3 m	Equivalent length	120 m	
				Real length	100 m	
	Farthest equivalent piping length from the first branch **Li** (*1)			H2 > 3 m	50 m	L3+L4+L5+L6+L7+L8+o, L3+L9+s+u
				H2 ≤ 3 m	65 m	
	Farthest equivalent piping length between outdoor units **LO** (*1)				15 m	LA+Lc (LA+Lb)
	maximum equivalent piping length of pipes connected to outdoor units				10 m	Lc (La, Lb)
	Maximum real length of terminal branching section to indoor units				30 m	a+f, b+g, c+h, d+i, e+j, k, l
	Maximum real length of between Flow Selector unit and indoor unit			Single port type	15 m	f, g, h, i, j
				Multi port type	50 m (*10) (*11)	p, q, r, s+t, s+u
	Maximum equivalent length between branching section				50 m	L2, L3, L4, L8, L9
Height difference	Height between outdoor and indoor units **H1** (*7)		Upper outdoor unit		70m (*8)(*13)	–
			Lower outdoor units		30 m (*6)	–
	Height between indoor units **H2** (*7)		Upper outdoor units		40 m	–
			Lower outdoor units (*4)		15 m	–
	Height between outdoor units **H3** (*5)				5 m	–
<In case of connecting single port type Flow Selector unit and a branch of Multi port type Flow Selector unit to the indoor units.>						
Maximum equivalent length indoor units in group control by one single port Flow Selector unit **Ln**					30 m	L6+L7+L8+o
Maximum real length between Flow Selector unit and indoor unit (*2)			Single port type		15 m	(Ex.) In case of wiring to the indoor unit (m): L7+m ≤ 15m In case of wiring to the indoor unit (n): L7+L8+n ≤ 15m
			Multi port type		50 m	s+t, s+u ≤ 50m
Height difference between indoor units in group control by one Flow Selector unit **H4**					0.5 m	–

*1: Farthest outdoor unit from the first branch: (C), farthest indoor unit: (o)
*2: When connecting the multiple indoor units to the single port type flow selector unit, wire the indoor unit to the remote controller to the single port type flow selection unit.
*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 56.0 : 180m, 61.5 to 112:195m, 120:200m.
*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).
*6: 40m is possible for a system that uses only the flow selector unit (multi port type), whose all the indoor units are 3HP or higher, and working ambient temperature is 0ºC or higher.
*7: As for 44HP to 54HP, contact our agent.
*8: If the height difference (H2) between indoor units exceed 3 m, set 50 m or less.
*9: Total charging refrigerant is 140 kg or less.
*10: The total piping length in one FS unit in case of branching to 4 : 120m (p + q + r + s + t + u), In case of branching to 6 : 180m.
*11: Length of whole pipe should be shorter than 50 m in one branch.
*12: As for 42HP to 54HP, contact our agent.
*13: Extension up till 90m is possible with conditions below
- Outdoor Temperature
Cooling operation : 10 - 46 (DB)
Heating operation : -5 - 15.5 (WB)
Simultaneous operation : 7 - 25 (DB)
- Equivalent length of farthest piping from 1st branching Li < 50m
- Real length of main piping L1 < 100m
- Height difference between indoor units H2 < 3m
- Height difference between FS units < 0.5m
- Total capacity of connectable indoor units : 90% - 100%
- Single CDU, and up to 18HP
- Minimum capacity of connectable indoor : unit 4HP or Larger.

3-3. Selection of refrigerant piping



Selection of pipe size

(1) Outdoor unit connecting pipe

Use Part: Outdoor Unit ↓ Outdoor unit connection piping kit

Type	Balance pipe side	Suction gas side	Discharge gas side	Liquid side
MMY-MAP0806*	Ø9.5	Ø22.2	Ø19.1	Ø12.7
MMY-MAP1006*	Ø9.5	Ø22.2	Ø19.1	Ø12.7
MMY-MAP1206*	Ø9.5	Ø28.6	Ø19.1	Ø12.7
MMY-MAP1406*	Ø9.5	Ø28.6	Ø22.2	Ø15.9
MMY-MAP1606*	Ø9.5	Ø28.6	Ø22.2	Ø19.1
MMY-MAP1806*	Ø9.5	Ø28.6	Ø22.2	Ø19.1
MMY-MAP2006*	Ø9.5	Ø28.6	Ø22.2	Ø19.1

(2) Between Outdoor unit connecting piping *6

Use Part: Outdoor unit connection piping kit ↓ Outdoor unit connection piping kit

Total capacity code of outdoor units at the downstream side		Suction gas side	Discharge gas side	Liquid side
Equivalent to capacity	Equivalent to HP			
45.0 to below 61.5	16 to below 22	Ø28.6	Ø22.2	Ø15.9
61.5 to below 73	22 to below 26	Ø34.9	Ø28.6	Ø19.1
73.0 to below 101.0	26 to below 36	Ø34.9	Ø28.6	Ø19.1
101.0 or more	36 or more	Ø41.3	Ø28.6	Ø22.2

(3) Main piping

Use Part: Outdoor unit connecting piping kit of header unit ↓ First branching section

Total capacity code of all outdoor units		Suction gas side	Discharge gas side	Liquid side
Equivalent to capacity	Equivalent to HP			
22.4 to below 33.5	8 to below 12	Ø22.2	Ø19.1	Ø12.7
33.5 to below 38.4	12 to below 14	Ø28.6	Ø19.1	Ø12.7
38.4 to below 45.0	14 to below 16	Ø28.6	Ø22.2	Ø15.8
45.0 to below 61.5	16 to below 22	Ø28.6	Ø22.2	Ø19.1
61.5 to below 73.0	22 to below 26	Ø34.9	Ø28.6	Ø19.1
73.0 to below 101.0	26 to below 36	Ø34.9	Ø28.6	Ø22.2
101.0 or more	36 or more	Ø41.3	Ø34.9	Ø22.2

Pipes side offers based on the total capacity codes of all outdoor units (see table2)

(4) Branching piping *1, *2, *6

Use Part: Branching section ↓ Branching section / Branching section ↓ Flow selector unit / Flow selector unit ↓ Branching section

Total capacity code of outdoor units of indoor units at the downstream side		Suction gas side	Discharge gas side	Liquid side
Equivalent to capacity	Equivalent to HP			
Below 18	Below 6.4	Ø15.9	Ø12.7	Ø9.5
18 to below 34	6.4 to below 12.2	Ø22.2	Ø19.1	Ø12.7
34 to below 45.5	12.2 to below 16.2	Ø28.6	Ø22.2	Ø15.9
45.5 to below 56.5	16.2 to below 20.2	Ø28.6	Ø22.2	Ø19.1
56.5 to below 70.5	20.2 to below 25.2	Ø34.9	Ø28.6	Ø19.1
70.5 to below 98.5	25.2 to below 35.2	Ø34.9	Ø28.6	Ø22.2
98.5 or more	35.2 or more	Ø41.3	Ø34.9	Ø22.2

Pipes side offers based on the total capacity code value of indoor units at the downstream side (See Table1 and 2)

(5) Indoor unit connecting pipe

Use Part: Flow selector unit ↓ Indoor unit

Capacity rank	Equivalent to capacity	Gas side	Liquid side
005 to 012	0.8 to 1.25	Ø9.5	Ø5.4
015 to 018	1.7 to 2.0	Ø12.7	Ø5.4
024 to 056	2.5 to 6.0	Ø15.9	Ø9.5
072 to 096	8.0 to 10.0	Ø22.2	Ø12.7

(6) Indoor unit connecting pipe

Use Part: Terminal branching section ↓ Indoor unit

Capacity rank	Equivalent to HP	Length og piping	Gas side	Liquid side
005 to 012	0.5 to 1.25	15 m or less real length	Ø9.5	Ø6.4
		Exceeds 15m real length	Ø12.7	Ø9.5
015 to 018	1.7 tp 2.0	15 m or less real length	Ø12.7	Ø6.4
		Exceeds 15m real length	Ø15.9	Ø9.5
024 to 056	2.5 to 6.0	-	Ø15.9	Ø9.5
072 to 096	8.0 to 10.0	-	Ø22.2	Ø12.7

(7) Y-shaped branhing joint *3, *4

Use Part: Branching section

Total capacity code of indoor units		Model name	
Equivalent to capacity	Equivalent to HP	For 3 piping	For 2 piping
Below 18.0	Below 6.4	RBM-BY55FE	RBM-BY55E
18.0 to below 40.0	6.4 to below 14.2	RBM-BY105FE	RBM-BY105E
40.0 to below 70.5	14.2 to below 25.2	RBM-BY205FE	RBM-BY205E
70.5 or more	25.2 or more	RBM-BY305FE	RBM-BY305E

(8) Branching header *3, *4, *5

Use Part: Branching section

	Total capacity code of indoor units		Model name	
	Equivalent to capacity	Equivalent to HP	For 3 piping	For 2 piping
For 4 branches	Below 40.0	Below 14.2	RBM-HY1043FE	RBM-HY1043E
	40.0 to below 70.5	14.2 to below 25.2	RBM-HY2043FE	RBM-HY2043E
For 8 branches	Below 40.0	Below 14.2	RBM-HY1083FE	RBM-HY1083E
	40.0 to below 70.5	14.2 to below 25.2	RBM-HY2083FE	RBM-HY2083E

(9) Outdoor unit connection piping kit *6

Use Part: Branching section

Total capacity codes of outdoor units at the downstream side		Model name
Equivalent to capacity	Equivalent to HP	
Below 73.0	Below 26.0	RBM-BT14FE
73.0 or more	26.0 or more	RBM-BT24FE

(10) Flow Selector unit *7

Use Part: Flow Selector unit ↓ Indoor unit

Single port type

Total capacity codes of connected indoor units			Model name
Equivalent to capacity	Equivalent to HP	Max No. of connected indoor unit	
Below 11.2	Below 4.0	Below 5	RBM-Y1123FE*
11.2 to below 18.0	4.0 to below 6.4	Below 10	RBM-Y1803FE*
18.0 to 28.0 or less	6.4 to below 10.0	Below 10	RBM-Y2803FE*

Multi port type

Equivalent to capacity	Equivalent to HP	Max No. of connected indoor unit in a branch	No. of branch	Model name
Below 18.0	Below 6.4	10	4	RBM-Y1801F4PE*
			5	RBM-Y1801F6PE*

*1 : Use the same size as the main pipe if it is larger than the main pipe.
*2 : use a suction gas pipe and a liquid pipe for the two pipe branching downstream from the flow selector unit and the dedicated cooling circuit.
*3 : Select the branch pipe of the first branch according to the outdoor capacity code.
*4 : Select according to the outdoor unit capacity code if the total of the indoor capacity codes exceeds the outdoor unit capacity code.
*5 : It is possible to select up to a maximum capacity code total AP056 (6hp) for the first circuit after the header branch.
When using a branch header for the first branch with an outdoor unit capacity code of 33.5 (12 hp equivalent) or more and 73.0 (26 hp equivalent) or less, use RBM-HY2043FE (4 branches) and RBM-HY2083FE (8 branches) regardless of the total value of the capacity codes of the downstream indoor units.
And, a branch header cannot be used as the first branch if the performance rank is over 73.0 (26hp equivalent).
*6 : The downstream strating point is the main pipe.
*7 : If the performance rank is over 117.5 (42 Hp equivalent), "Flow Selector unit" is available for only Multi port side.

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	16HP	18HP	20HP
Refrigerant amount charged in factory	Heat recovery model	11.0 kg	11.0 kg	11.0 kg	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 + (14 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 (SHRM-e)

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	16			12
18	18			14
20	20			15
22	12	10		6
24	14	10		8
26	14	12		12
28	14	14		12
30	16	14		14
32	16	16		15
34	18	16		16
36	18	18		18
38	20	18		22
40	20	20		24
42	14	14	14	14
44	16	14	14	15
46	18	14	14	16
48	16	16	16	17
50	18	16	16	18
52	18	18	16	20
54	18	18	18	22

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.

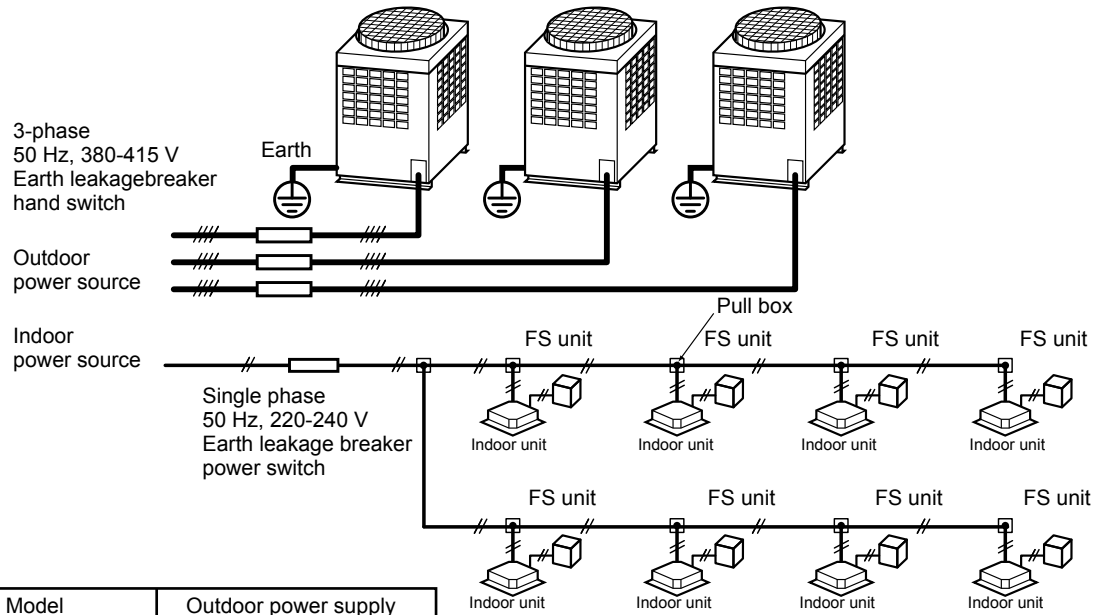
4-2.Summary of wiring design

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



Model	Outdoor power supply
MMY-MAP***6FT8P-E	3-phase,380-415V,50Hz

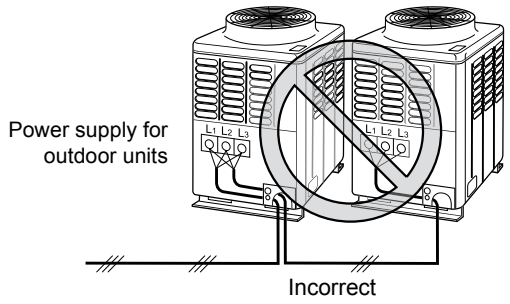
NOTE:
Control wire and power supply wire between the FS unit and the indoor unit are supplied as an accessory complete with the FS unit. (Wire length : 6 m) ※Except Multi ports FS unit
If the length between indoor and FS unit exceeds 5 m, connect by using the connection cable kit sold separately (RBC-CBK15FE).

4-4.Outdoor unit power supply

- 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***6FT8P-E	3-phase,380-415V,50Hz

Every outdoor unit must have a dedicated power supply.



Outdoor unit data

[50Hz,380/400/415V]

■ Single outdoor unit

HP	Heat Recovery 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	MAP0806FT8P-E	3N~ 50Hz	380-400-415V	342	456	2.3x2			1.0	21.5	25
10	MAP1006FT8P-E	3N~ 50Hz	380-400-415V	342	456	3.1x2			1.0	26.1	32
12	MAP1206FT8P-E	3N~ 50Hz	380-400-415V	342	456	3.9x2			1.0	31.0	40
14	MAP1406FT8P-E	3N~ 50Hz	380-400-415V	342	456	4.8x2			1.0	35.8	50
16	MAP1606FT8P-E	3N~ 50Hz	380-400-415V	342	456	5.8x2			2.0	40.7	50
18	MAP1806FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2			2.0	44.9	50
20	MAP2006FT8P-E	3N~ 50Hz	380-400-415V	342	456	7.6x2			2.0	49.3	63

■ Combination of outdoor unit

HP	Heat Recovery 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)
22	AP2216FT8P-E	3N~ 50Hz	380-400-415V	342	456	3.9x2	3.1x2		1.0+1.0	57.1	63
24	AP2416FT8P-E	3N~ 50Hz	380-400-415V	342	456	3.9x2	3.9x2		1.0+1.0	62.0	80
26	AP2616FT8P-E	3N~ 50Hz	380-400-415V	342	456	4.8x2	3.9x2		1.0+1.0	66.8	80
28	AP2816FT8P-E	3N~ 50Hz	380-400-415V	342	456	4.8x2	4.8x2		1.0+1.0	71.6	80
30	AP3016FT8P-E	3N~ 50Hz	380-400-415V	342	456	5.8x2	4.8x2		2.0+1.0	76.5	100
32	AP3216FT8P-E	3N~ 50Hz	380-400-415V	342	456	5.8x2	5.8x2		2.0+2.0	81.3	100
34	AP3416FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	5.8x2		2.0+2.0	85.6	100
36	AP3616FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	6.5x2		2.0+2.0	89.8	100
38	AP3816FT8P-E	3N~ 50Hz	380-400-415V	342	456	7.6x2	6.5x2		2.0+2.0	94.2	125
40	AP4016FT8P-E	3N~ 50Hz	380-400-415V	342	456	7.6x2	7.6x2		2.0+2.0	98.6	125
42	AP4216FT8P-E	3N~ 50Hz	380-400-415V	342	456	4.8x2	4.8x2	4.8x2	1.0+1.0+1.0	107.4	125
44	AP4416FT8P-E	3N~ 50Hz	380-400-415V	342	456	5.8x2	4.8x2	4.8x2	2.0+1.0+1.0	112.3	125
46	AP4616FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	4.8x2	4.8x2	2.0+1.0+1.0	116.5	160
48	AP4816FT8P-E	3N~ 50Hz	380-400-415V	342	456	5.8x2	5.8x2	5.8x2	2.0+2.0+2.0	122.0	160
50	AP5016FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	5.8x2	5.8x2	2.0+2.0+2.0	126.2	160
52	AP5216FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	6.5x2	5.8x2	2.0+2.0+2.0	130.5	160
54	AP5416FT8P-E	3N~ 50Hz	380-400-415V	342	456	6.5x2	6.5x2	6.5x2	2.0+2.0+2.0	134.7	160

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 name	Capacity rank	Capacity Code	Cooling capacity(kW)	Heating capacity(kW)	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power Supply	
							Min	Max	kW	FLA	MCA	MOCP
4-way Air Discharge Cassette Type	MMU-AP0094HP1-E	009	1	2.8	3.2	230-1-50	198	264	0.014	0.63	0.79	15
	MMU-AP0124HP1-E	012	1.25	3.6	4.0	230-1-50	198	264	0.014	0.63	0.79	15
	MMU-AP0154HP1-E	015	1.7	4.5	5.0	230-1-50	198	264	0.014	0.80	1.00	15
	MMU-AP0184HP1-E	018	2	5.6	6.3	230-1-50	198	264	0.014	0.80	1.00	15
	MMU-AP0244HP1-E	024	2.5	7.1	8.0	230-1-50	198	264	0.020	0.87	1.09	15
	MMU-AP0274HP1-E	027	3.0	8.0	9.0	230-1-50	198	264	0.020	0.87	1.09	15
	MMU-AP0304HP1-E	030	3.2	9.0	10.0	230-1-50	198	264	0.020	0.87	1.09	15
	MMU-AP0364HP1-E	036	4.0	11.2	12.5	230-1-50	198	264	0.068	1.15	1.44	15
	MMU-AP0484HP1-E	048	5.0	14.0	16.0	230-1-50	198	264	0.072	1.15	1.44	15
	MMU-AP0564HP1-E	056	6	16.0	18.0	230-1-50	198	264	0.072	1.15	1.44	15
Compact 4-way Cassette (600 x 600) Type	MMU-AP0056MH1-E	005	0.6	1.7	1.9	230-1-50	198	264	0.060	0.32	0.40	15
	MMU-AP0074MH1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.060	0.32	0.40	15
	MMU-AP0094MH1-E	009	1	2.8	3.2	230-1-50	198	264	0.060	0.35	0.44	15
	MMU-AP0124MH1-E	012	1.25	3.6	4.0	230-1-50	198	264	0.060	0.36	0.45	15
	MMU-AP0154MH1-E	015	1.7	4.5	5.0	230-1-50	198	264	0.060	0.48	0.60	15
	MMU-AP0184MH1-E	018	2	5.6	6.3	230-1-50	198	264	0.060	0.48	0.60	15
Compact 4-way Cassette (600 x 600) Type	MMU-AP0057MH-E	005	0.6	1.7	1.9	230-1-50	198	264	0.060	0.18	0.23	15
	MMU-AP0077MH-E	007	0.8	2.2	2.5	230-1-50	198	264	0.060	0.26	0.33	15
	MMU-AP0097MH-E	009	1	2.8	3.2	230-1-50	198	264	0.060	0.28	0.35	15
	MMU-AP0127MH-E	012	1.25	3.6	4.0	230-1-50	198	264	0.060	0.29	0.36	15
	MMU-AP0157MH-E	015	1.7	4.5	5.0	230-1-50	198	264	0.060	0.47	0.59	15
	MMU-AP0187MH-E	018	2	5.6	6.3	230-1-50	198	264	0.060	0.53	0.66	15
2-way Air Discharge Cassette Type	MMU-AP0072WH1	007	0.8	2.2	2.5	230-1-50	198	264	0.020	0.32	0.40	15
	MMU-AP0092WH1	009	1	2.8	3.2	230-1-50	198	264	0.020	0.32	0.40	15
	MMU-AP0122WH1	012	1.25	3.6	4.0	230-1-50	198	264	0.020	0.32	0.40	15
	MMU-AP0152WH1	015	1.7	4.5	5.0	230-1-50	198	264	0.020	0.32	0.40	15
	MMU-AP0182WH1	018	2	5.6	6.3	230-1-50	198	264	0.030	0.70	0.88	15
	MMU-AP0242WH1	024	2.5	7.1	8.0	230-1-50	198	264	0.040	0.81	1.01	15
	MMU-AP0272WH1	027	3	8.0	9.0	230-1-50	198	264	0.040	0.81	1.01	15
	MMU-AP0302WH1	030	3.2	9.0	10.0	230-1-50	198	264	0.050	0.81	1.01	15
	MMU-AP0362WH1	036	4.0	11.2	12.5	230-1-50	198	264	0.070	0.87	1.09	15
	MMU-AP0482WH1	048	5.0	14.0	16.0	230-1-50	198	264	0.070	0.87	1.09	15
	MMU-AP0562WH1	056	6	16.0	18.0	230-1-50	198	264	0.070	0.87	1.09	15
1-way Air Discharge Cassette Type	MMU-AP0074YH1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP0094YH1-E	009	1.0	2.8	3.2	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP0124YH1-E	012	1.3	3.6	4.0	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP0154SH1-E	015	1.7	4.5	5.0	230-1-50	198	264	0.030	0.40	0.49	15
	MMU-AP0184SH1-E	018	2.0	5.6	6.3	230-1-50	198	264	0.030	0.42	0.53	15
	MMU-AP0244SH1-E	024	2.5	7.1	8.0	230-1-50	198	264	0.030	0.71	0.88	15
Concealed Duct Type	MMD-AP0076BHP1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.120	0.30	0.37	15
	MMD-AP0096BHP1-E	009	1.0	2.8	3.2	230-1-50	198	264	0.150	0.34	0.42	15
	MMD-AP0126BHP1-E	012	1.25	3.6	4.0	230-1-50	198	264	0.150	0.34	0.42	15
	MMD-AP0156BHP1-E	015	1.70	4.5	5.0	230-1-50	198	264	0.150	0.48	0.61	15
	MMD-AP0186BHP1-E	018	2.0	5.6	6.3	230-1-50	198	264	0.150	0.48	0.61	15
	MMD-AP0246BHP1-E	024	2.50	7.1	8.0	230-1-50	198	264	0.150	0.60	0.75	15
	MMD-AP0276BHP1-E	027	3.0	8.0	9.0	230-1-50	198	264	0.150	0.60	0.75	15
	MMD-AP0306BHP1-E	030	3.20	9.0	10.0	230-1-50	198	264	0.150	0.70	0.88	15
	MMD-AP0366BHP1-E	036	4.00	11.2	12.5	230-1-50	198	264	0.250	1.23	1.54	15
	MMD-AP0486BHP1-E	048	5.00	14.0	16.0	230-1-50	198	264	0.250	1.41	1.77	15
	MMD-AP0566BHP1-E	056	6.00	16.0	18.0	230-1-50	198	264	0.250	1.41	1.77	15
Slim Duct Type	MMD-AP0056SPH1-E	005	0.6	1.7	1.9	230-1-50	198	264	0.060	0.35	0.44	15
	MMD-AP0074SPH1-E	007	0.80	2.2	2.5	230-1-50	198	264	0.060	0.35	0.44	15
	MMD-AP0094SPH1-E	009	1.0	2.8	3.2	230-1-50	198	264	0.060	0.35	0.44	15
	MMD-AP0124SPH1-E	012	1.25	3.6	4.0	230-1-50	198	264	0.060	0.37	0.47	15
	MMD-AP0154SPH1-E	015	1.70	4.5	5.0	230-1-50	198	264	0.060	0.38	0.48	15
	MMD-AP0184SPH1-E	018	2.00	5.6	6.3	230-1-50	198	264	0.060	0.47	0.59	15
	MMD-AP0244SPH1-E	024	2.25	7.1	8.0	230-1-50	198	264	0.120	0.86	1.08	15
	MMD-AP0274SPH1-E	027	3.0	8.0	9.0	230-1-50	198	264	0.120	0.86	1.08	15
Concealed Duct High Static Pressure Type	MMD-AP0186HP1-E	018	2.0	5.6	6.3	230-1-50	198	264	0.250	1.02	1.28	15
	MMD-AP0246HP1-E	024	2.5	7.1	8.0	230-1-50	198	264	0.250	1.33	1.66	15
	MMD-AP0276HP1-E	027	3.0	8.0	9	230-1-50	198	264	0.250	1.33	1.66	15
	MMD-AP0366HP1-E	036	4.0	11.2	12.5	230-1-50	198	264	0.350	2.22	2.78	15
	MMD-AP0486HP1-E	048	5.0	14.0	16.0	230-1-50	198	264	0.350	2.40	2.99	15
	MMD-AP0566HP1-E	056	6.0	16.0	18.0	230-1-50	198	264	0.350	2.57	3.22	15
	MMD-AP0726HP-E	072	8.0	22.4	25.0	230-1-50	198	264	0.37x3	6.04	7.55	15
	MMD-AP0966HP-E	096	10.0	28.0	31.5	230-1-50	198	264	0.37x3	6.35	7.94	15
Under Ceiling Type	MMC-AP0158HP-E	015	1.7	4.5	5.0	230-1-50	198	264	0.094	0.41	0.52	15
	MMC-AP0188HP-E	018	2.0	5.6	6.3	230-1-50	198	264	0.094	0.42	0.53	15
	MMC-AP0248HP-E	024	2.5	7.1	8.0	230-1-50	198	264	0.094	0.75	0.93	15
	MMC-AP0278HP-E	027	3.0	8.0	9.0	230-1-50	198	264	0.094	0.75	0.93	15
	MMC-AP0368HP-E	036	4.0	11.2	12.5	230-1-50	198	264	0.139	0.89	1.11	15
	MMC-AP0488HP-E	048	5.0	14.0	16.0	230-1-50	198	264	0.139	0.89	1.11	15
	MMC-AP0568HP-E	056	6.0	16.0	18.0	230-1-50	198	264	0.139	1.14	1.43	15

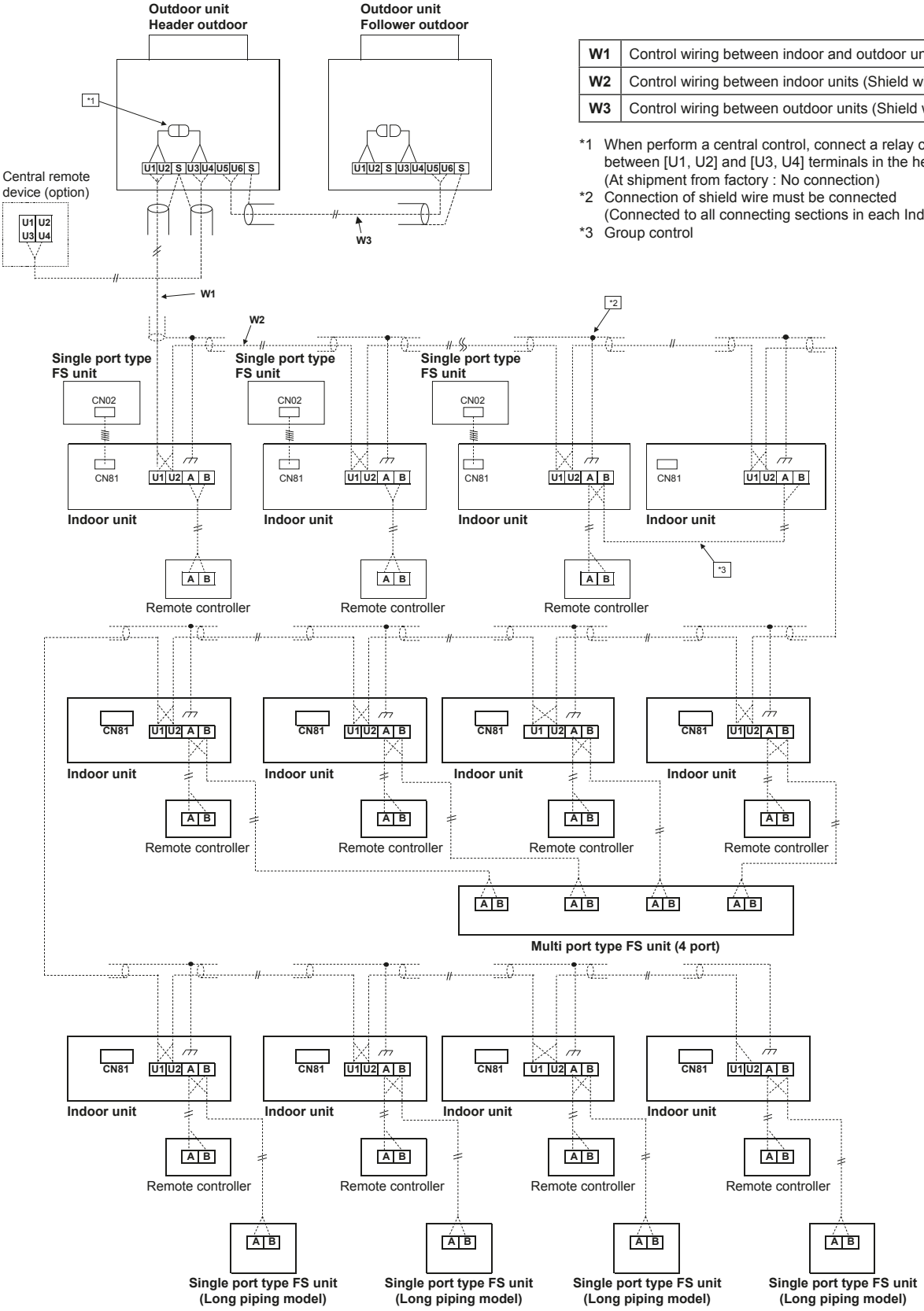
Electrical characteristics for 50 Hz outdoor units

Type	Model name	Capacity rank	Capacity Code	Cooling capacity(kW)	Heating capacity(kW)	Nominal Voltage (V-Ph-Hz)	Voltage Range Min	Voltage Range Max	Fan Motor kW	Fan Motor FLA	Power Supply MCA	Power Supply MOCP
High Wall Type 3 series	MMK-AP0073H1	007	0.8	2.2	2.5	230-1-50	198	264	0.030	0.20	0.22	15
	MMK-AP0093H1	009	1.0	2.8	3.2	230-1-50	198	264	0.030	0.22	0.24	15
	MMK-AP0123H1	012	1.25	3.6	4.0	230-1-50	198	264	0.030	0.22	0.24	15
	MMK-AP0153H1	015	1.7	4.5	5.0	230-1-50	198	264	0.030	0.37	0.40	15
	MMK-AP0183H1	018	2.0	5.6	6.3	230-1-50	198	264	0.030	0.37	0.40	15
	MMK-AP0243H1	024	2.5	7.1	8	230-1-50	198	264	0.030	0.43	0.47	15
High Wall Type 3 series (Without PMV)	MMK-AP0073HP1-E1	007	0.8	2.2	2.5	230-1-50	198	264	0.030	0.20	0.22	15
	MMK-AP0093HP1-E1	009	1.0	2.8	3.2	230-1-50	198	264	0.030	0.22	0.24	15
	MMK-AP0123HP1-E1	012	1.25	3.6	4.0	230-1-50	198	264	0.030	0.22	0.24	15
	MMK-AP0153HP1-E1	015	1.7	4.5	5.0	230-1-50	198	264	0.030	0.37	0.40	15
	MMK-AP0183HP1-E1	018	2.0	5.6	6.3	230-1-50	198	264	0.030	0.37	0.40	15
	MMK-AP0243HP1-E1	024	2.5	7.1	8	230-1-50	198	264	0.030	0.43	0.47	15
High Wall Type 4 series	MMK-AP0054MHP1-E	005	0.6	1.7	1.9	230-1-50	198	264	0.030	0.20	0.24	15
	MMK-AP0074MH1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.030	0.20	0.24	15
	MMK-AP0094MH1-E	009	1	2.8	3.2	230-1-50	198	264	0.030	0.21	0.26	15
	MMK-AP0124MH1-E	012	1.25	3.6	4	230-1-50	198	264	0.030	0.22	0.27	15
High Wall Type 4 series (Without PMV)	MMK-AP0054MHP1-E1	005	0.6	1.7	1.9	230-1-50	198	264	0.030	0.20	0.24	15
	MMK-AP0074MHP1-E1	007	0.8	2.2	2.5	230-1-50	198	264	0.030	0.20	0.24	15
	MMK-AP0094MHP1-E1	009	1	2.8	3.2	230-1-50	198	264	0.030	0.21	0.26	15
	MMK-AP0124MHP1-E1	012	1.25	3.6	4	230-1-50	198	264	0.030	0.22	0.27	15
Floor Standing Concealed Type	MML-AP0074BH1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP0094BH1-E	009	1	2.8	3.2	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP0124BH1-E	012	1.25	3.6	4	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP0154BH1-E	015	1.7	4.5	5	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP0184BH1-E	018	2	5.6	6.3	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP0244BH1-E	024	2.5	7.1	8	230-1-50	198	264	0.070	0.53	0.66	15
Floor Standing Cabinet Type	MML-AP0074H1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.045	0.30	0.37	15
	MML-AP0094H1-E	009	1	2.8	3.2	230-1-50	198	264	0.045	0.30	0.37	15
	MML-AP0124H1-E	012	1.25	3.6	4	230-1-50	198	264	0.045	0.49	0.62	15
	MML-AP0154H1-E	015	1.7	4.5	5	230-1-50	198	264	0.045	0.49	0.62	15
	MML-AP0184H1-E	018	2	5.6	6.3	230-1-50	198	264	0.070	0.54	0.68	15
	MML-AP0244H1-E	024	2.5	7.1	8	230-1-50	198	264	0.070	0.54	0.68	15
Floor Standing Type	MMF-AP0156H1-E	015	1.7	4.5	5	230-1-50	198	264	0.062	0.44	0.56	15
	MMF-AP0186H1-E	018	2	5.6	6.3	230-1-50	198	264	0.062	0.44	0.56	15
	MMF-AP0246H1-E	024	2.5	7.1	8	230-1-50	198	264	0.062	0.69	0.86	15
	MMF-AP0276H1-E	027	3	8	9	230-1-50	198	264	0.062	0.69	0.86	15
	MMF-AP0366H1-E	036	4	11.2	12.5	230-1-50	198	264	0.109	1.04	1.29	15
	MMF-AP0486H1-E	048	5	14	16	230-1-50	198	264	0.109	1.27	1.58	15
	MMF-AP0566H1-E	056	6.0	16.0	18	230-1-50	198	264	0.109	1.27	1.58	15
Console Type	MML-AP0074NH1-E	007	0.8	2.2	2.5	230-1-50	198	264	0.041	0.21	0.26	15
	MML-AP0094NH1-E	009	1	2.8	3.2	230-1-50	198	264	0.041	0.21	0.26	15
	MML-AP0124NH1-E	012	1.3	4	4	230-1-50	198	264	0.041	0.25	0.31	15
	MML-AP0154NH1-E	015	1.7	5	5	230-1-50	198	264	0.041	0.32	0.40	15
	MML-AP0184NH1-E	018	2.0	5.6	6.3	230-1-50	198	264	0.041	0.46	0.58	15
Air to Air Heat exchanger with DX-coil Type	MMD-VN502HEX1E	009	1.0	4.1(1.30)*	5.53(2.33)*	230-1-50	198	264	0.248	1.50	1.70	15
	MMD-VN802HEX1E	015	1.7	6.56(2.06)*	8.61(3.61)*	230-1-50	198	264	0.254	2.60	3.00	15
	MMD-VN1002HEX1E	018	2.0	8.25(2.32)*	10.92(4.32)*	230-1-50	198	264	0.568	2.90	3.50	15
Air to Air Heat exchanger with DX-coil Humidifier Type	MMD-VNK502HEX1E	009	1	4.1(1.30)*	5.53(2.33)*	230-1-50	198	264	0.248	1.50	1.70	15
	MMD-VNK802HEX1E	015	1.7	6.56(2.06)*	8.61(3.61)*	230-1-50	198	264	0.254	2.60	2.90	15
	MMD-VNK1002HEX1E	018	2	8.25(2.32)*	10.92(4.32)*	230-1-50	198	264	0.568	2.90	3.40	15

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

4-6. Design of control wiring

Summary of communication wiring



W1	Control wiring between indoor and outdoor units (Shield wire)
W2	Control wiring between indoor units (Shield wire)
W3	Control wiring between outdoor units (Shield wire)

*1 When perform a central control, connect a relay connector between [U1, U2] and [U3, U4] terminals in the header unit. (At shipment from factory : No connection)
*2 Connection of shield wire must be connected (Connected to all connecting sections in each Indoor unit)
*3 Group control

Restriction of control wiring

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

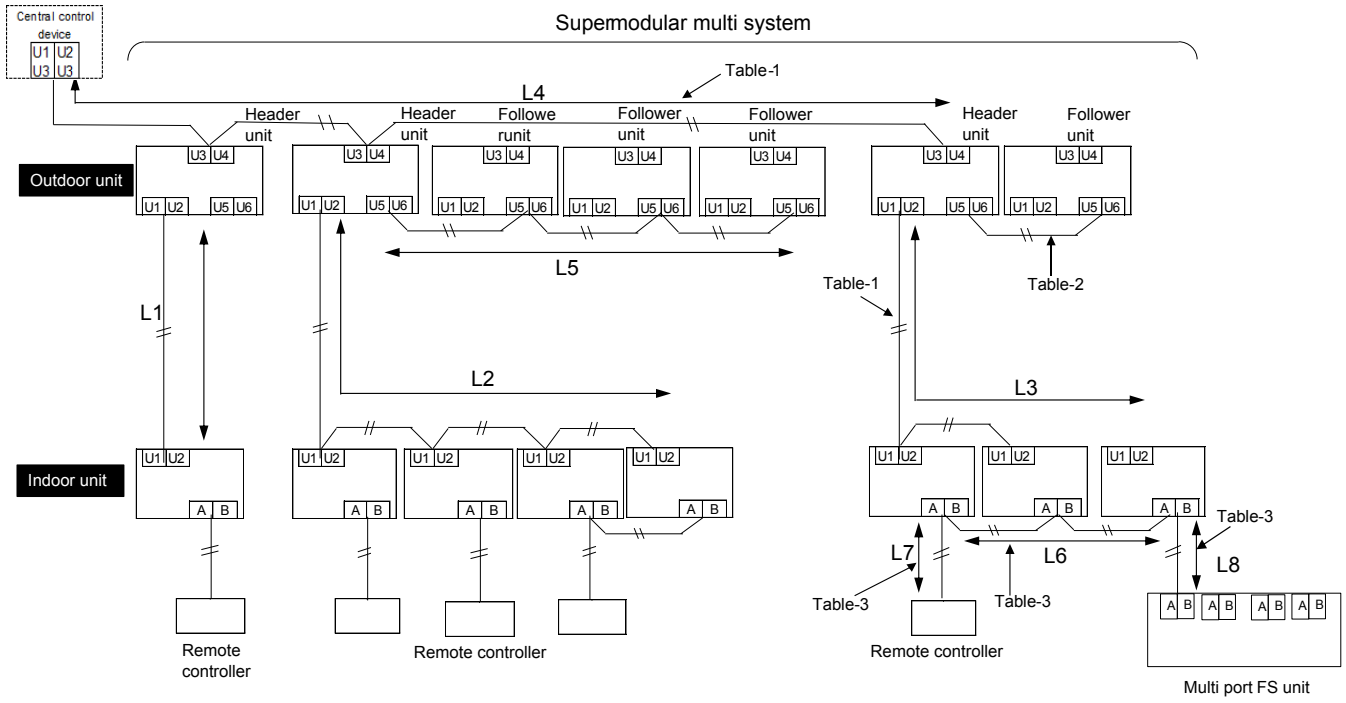


Table- 1 Control wiring between indoor and outdoor units (L1,L2,L3), Central control wiring (L4)

Wiring	2-core, non-polarity
Type	Shield wire
Size/Length	1.25 mm² : Up to 1000 m / 2.0 mm² : Up to 2000 m(*1)

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

Table- 2 Controller wiring between outdoor units (L5)

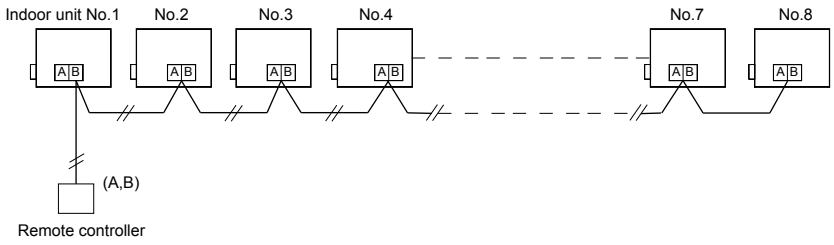
Wiring	2-core, non-polarity
Type	Shield wire
Size/Length	1.25 mm² to 2.0 mm²/Up to 100 m (L5)

Table- 3 Remote controller wiring (L6,L7) , Multi port FS unit witing (L8)

Wire	2-core , non-polarity
Size	0.5mm2 to 2.0mm2
Length	·Up to 500m(L6+L7) ·Up to 400m in case of wireless remote controller in group control Up to 200m total length of control wiring ·between indoor units and Mult port FS unit(L6+L8) ·Up to 300m(L6+L7+L8) ·Up to 300m(L7)

Group Operation through Remote Controller

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



5-1. Specifications

Standard model (50Hz/380～415V)

Model name		Heat recovery		MMY-MAP0806FT8P-E	MMY-MAP1006FT8P-E	MMY-MAP1206FT8P-E	MMY-MAP1406FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	22.4	28.0	33.5	40.0
Heating capacity (*1)		Nominal.	kW	22.4	28.0	33.5	40.0
		Maximum.	kW	25.0	31.5	37.5	45.0
Capacity range			HP	8	10	12	14
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342	342
		Maximum	V	456	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	9.44	12.49	15.46	19.92
		Power input	kW	5.95	7.96	9.75	12.70
		EER	kW/kW	3.76	3.51	3.43	3.14
	Heating	Running current	A	8.57	11.06	13.80	16.47
		Power input	kW	5.40	7.05	8.70	10.50
		COP	kW/kW	4.14	3.97	3.85	3.80
	Starting current		A	Soft Start	Soft Start	Soft Start	Soft Start
Dimension		Height	mm	1830	1830	1830	1830
		Width	mm	990	990	1210	1210
		Depth	mm	780	780	780	780
Weight		Heat recovery	kg	263	263	316	316
Color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor		Type		Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
		Motor output	kW	2.3x2	3.1x2	3.9x2	4.8x2
Fan unit		Fan		Propeller fan	Propeller fan	Propeller fan	Propeller fan
		Motor output	W	1.0	1.0	1.0	1.0
		Air volume	m3/h	9700	9700	12200	12200
Max. external static pressure			Pa	60	50	50	40
Heat exchanger				Finned tube	Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A	R410A
	Charge	Heat recovery	kg	11.0	11.0	11.0	11.0
High-pressure switch			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	21.5	26.1	31.0	35.8
		MOCP (*5)	A	25.0	32.0	40.0	50.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	22.2	22.2	28.6	28.6
	Discharge	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	19.1	19.1	19.1	22.2
	Liquid	Type		Flare	Flare	Flare	Flare
		Diameter	mm	12.7	12.7	12.7	15.9
	Balance	Type		Flare	Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5	9.5
Max. number of connected indoor units (*8)				18	22	27	31
Sound pressure level		Cooling	dB(A)	59.0	59.0	60.0	62.0
		Heating	dB(A)	61.0	61.0	62.0	64.0
Sound power level		Cooling	dB(A)	80.0	80.0	80.0	81.0
		Heating	dB(A)	82.0	82.0	82.0	83.0
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model name		Heat recovery		MMY-MAP1606FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP2006FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	45.0	50.4	56.0
Heating capacity (*1)		Nominal.	kW	45.0	50.4	56.0
		Maximum.	kW	50.0	56.5	58.0
Capacity range			HP	16	18	20
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342
		Maximum	V	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	21.81	25.10	29.18
		Power input	kW	13.90	16.00	18.60
		EER	kW/kW	3.23	3.15	3.01
	Heating	Running current	A	19.14	21.49	24.68
		Power input	kW	12.20	13.70	15.90
		COP	kW/kW	3.68	3.67	3.52
	Starting current		A	Soft Start	Soft Start	Soft Start
Dimension		Height	mm	1830	1830	1830
		Width	mm	1600	1600	1600
		Depth	mm	780	780	780
Weight		Heat recovery	kg	377	377	377
Color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor		Type		Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
		Motor output	kW	5.8x2	6.5x2	7.6x2
Fan unit		Fan		Propeller fan	Propeller fan	Propeller fan
		Motor output	kW	2.0	2.0	2.0
		Air volume	m3/h	17300	17300	17900
Max. external static pressure			Pa	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A
	Charge	Heat recovery	kg	11.0	11.0	11.0
High-pressure switch			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	40.6	44.9	49.3
		MOCP (*5)	A	50.0	50.0	63.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing
		Diameter	mm	28.6	28.6	28.6
	Discharge	Type		Brazing	Brazing	Brazing
		Diameter	mm	22.2	22.2	22.2
	Liquid	Type		Flare	Flare	Flare
		Diameter	mm	19.1	19.1	19.1
	Balance	Type		Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5
Max. number of connected indoor units (*8)				36	40	41
Sound pressure level		Cooling	dB(A)	61.0	61.0	61.0
		Heating	dB(A)	62.0	62.0	62.0
Sound power level		Cooling	dB(A)	83.0	83.0	83.0
		Heating	dB(A)	84.0	84.0	84.0
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model	Name	Heat recovery		MMY-AP2216FT8P-E	MMY-AP2416FT8P-E	MMY-AP2616FT8P-E	MMY-AP2816FT8P-E
	Combination	Heat recovery		MMY-MAP1206FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E
				MMY-MAP1006FT8P-E	MMY-MAP1006FT8P-E	MMY-MAP1206FT8P-E	MMY-MAP1406FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	61.5	68.0	73.5	80.0
Heating capacity (*1)		Nominal.	kW	61.5	68.0	73.5	80.0
		Maximum.	kW	69.0	76.5	82.5	90.0
Capacity range			HP	22	24	26	28
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342	342
		Maximum	V	456	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	27.94	32.41	35.41	39.85
		Power input	kW	17.71	20.66	22.45	25.40
		EER	kW/kW	3.47	3.29	3.27	3.15
	Heating	Running current	A	24.85	27.53	30.29	32.95
		Power input	kW	15.75	17.55	19.20	21.00
		COP	kW/kW	3.90	3.87	3.83	3.81
	Starting current		A	Soft Start	Soft Start	Soft Start	Soft Start
Weight	Heat recovery		kg	316 + 263	316 + 263	316 + 316	316 + 316
Color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output		kW	3.9x2 +3.1x2	4.8x2 +3.1x2	4.8x2 +3.9x2	4.8x2 +4.8x2
Fan unit	Fan			Propeller fan	Propeller fan	Propeller fan	Propeller fan
	Motor output		kW	1.0 + 1.0	1.0 + 1.0	1.0 + 1.0	1.0 + 1.0
	Air volume		m3/h	12200 + 9700	12200 + 9700	12200 + 12200	12200 + 12200
Max. external static pressure			Pa	50	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A	R410A
	Charge	Heat recovery	kg	11.0 + 11.0	11.0 + 11.0	11.0 + 11.0	11.0 + 11.0
High-pressure switch			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	57.1	62.0	66.8	71.6
		MOCP (*5)	A	63.0	80.0	80.0	80.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	34.9	34.9	34.9	34.9
	Discharge	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	28.6	28.6	28.6	28.6
	Liquid	Type		Flare	Flare	Flare	Flare
		Diameter	mm	19.1	19.1	22.2	22.2
	Balance	Type		Flare	Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5	9.5
Max. number of connected indoor units (*8)				49	54	58	63
Sound pressure level		Cooling	dB(A)	63.0	64.0	64.5	65.5
		Heating	dB(A)	65.0	66.0	66.5	67.5
Sound power level		Cooling	dB(A)	83.5	84.0	84.0	84.5
		Heating	dB(A)	85.5	86.0	86.0	86.5
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model	Name	Heat recovery		MMY-AP3016FT8P-E	MMY-AP3216FT8P-E	MMY-AP3416FT8P-E
	Combination	Heat recovery		MMY-MAP1606FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E
				MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1606FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	85.0	90.4	95.4
Heating capacity (*1)		Nominal.	kW	85.0	90.4	95.4
		Maximum.	kW	95.0	101.5	106.5
Capacity range			HP	30	32	34
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342
		Maximum	V	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	41.73	45.03	46.91
		Power input	kW	26.60	28.70	29.90
		EER	kW/kW	3.20	3.15	3.19
	Heating	Running current	A	35.61	38.28	40.63
		Power input	kW	22.70	24.40	25.90
		COP	kW/kW	3.74	3.70	3.68
	Starting current		A	Soft Start	Soft Start	Soft Start
Weight	Heat recovery		kg	377 + 316	377 + 316	377 + 377
Color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output		kW	5.8x2 +4.8x2	6.5x2 +4.8x2	6.5x2 +5.8x2
Fan unit	Fan			Propeller fan	Propeller fan	Propeller fan
	Motor output		kW	2.0 + 1.0	2.0 + 1.0	2.0 + 2.0
	Air volume		m3/h	17300 + 12200	17300 + 12200	17300 + 17300
Max. external static pressure			Pa	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A
	Charge	Heat recovery	kg	11.0 + 11.0	11.0 + 11.0	11.0 + 11.0
High-pressure switch			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	76.5	81.3	85.6
		MOCP (*5)	A	100.0	100.0	100.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing
		Diameter	mm	34.9	34.9	34.9
	Discharge	Type		Brazing	Brazing	Brazing
		Diameter	mm	28.6	28.6	28.6
	Liquid	Type		Flare	Flare	Flare
		Diameter	mm	22.2	22.2	22.2
	Balance	Type		Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5
Max. number of connected indoor units (*8)				64	64	64
Sound pressure level		Cooling	dB(A)	65.0	65.0	64.5
		Heating	dB(A)	66.5	66.5	65.5
Sound power level		Cooling	dB(A)	85.5	85.5	86.5
		Heating	dB(A)	87.0	87.0	87.5
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model	Name	Heat recovery		MMY-AP3616FT8P-E	MMY-AP3816FT8P-E	MMY-AP4016FT8P-E
	Combination	Heat recovery		MMY-MAP1806FT8P-E	MMY-MAP2006FT8P-E	MMY-MAP2006FT8P-E
				MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP2006FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	100.8	106.4	112.0
Heating capacity (*1)		Nominal.	kW	100.8	106.4	112.0
		Maximum.	kW	113.0	114.5	116.0
Capacity range			HP	36	38	40
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342
		Maximum	V	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	50.20	54.28	58.36
		Power input	kW	32.00	34.60	37.20
		EER	kW/kW	3.15	3.08	3.01
	Heating	Running current	A	42.99	46.19	49.35
		Power input	kW	27.40	29.60	31.80
		COP	kW/kW	3.68	3.59	3.52
	Starting current		A	Soft Start	Soft Start	Soft Start
Weight	Heat recovery		kg	377 + 377	377 + 377	377 + 377
Color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output		kW	6.5x2 +6.5x2	7.6x2 +6.5x2	7.6x2 +7.6x2
Fan unit	Fan			Propeller fan	Propeller fan	Propeller fan
	Motor output		kW	2.0 + 2.0	2.0 + 2.0	2.0 + 2.0
	Air volume		m3/h	17300 + 17300	17900 + 17300	17900 + 17900
Max. external static pressure			Pa	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A
	Charge	Heat recovery	kg	11.0 + 11.0	11.0 + 11.0	11.0 + 11.0
High-pressure switch			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	89.8	94.2	98.6
		MOCP (*5)	A	100.0	125.0	125.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing
		Diameter	mm	41.3	41.3	41.3
	Discharge	Type		Brazing	Brazing	Brazing
		Diameter	mm	34.9	34.9	34.9
	Liquid	Type		Flare	Flare	Flare
		Diameter	mm	22.2	22.2	22.2
	Balance	Type		Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5
Max. number of connected indoor units (*8)				64	64	64
Sound pressure level		Cooling	dB(A)	64.5	64.5	64.5
		Heating	dB(A)	65.5	65.5	65.5
Sound power level		Cooling	dB(A)	86.5	86.5	86.5
		Heating	dB(A)	87.5	87.5	87.5
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model	Name	Heat recovery		MMY-AP4216FT8P-E	MMY-AP4416FT8P-E	MMY-AP4616FT8P-E	MMY-AP4816FT8P-E
	Combination	Heat recovery		MMY-MAP1406FT8P-E	MMY-MAP1606FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E
				MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1606FT8P-E
				MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	120.0	125.0	130.4	135.4
Heating capacity (*1)		Nominal.	kW	120.0	125.0	130.4	135.4
		Maximum.	kW	135.0	140.0	146.5	151.5
Capacity range			HP	42	44	46	48
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342	342
		Maximum	V	456	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	59.8	61.7	65.0	65.4
		Power input	kW	38.1	39.3	41.4	41.7
		EER	kW/kW	3.15	3.18	3.15	3.25
	Heating	Running current	A	49.4	52.1	54.4	57.4
		Power input	kW	31.5	33.2	34.7	36.6
		COP	kW/kW	3.81	3.77	3.76	3.70
	Starting current		A	Soft Start	Soft Start	Soft Start	Soft Start
Weight	Heat recovery		kg	316 + 316 + 316	377 + 316 + 316	377 + 316 + 316	377 + 377 + 316
color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output		kW	4.8x2 + 4.8x2 + 4.8x2	5.8x2 + 4.8x2 + 4.8x2	6.5x2 + 4.8x2 + 4.8x2	6.5x2 + 5.8x2 + 4.8x2
Fan unit	Fan			Propeller fan	Propeller fan	Propeller fan	Propeller fan
	Motor output		kW	1.0 + 1.0 + 1.0	2.0 + 1.0 + 1.0	2.0 + 1.0 + 1.0	2.0 + 2.0 + 1.0
	Air volume		m3/h	12200 + 12200 + 12200	17300 + 12200 + 12200	17300 + 12200 + 12200	17300 + 17300 + 12200
Max. external static pressure			Pa	40	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A	R410A
	Charge	Heat recovery	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			MPa	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	107.4	112.3	116.5	122.0
		MOCP (*5)	A	125.0	125.0	160.0	160.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	41.3	41.3	41.3	41.3
	Discharge	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	34.9	34.9	34.9	34.9
	Liquid	Type		Flare	Flare	Flare	Flare
		Diameter	mm	22.2	22.2	22.2	22.2
	Balance	Type		Flare	Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5	9.5
Max. number of connected indoor units (*8)				64	64	64	64
Sound pressure level		Cooling	dB(A)	67.0	66.5	66.5	66.5
		Heating	dB(A)	69.0	68.5	68.5	68.0
Sound power level		Cooling	dB(A)	86.0	87.0	87.0	87.5
		Heating	dB(A)	88.0	88.5	88.5	88.5
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 Wet Bulb.
Based on equivalent piping length of 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

Standard model (50Hz/380～415V)

Model	Name	Heat recovery		MMY-AP5016FT8P-E	MMY-AP5216FT8P-E	MMY-AP5416FT8P-E
	Combination	Heat recovery		MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E
				MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E
				MMY-MAP1406FT8P-E	MMY-MAP1606FT8P-E	MMY-MAP1806FT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit
Cooling capacity (*1)		Nominal.	kW	140.8	145.8	151.2
Heating capacity (*1)		Nominal.	kW	140.8	145.8	151.2
		Maximum.	kW	158.0	163.0	169.5
Capacity range			HP	50	52	54
Power supply				3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)	3N~ 50Hz 400V(380-415V)
Voltage range (*2)		Minimum	V	342	342	342
		Maximum	V	456	456	456
Electrical characteristic (*1)	Cooling	Running current	A	70.1	72.0	75.3
		Power input	kW	44.7	45.9	48.0
		EER	kW/kW	3.15	3.18	3.15
	Heating	Running current	A	59.8	62.1	64.5
		Power input	kW	38.1	39.6	41.1
		COP	kW/kW	3.70	3.68	3.68
	Starting current		A	Soft Start	Soft Start	Soft Start
Weight	Heat recovery		MPa	377 + 377 + 316	377 + 377 + 377	377 + 377 + 377
color				Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)	Silky shade (Munsell 1Y8.5/0.5)
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output		kW	6.5x2 + 6.5x2 + 4.8x2	6.5x2 + 6.5x2 + 5.8x2	6.5x2 + 6.5x2 + 6.5x2
Fan unit	Fan			Propeller fan	Propeller fan	Propeller fan
	Motor output		kW	2.0 + 2.0 + 1.0	2.0 + 2.0 + 2.0	2.0 + 2.0 + 2.0
	Air volume		m3/h	17300 + 17300 + 12200	17300 + 17300 + 17300	17300 + 17300 + 17300
Max. external static pressure			Pa	40	40	40
Heat exchanger				Finned tube	Finned tube	Finned tube
Refrigerant	Name			R410A	R410A	R410A
	Charge	Heat recovery	kg	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	OFF:2.9 ON:3.73	OFF:2.9 ON:3.73
Protective devices				(*3)	(*3)	(*3)
Power supply wiring		MCA (*4)	A	126.2	130.5	134.7
		MOCP (*5)	A	160.0	160.0	160.0
Piping connections	Suction	Type		Brazing	Brazing	Brazing
		Diameter	mm	41.3	41.3	41.3
	Discharge	Type		Brazing	Brazing	Brazing
		Diameter	mm	34.9	34.9	34.9
	Liquid	Type		Flare	Flare	Flare
		Diameter	mm	22.2	22.2	22.2
	Balance	Type		Flare	Flare	Flare
		Diameter	mm	9.5	9.5	9.5
Max. number of connected indoor units (*8)				64	64	64
Sound pressure level		Cooling	dB(A)	66.5	66.0	66.0
		Heating	dB(A)	68.0	67.0	67.0
Sound power level		Cooling	dB(A)	87.5	88.0	88.0
		Heating	dB(A)	88.5	89.0	89.0
Operation temperature range		Cooling(*7)	CDB	-10.0 to 46.0	-10.0 to 46.0	-10.0 to 46.0
		Heating(*6)	CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 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 7.5m and piping height difference of 0m.

(*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 / Compressor case thermostat / PC board fuse

(*4) Select wire size base on the larger value of MCA.
MCA : Minimum Circuit Amps

(*5) MOCP : Maximum Overcurrent Protection(Amps)

(*6) Low ambient heating (-20degC or less) for extended periods of time is not allowed

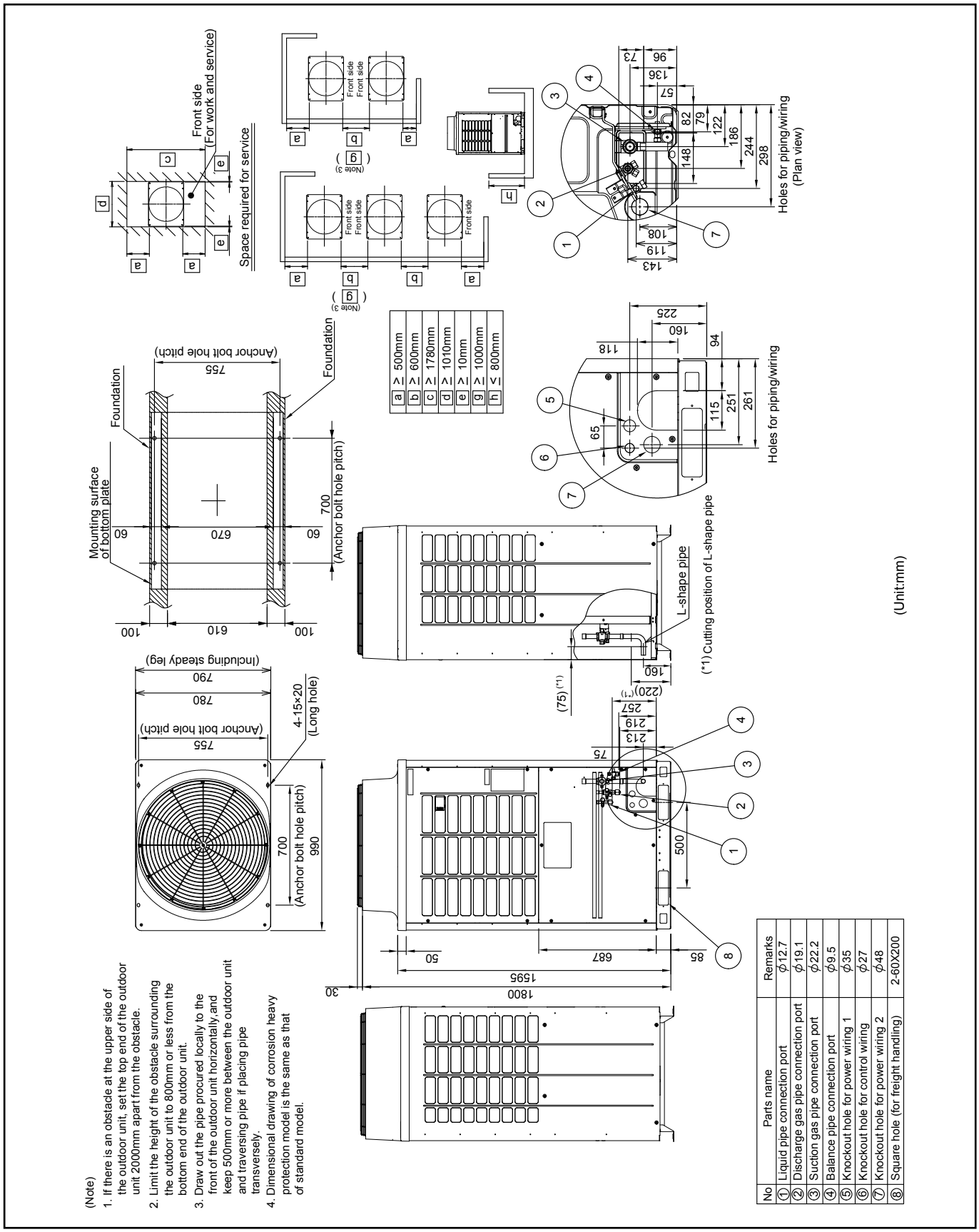
(*7) Low ambient cooling (-5degC or less)
1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures.
2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling.

(*8) Under centralized control maximum 54 unit.

5-2. Dimensional drawing

Single unit

Model : MMY-MAP0806FT8P-E , MAP1006FT8P-E

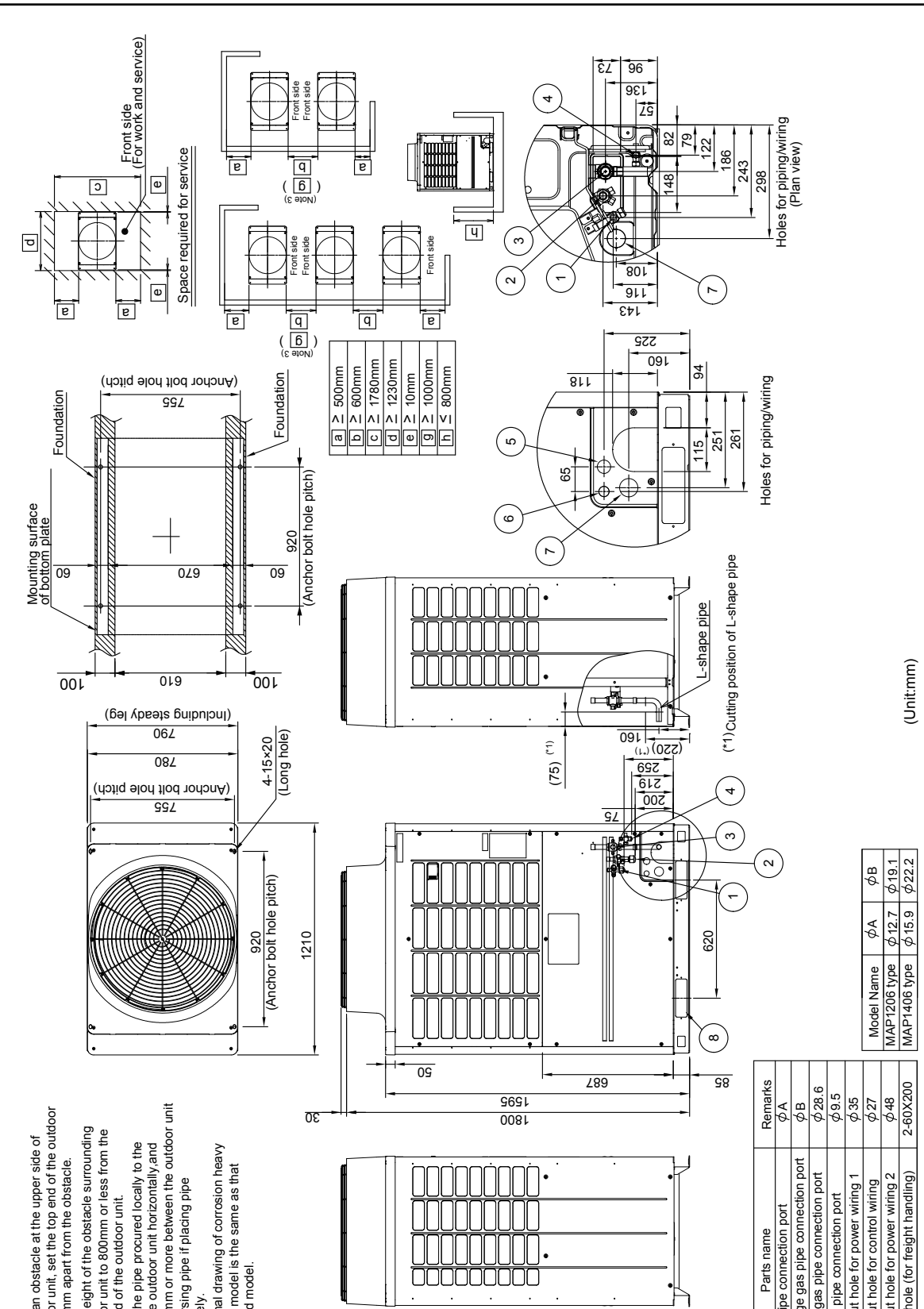


(Note)
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally 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 heavy protection model is the same as that of standard model.

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

Single unit

Model : MMY-MAP1206FT8P-E, MAP1406FT8P-E



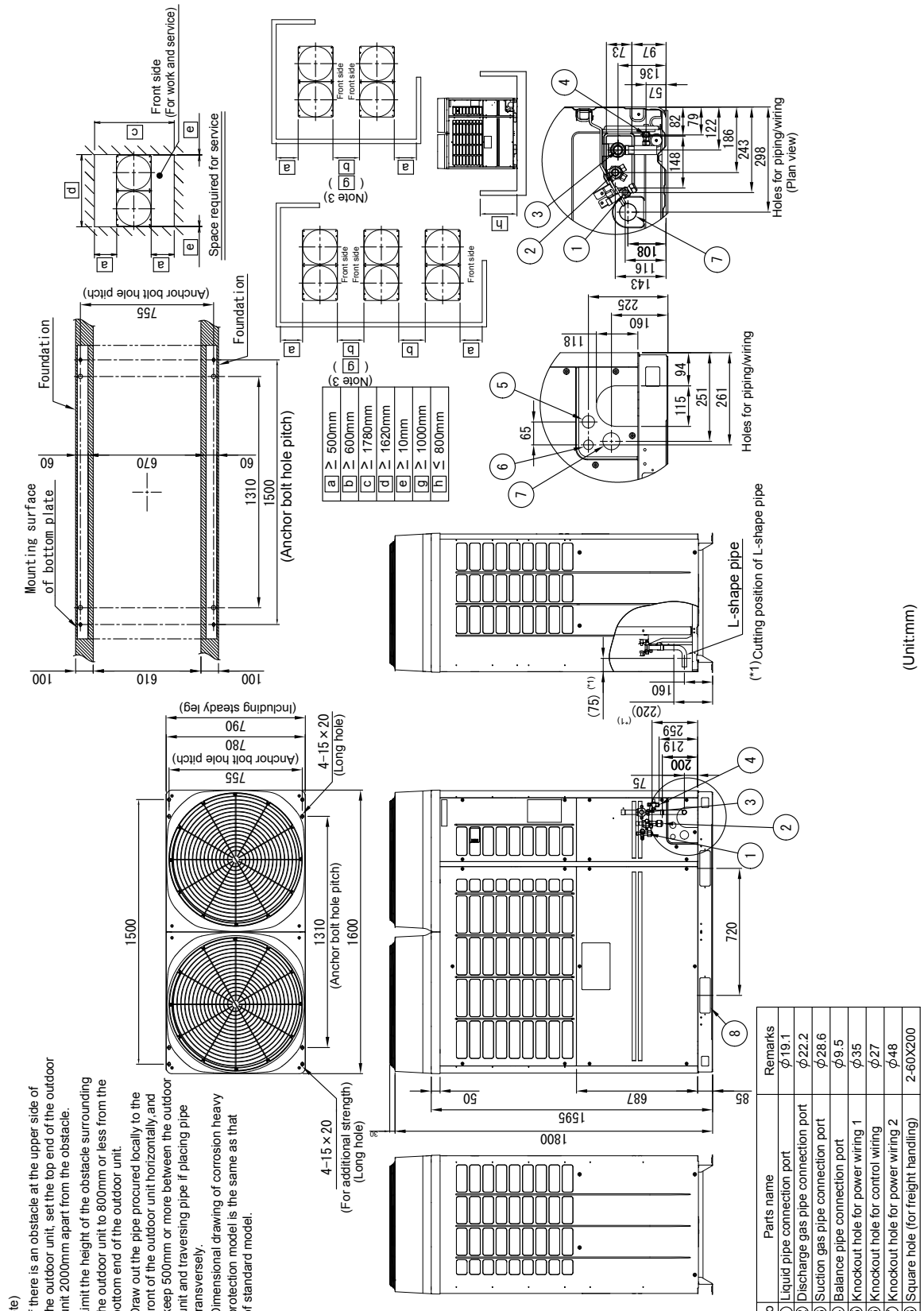
a	≥ 500mm
b	≥ 600mm
c	≥ 1780mm
d	≥ 1230mm
e	≥ 10mm
g	≥ 1000mm
h	≤ 800mm

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
MAP1206 type	ϕ12.7	ϕ19.1
MAP1406 type	ϕ15.9	ϕ22.2

Single unit

Model : MMY-MAP1608FT8P-E, MAP1806FT8P-E, MAP2006FT8P-E



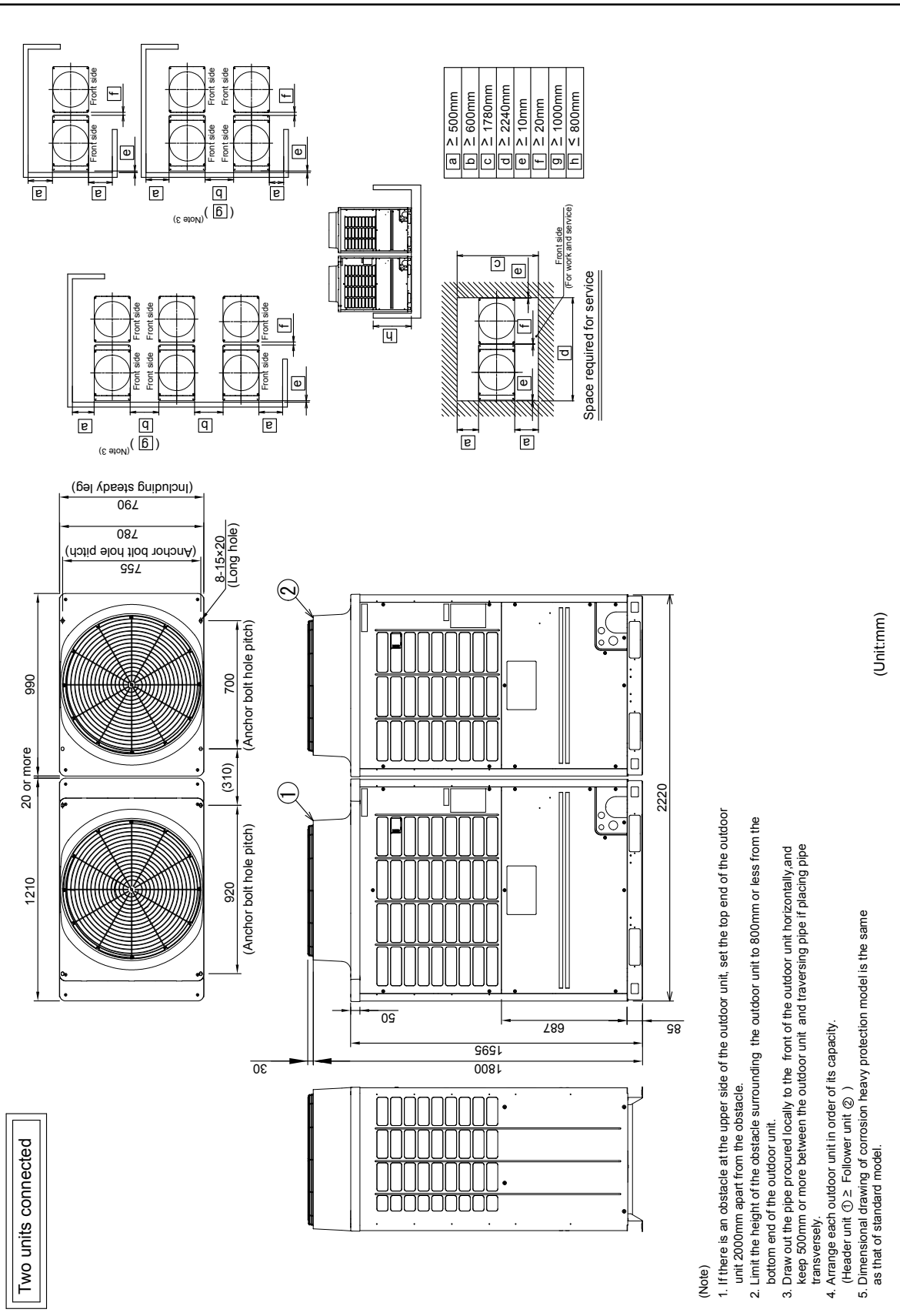
	a	b	c	d	e	g	h
≥	500mm	600mm	1780mm	1620mm	10mm	1000mm	800mm

(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 heavy protection model is the same as that of standard model.

No	Parts name	Remarks
①	Liquid pipe connection port	φ19.1
②	Discharge gas pipe connection port	φ22.2
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

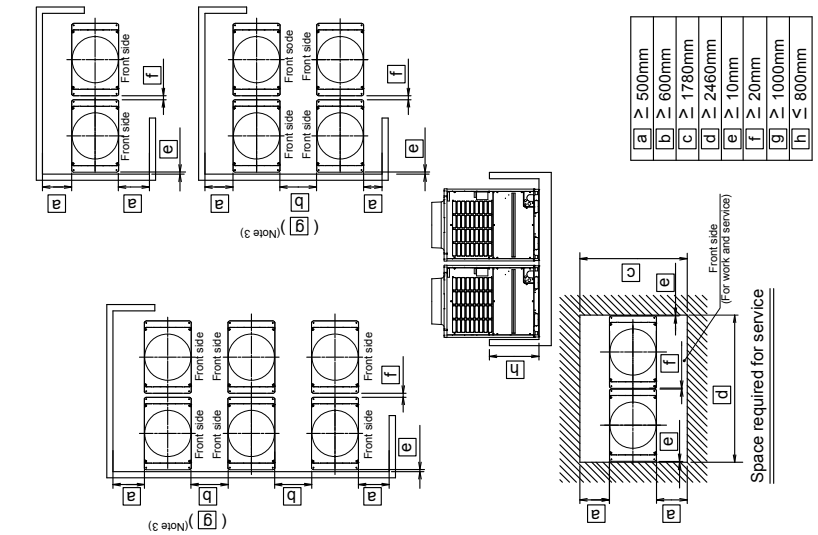
Combination

Model	Outdoor unit	
	(1) Header unit	(2) Follower unit
MMY-AP2216FT8P-E	MMY-MAP1206FT8P-E	MMY-MAP1006FT8P-E
MMY-AP2416FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1006FT8P-E

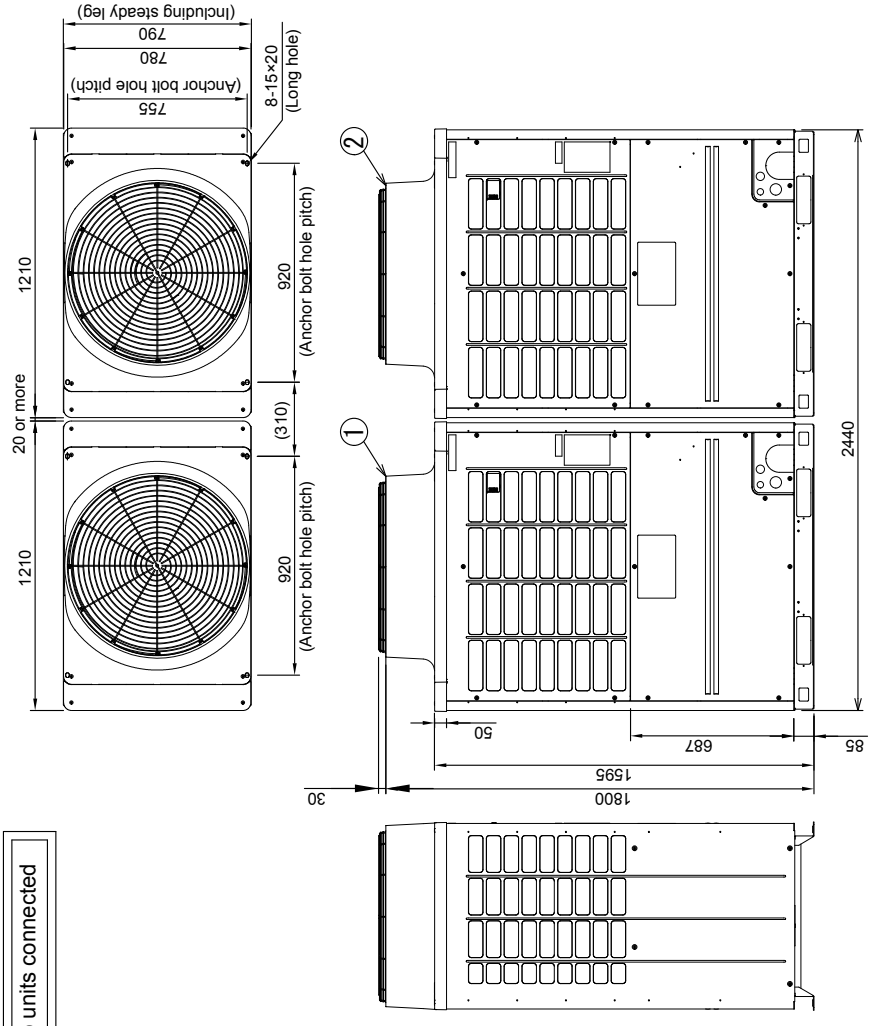


Combination

Model	Outdoor unit	
	(1) Header unit	(2) Follower unit
MMY-AP2616FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1206FT8P-E
MMY-AP2816FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E



Two units connected

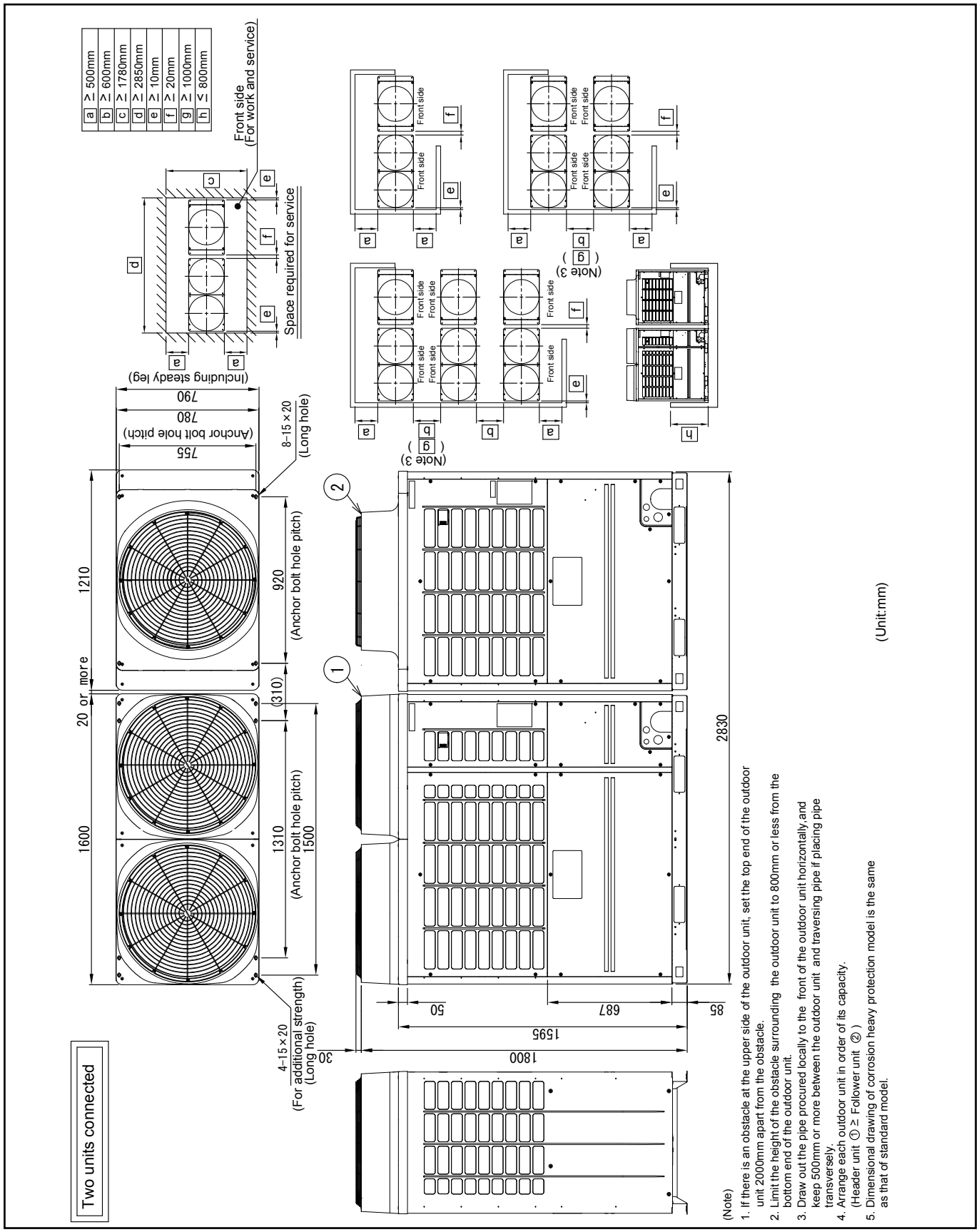


(Unit:mm)

(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 heavy protection model is the same as that of standard model.

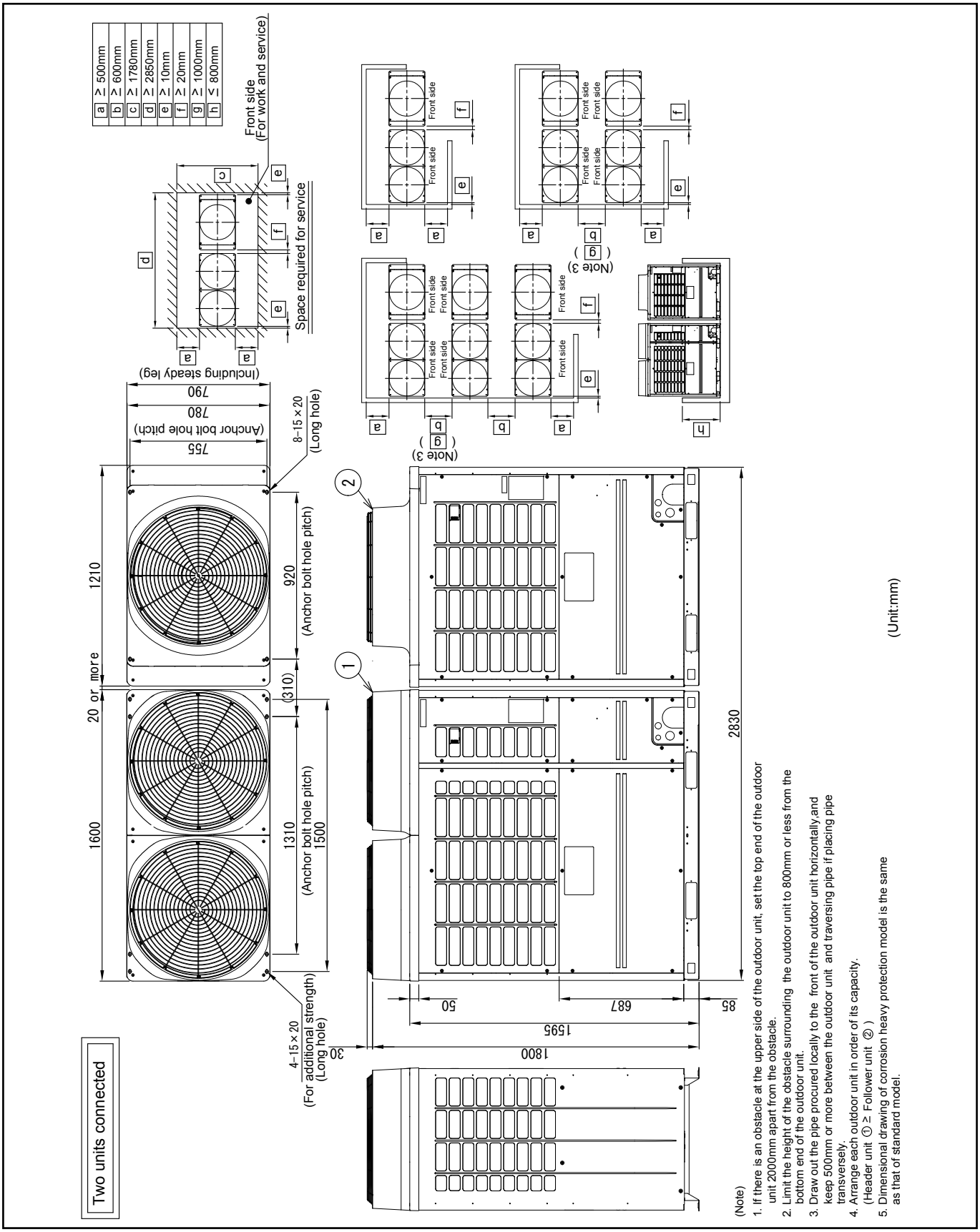
Combination

Model	Outdoor unit	
	(1) Header unit	(2) Follower unit
MMY-AP3016FT8P-E	MMY-MAP1606FT8P-E	MMY-MAP1406FT8P-E
MMY-AP3216FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1406FT8P-E



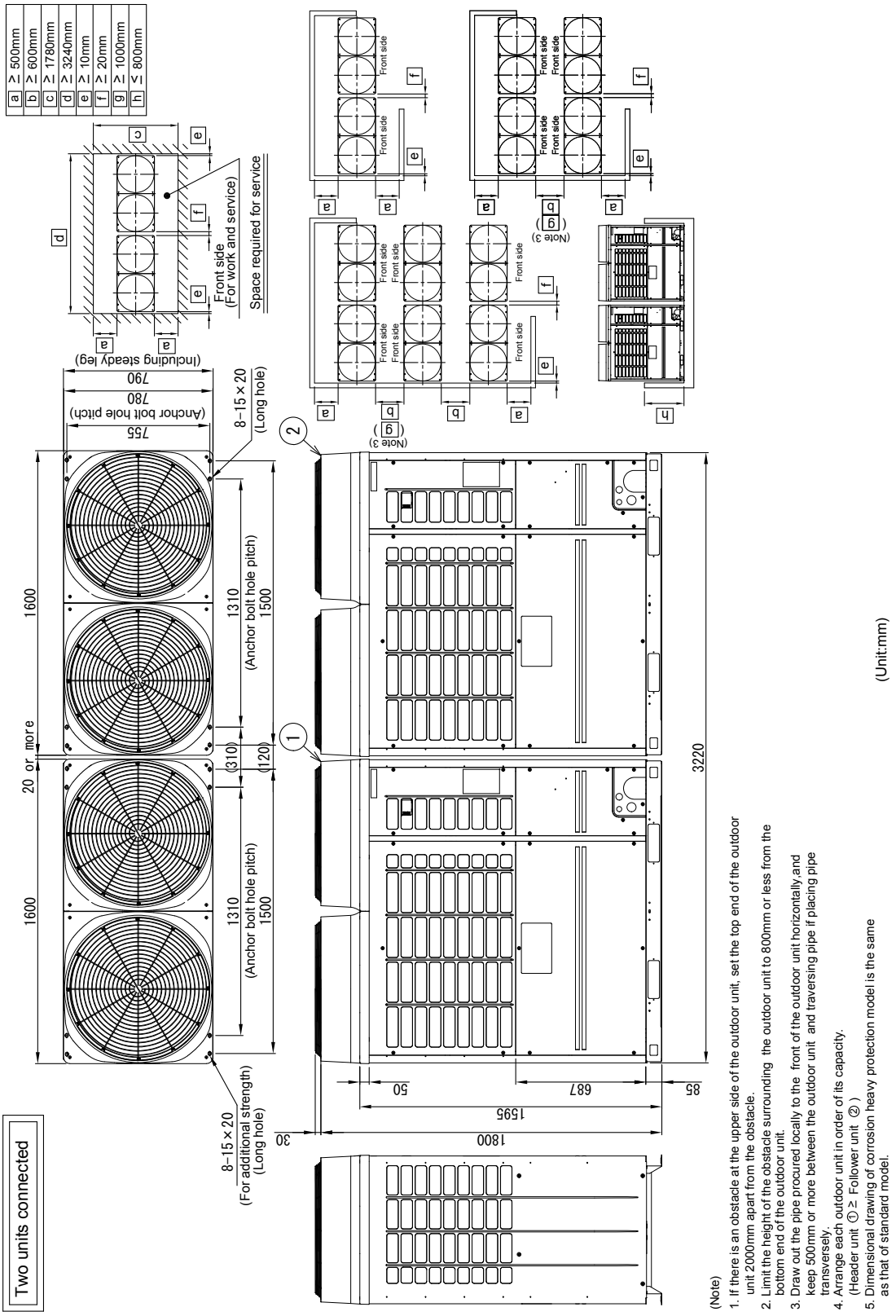
Combination

Model	Outdoor unit	
	(1) Header unit	(2) Follower unit
MMY-AP3016FT8P-E	MMY-MAP1606FT8P-E	MMY-MAP1406FT8P-E
MMY-AP3216FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1406FT8P-E



Combination

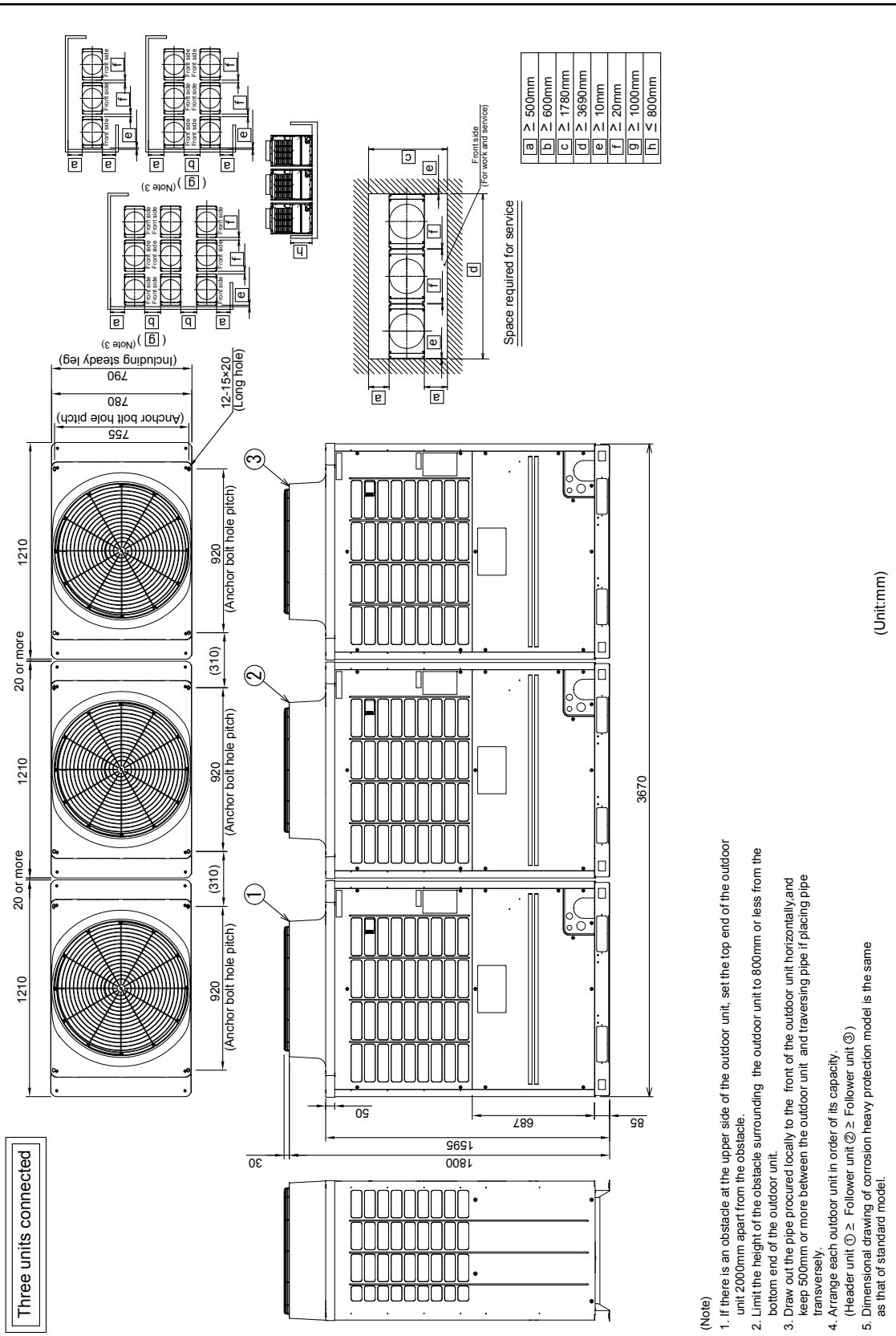
Model	Outdoor unit	
	(1) Header unit	(2) Follower unit
MMY-AP3416FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1606FT8P-E
MMY-AP3616FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E
MMY-AP3816FT8P-E	MMY-MAP2006FT8P-E	MMY-MAP1806FT8P-E
MMY-AP4016FT8P-E	MMY-MAP2006FT8P-E	MMY-MAP2006FT8P-E



(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 heavy protection model is the same as that of standard model.

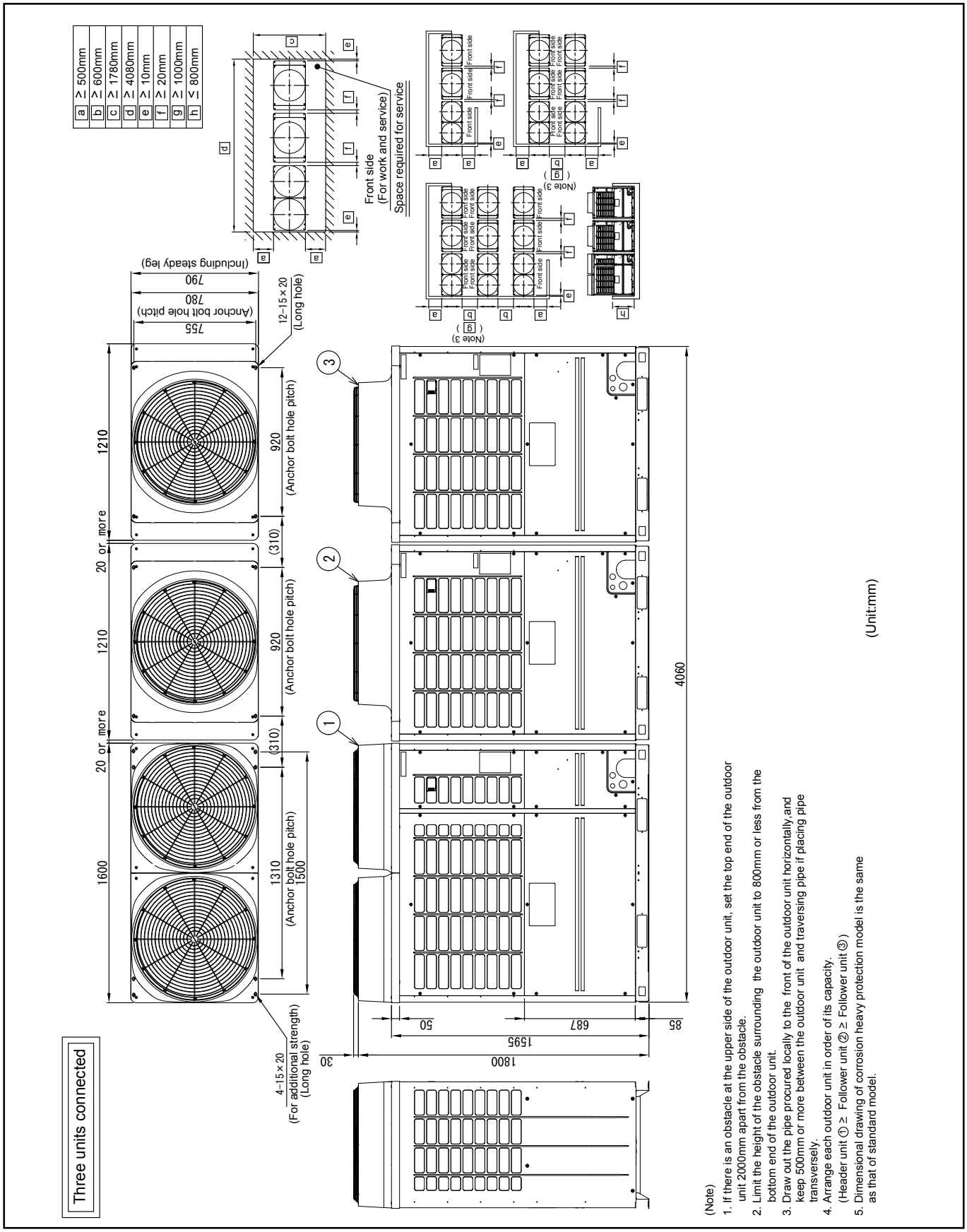
Combination

Model	Outdoor unit		
	(1) Header unit	(2) Follower unit	(3) Follower unit
MMY-AP4216FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E



Combination

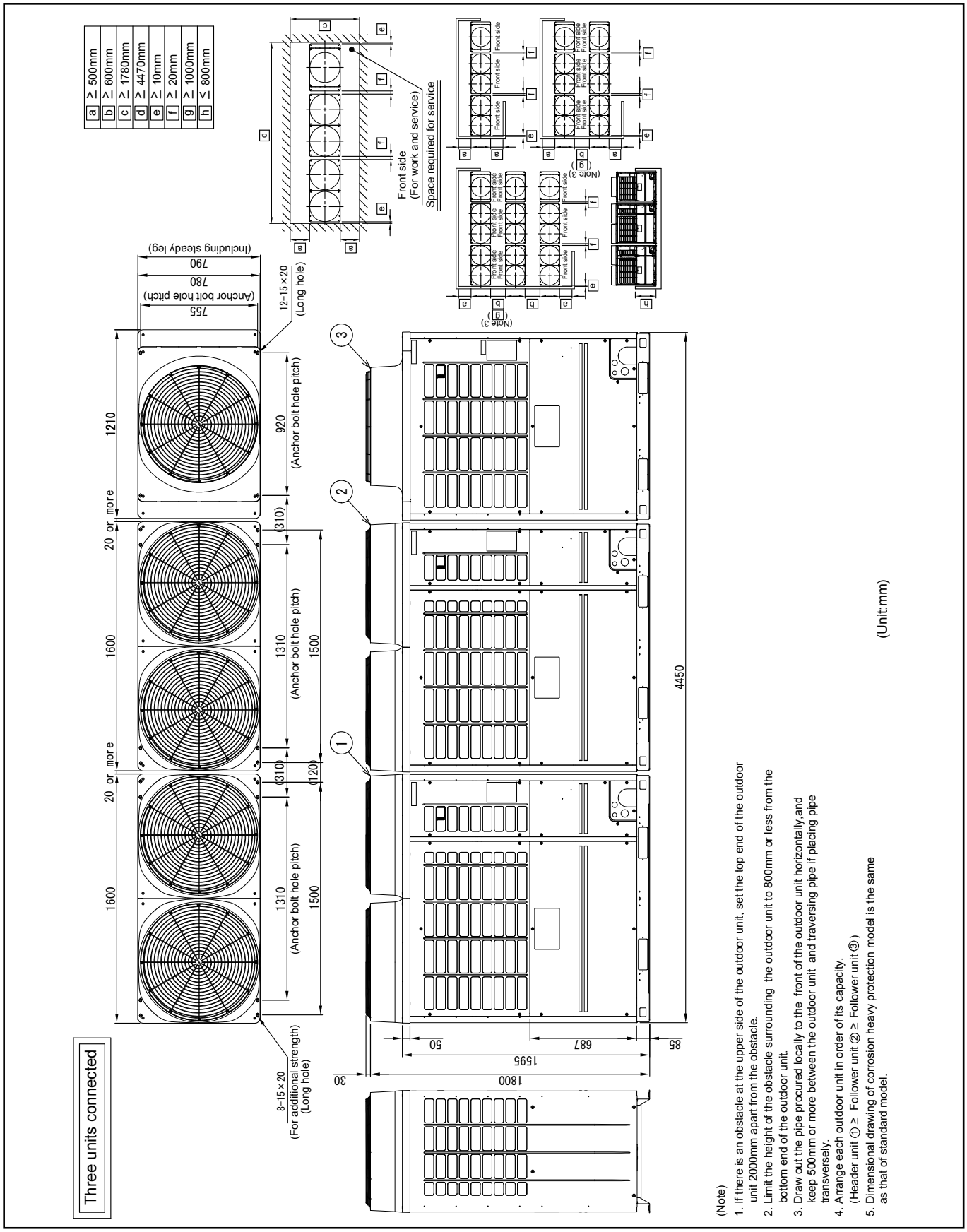
Model	Outdoor unit		
	(1) Header unit	(2) Follower unit	(3) Follower unit
MMY-AP4416FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E
MMY-AP4616FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1406FT8P-E	MMY-MAP1406FT8P-E



(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 heavy protection model is the same as that of standard model.

Combination

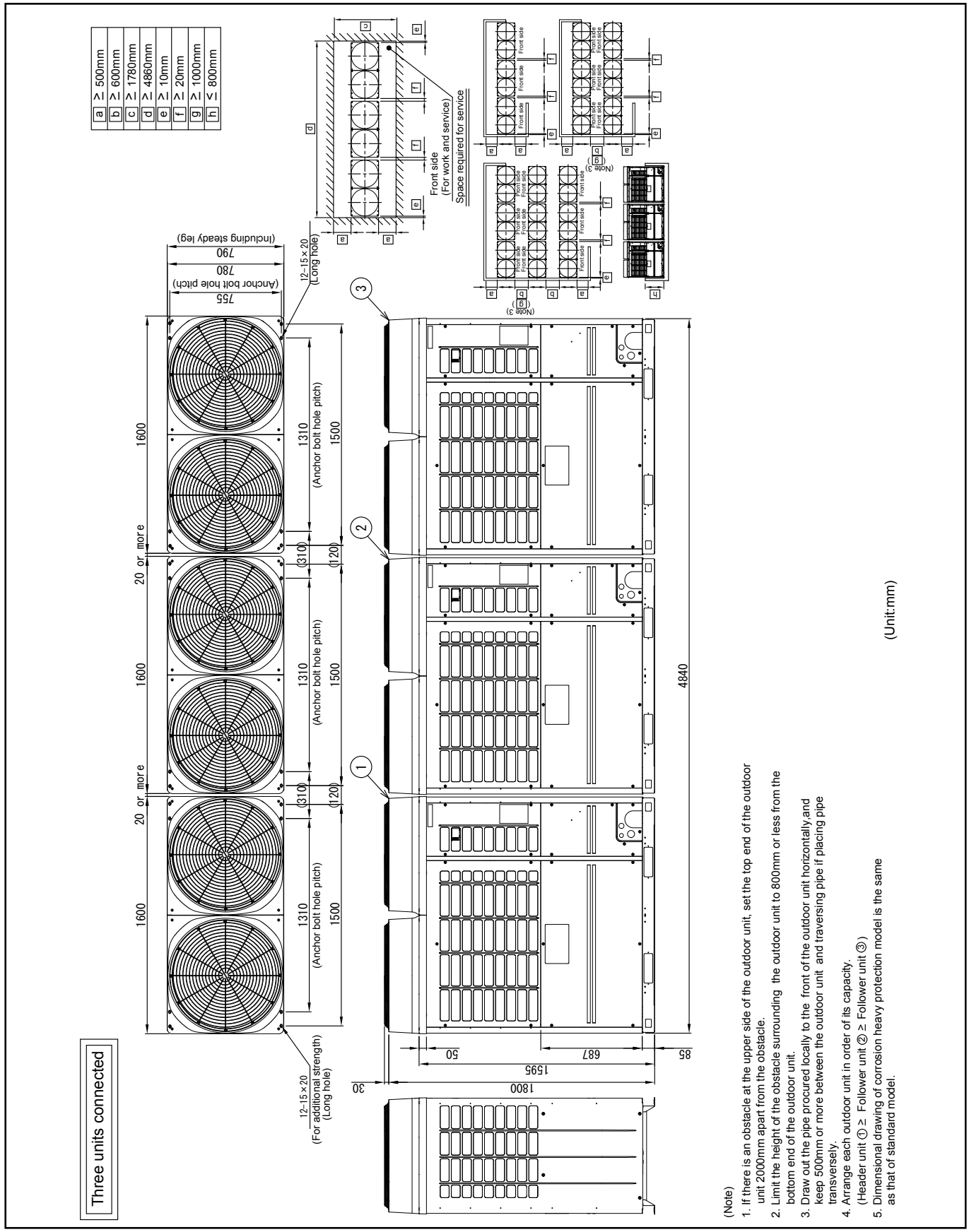
Model	Outdoor unit		
	(1) Header unit	(2) Follower unit	(3) Follower unit
MMY-AP4816FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1606FT8P-E	MMY-MAP1406FT8P-E
MMY-AP5016FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1406FT8P-E



(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 heavy protection model is the same as that of standard model.

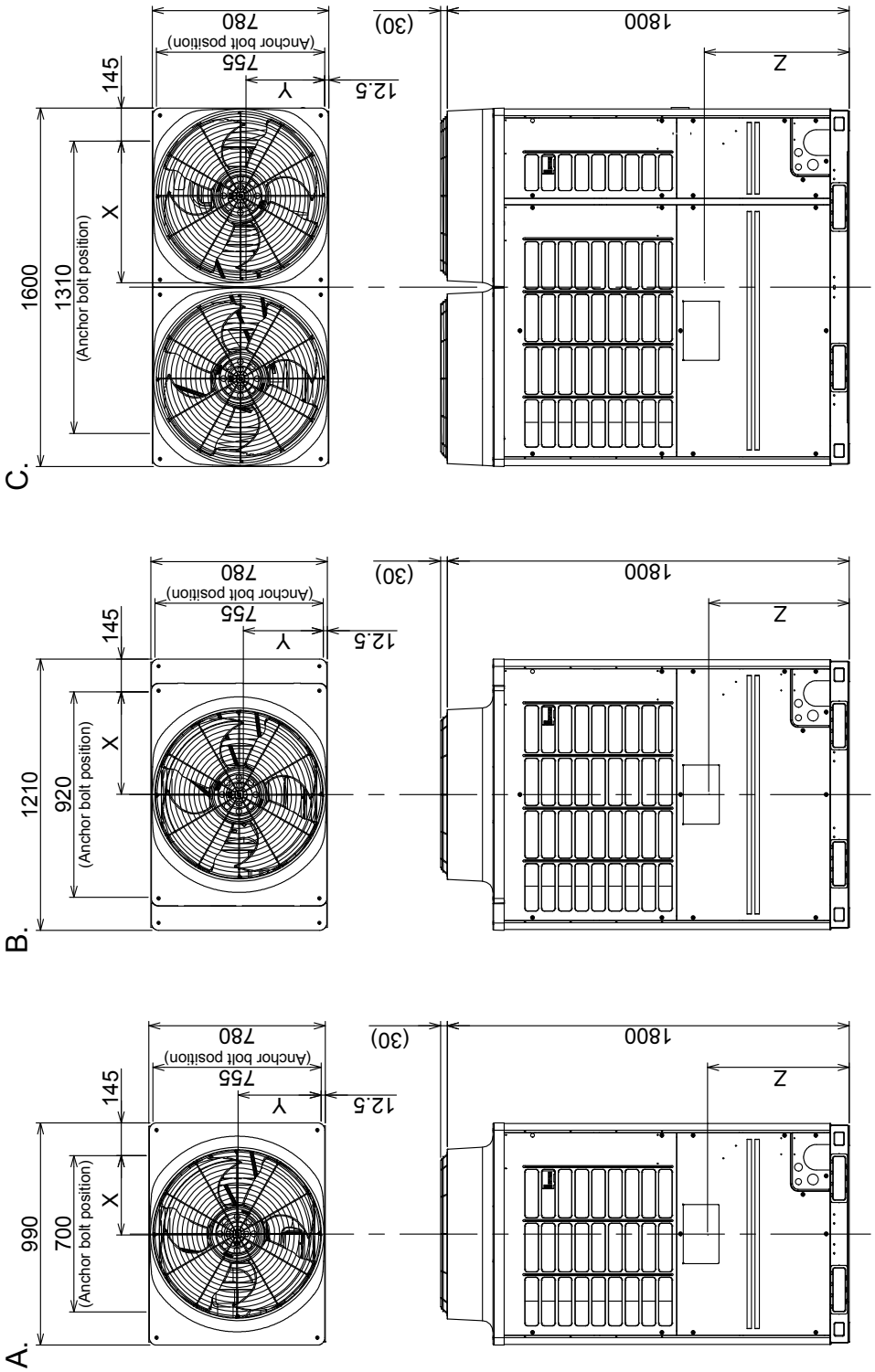
Combination

Model	Outdoor unit		
	(1) Header unit	(2) Follower unit	(3) Follower unit
MMY-AP5216FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1606FT8P-E
MMY-AP5416FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E	MMY-MAP1806FT8P-E



(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 heavy protection model is the same as that of standard model.

5.3 Center of gravity



(Unit : mm)

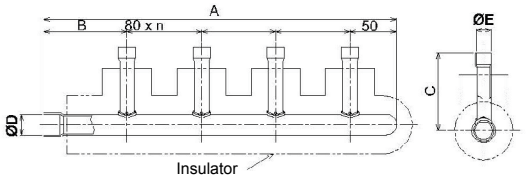
No.	Model type	X (mm)	Y (mm)	Z (mm)	Mass (kg)
A	MMY-MAP0806FT8P-E	355	373	635	263
	MMY-MAP1006FT8P-E				
B	MMY-MAP1206FT8P-E	460	358	630	316
	MMY-MAP1406FT8P-E				
C	MMY-MAP1606FT8P-E	635	353	650	377
	MMY-MAP1806FT8P-E				
	MMY-MAP2006FT8P-E				

5-4. Branch header / branch joint

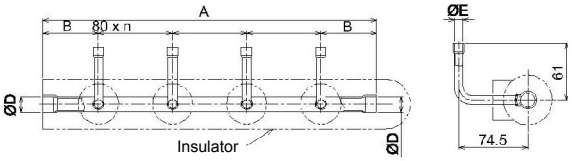
• Branch header

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

Suction gas side, Discharge gas side



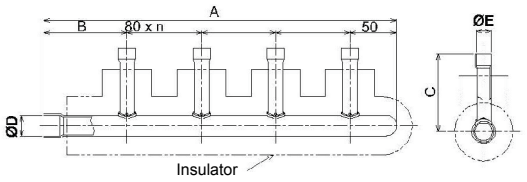
Liquid side



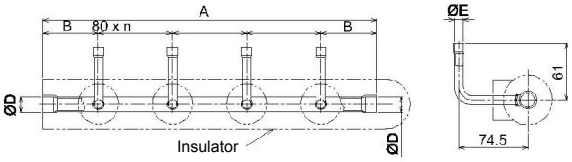
Model		A	B	C	øD	øE	n	Accessory socket Q'ty	Sealed pipe
RBM-HY1043FE	Suction gas side	380	90	83.6	22.2	15.9	3	⑥x 3, ⑨x 4, ⑭x 1, ⑦⓪x 1	ø 15.9 x 1
	Discharge gas side	380	90	83.6	22.2	15.9	3	⑥x 4, ⑨x 4, ⑱x 1, ⑧⑤x 1	ø 15.9 x 3
	Liquid side	330	45	-	15.9	9.5	3	①x 4, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 1
RBM-HY1083FE	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

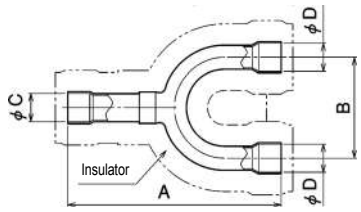


Model		A	B	C	øD	øE	n	Accessory socket Q'ty	Sealed pipe
RBM-HY1043E	Gas side	380	90	83.6	22.2	15.9	3	⑥x 4, ⑨x 4, ⑭x 1, ⑱x 1, ⑦⓪x 1	ø 15.9 x 1
	Liquid side	360	60	-	15.9	9.5	3	①x 4, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 1
RBM-HY1083E	Gas side	700	90	83.6	22.2	15.9	7	⑥x 8, ⑨x 8, ⑭x 1, ⑱x 1, ⑦⓪x 1	ø 15.9 x 3
	Liquid 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

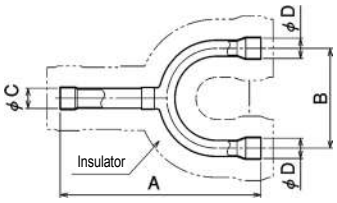
• Y-shape branch joint

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

Suction gas side, Discharge gas side



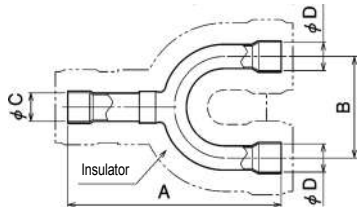
Liquid side



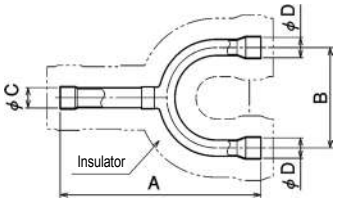
Model		A	B	øC	øD	Accessory socket Q'ty	Sealed pipe
RBM-BY55FE	Suction gas side	160	80	15.9	15.9	⑨1 x 2	
	Discharge gas side	160	80	15.9	15.9	⑨ x 3	ø 12.7 x 1
	Liquid side	130	70	9.5	9.5	① x 2	
RBM-BY105FE	Suction gas side	170	80	22.2	22.2	⑭ x 2, ⑦⓪ x 2, ⑨1 x 1	
	Discharge gas side	170	80	22.2	22.2	⑱ 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

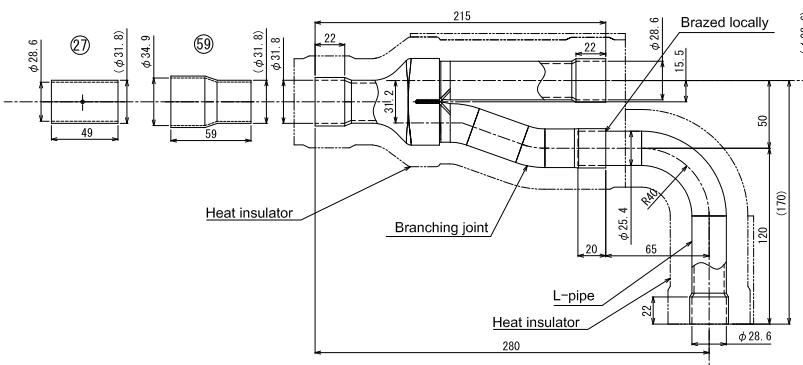


Model		A	B	øC	øD	Accessory socket Q'ty
RBM-BY55E	Gas side	160	80	15.9	15.9	⑨ x 1, ⑤1 x 2, ⑨1 x 2
	Liquid side	130	70	9.5	9.5	① x 2
RBM-BY105E	Gas side	170	80	22.2	22.2	⑭ x 2, ⑦⓪ x 2, ⑨1 x 1
	Liquid side	160	80	15.9	15.9	⑨ x 1, ⑨1 x 1, ⑨② x 1
RBM-BY205E	Gas side	200	80	31.8	28.6	⑯ x 1, ㉗ x 1, ㊸ x 2, ⑤⑧ 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

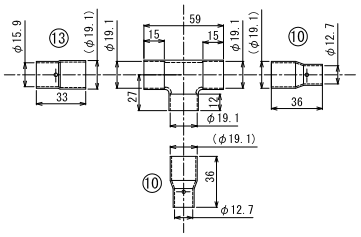
• Branching joint for connection of outdoor units (Set of three kinds of joint)

RBM-BT14FE

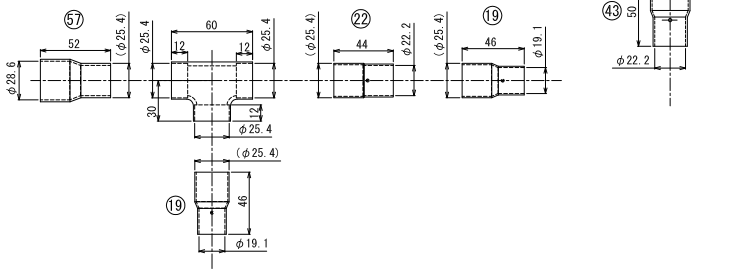
Branching joint (Suction gas side) and sockets



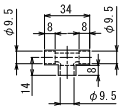
Branching joint (Liquid side) and sockets



Branching joint (Discharge gas side) and sockets

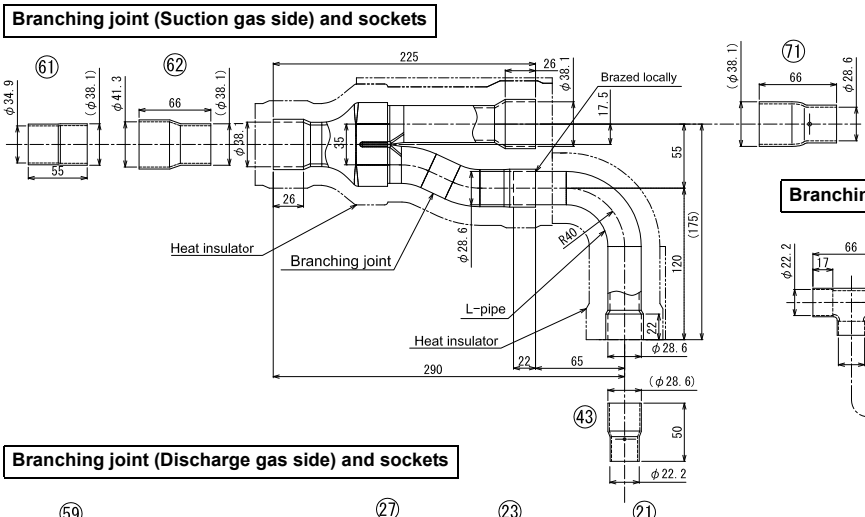


Balance pipe side

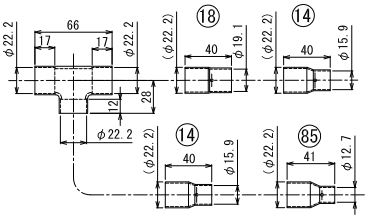


RBM-BT24FE

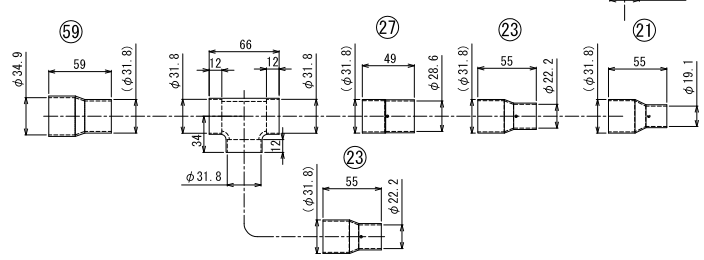
Branching joint (Suction gas side) and sockets



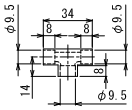
Branching joint (Liquid side) and sockets



Branching joint (Discharge gas side) and sockets



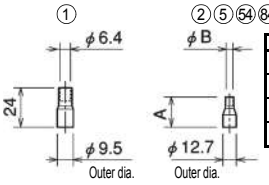
Balance pipe side



(Unit : mm)

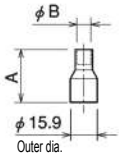
• Accessory socket

① ② ⑤ ⑭ ⑧④



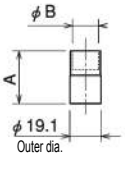
	A	øB
②	29	6.4
⑤	26	9.5
⑭	31	15.9
⑧④	40	19.1

③ ⑥ ⑨ ⑤①



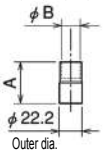
	A	øB
③	35	6.4
⑥	32	9.5
⑨	28	12.7
⑤①	37.5	19.1

④ ⑦ ⑩ ⑬ ⑤② ⑥⑦



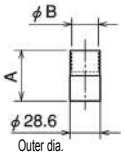
	A	øB
④	39	6.4
⑦	39	9.5
⑩	36	12.7
⑬	33	15.9
⑤②	42.5	22.2
⑥⑦	49	25.4

⑭ ⑱ ⑥⑨ ⑦⓪ ⑧⑤ ⑧⑥



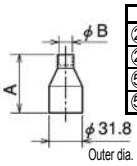
	A	øB
⑭	40	15.9
⑱	40	19.1
⑥⑨	48	25.4
⑦⓪	54	28.6
⑧⑤	41	12.7
⑧⑥	44	9.5

⑯ ⑳ ㉔ ㊸ ㊽ ㊾ ㊸ ㊽



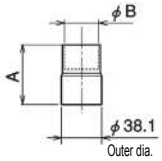
	A	øB
⑯	50	15.9
⑳	52	19.1
㉔	48	25.4
㊸	50	22.2
㊽	54	9.5
㊾	52	12.7
㊸	55	31.8
㊽	62	34.9

㉕ ㉗ ㊺ ㊾



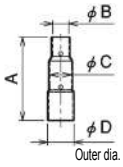
	A	øB
㉕	53	25.4
㉗	49	28.6
㊺	64	38.1
㊾	59	34.9

㉘ ㊶ ㊷ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼



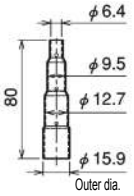
	A	øB
㉘	58	31.8
㊶	55	34.9
㊷	66	41.3
㊶	66	28.6
㊷	66	25.4
㊸	66	22.2
㊹	66	19.1
㊺	64	15.9
㊻	62	12.7
㊼	62	9.5

㊶ ㊸ ㊹ ㊺ ㊻ ㊼

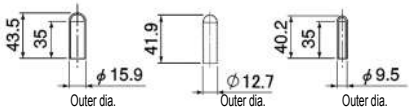


	A	øB	øC	øD
㊶	58	9.5	12.7	15.9
㊸	69	12.7	19.1	22.2
㊹	71	15.9	19.1	22.2
㊺	80	22.2	25.4	28.6
㊻	87	25.4	28.6	31.8
㊼	95	28.6	31.8	38.1

㊷



Sealed pipe

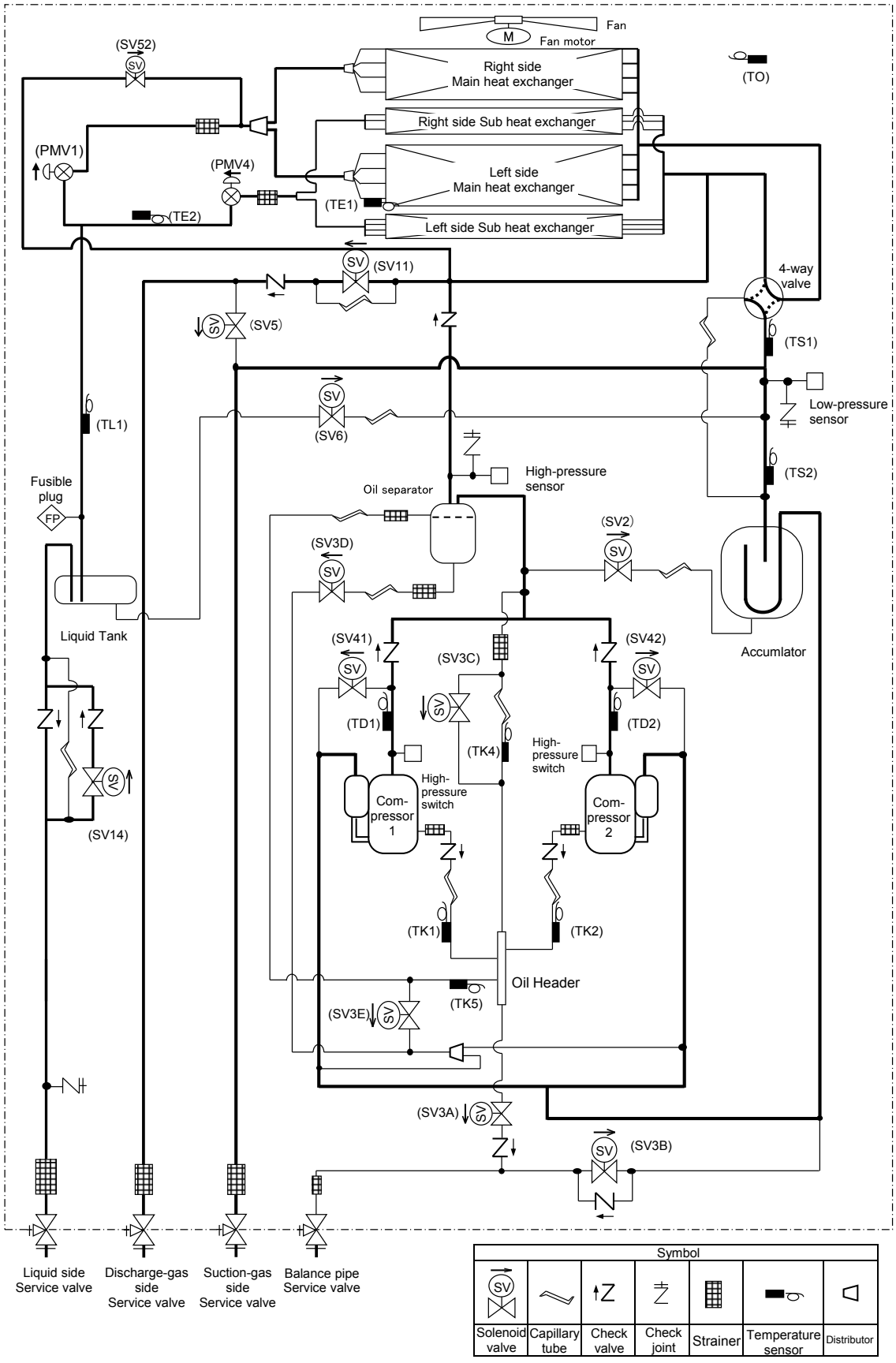


(Unit : mm)

5-5. Refrigerant cycle diagram

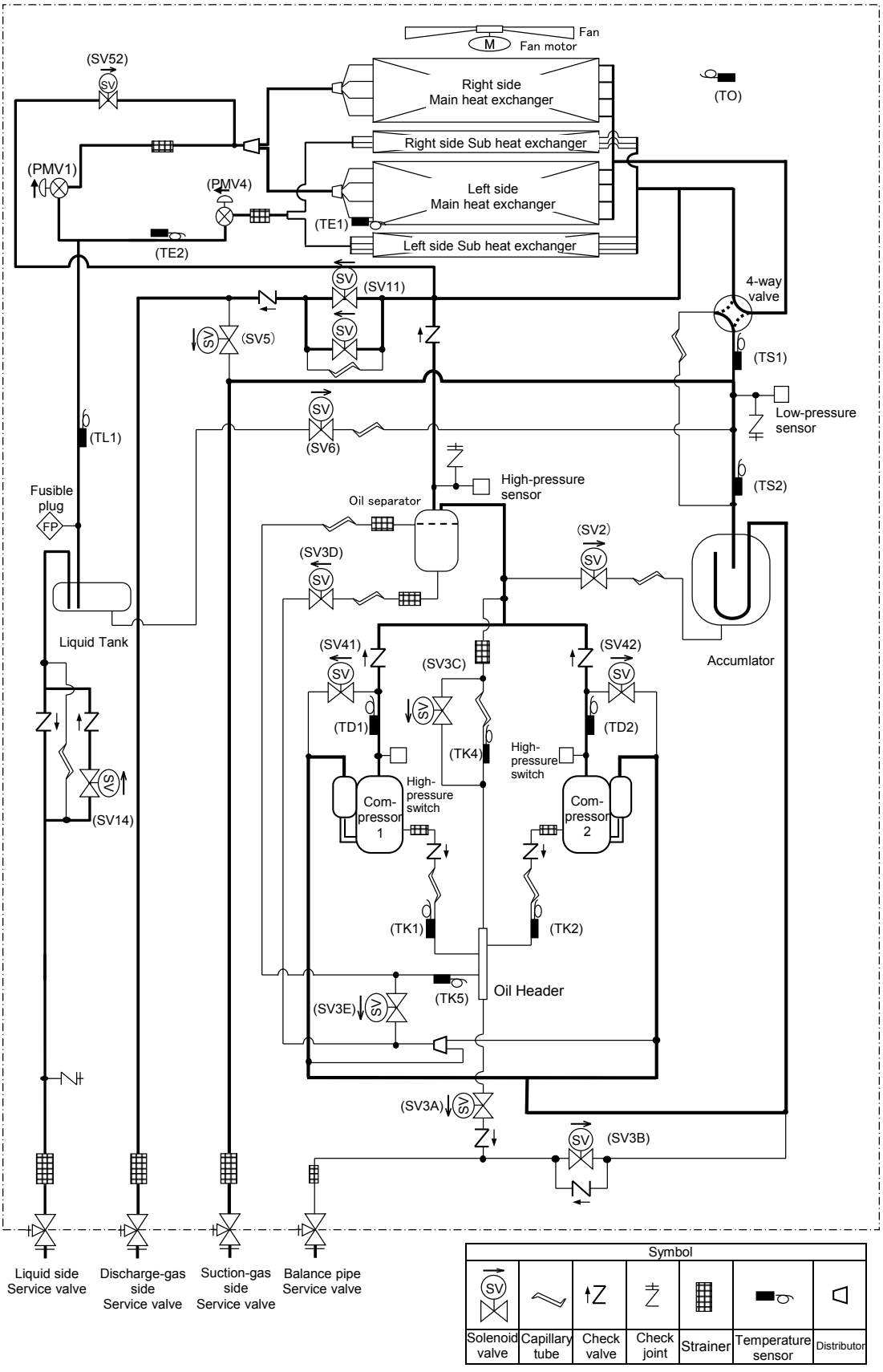
Outdoor Unit (8, 10HP)

Model : MMY-MAP0806FT8P-E, MMY-MAP1006FT8P-E



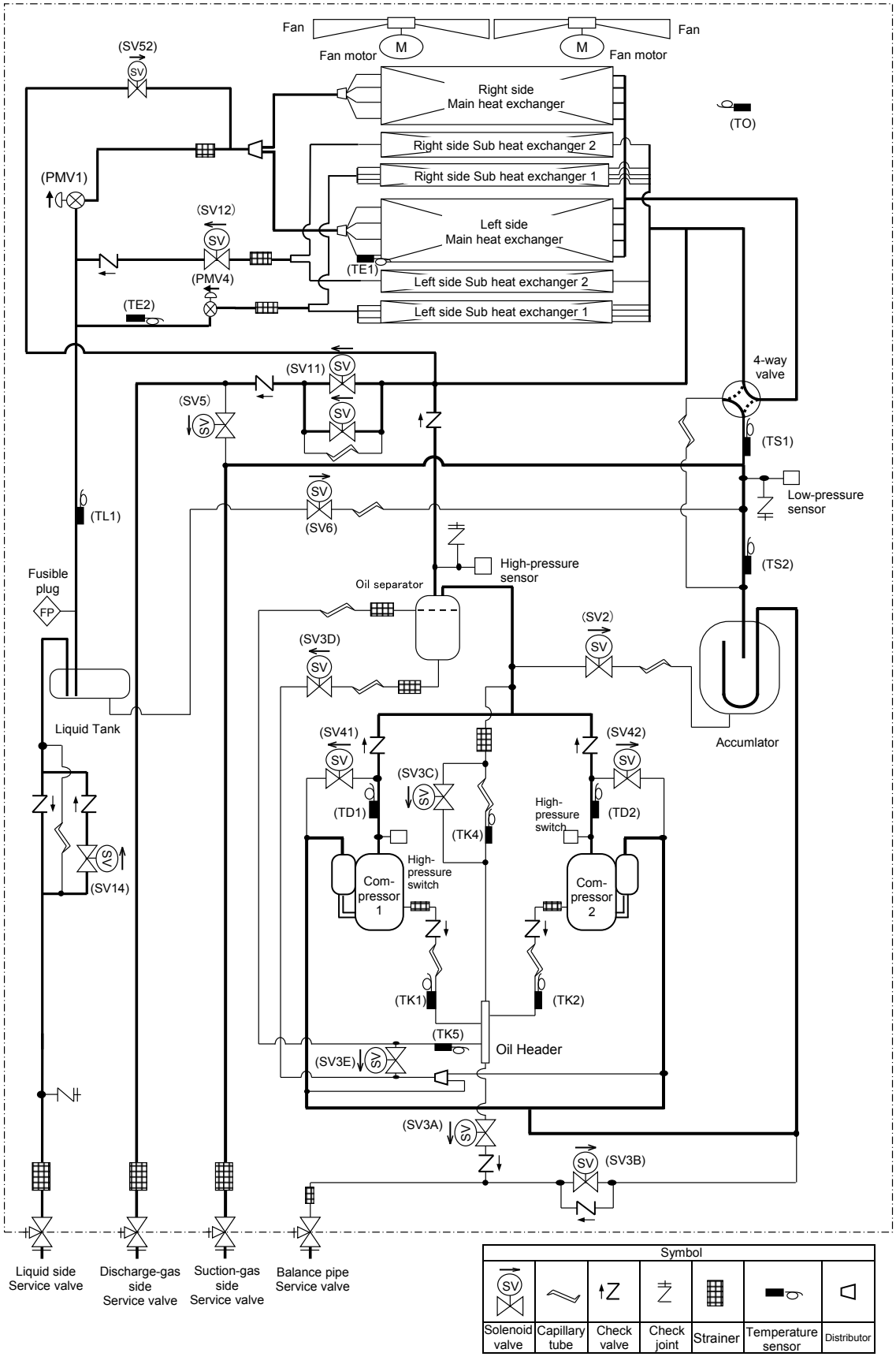
Outdoor Unit (12, 14HP)

Model : MMY-MAP1206FT8P-E , MMY-MAP1406FT8P-E



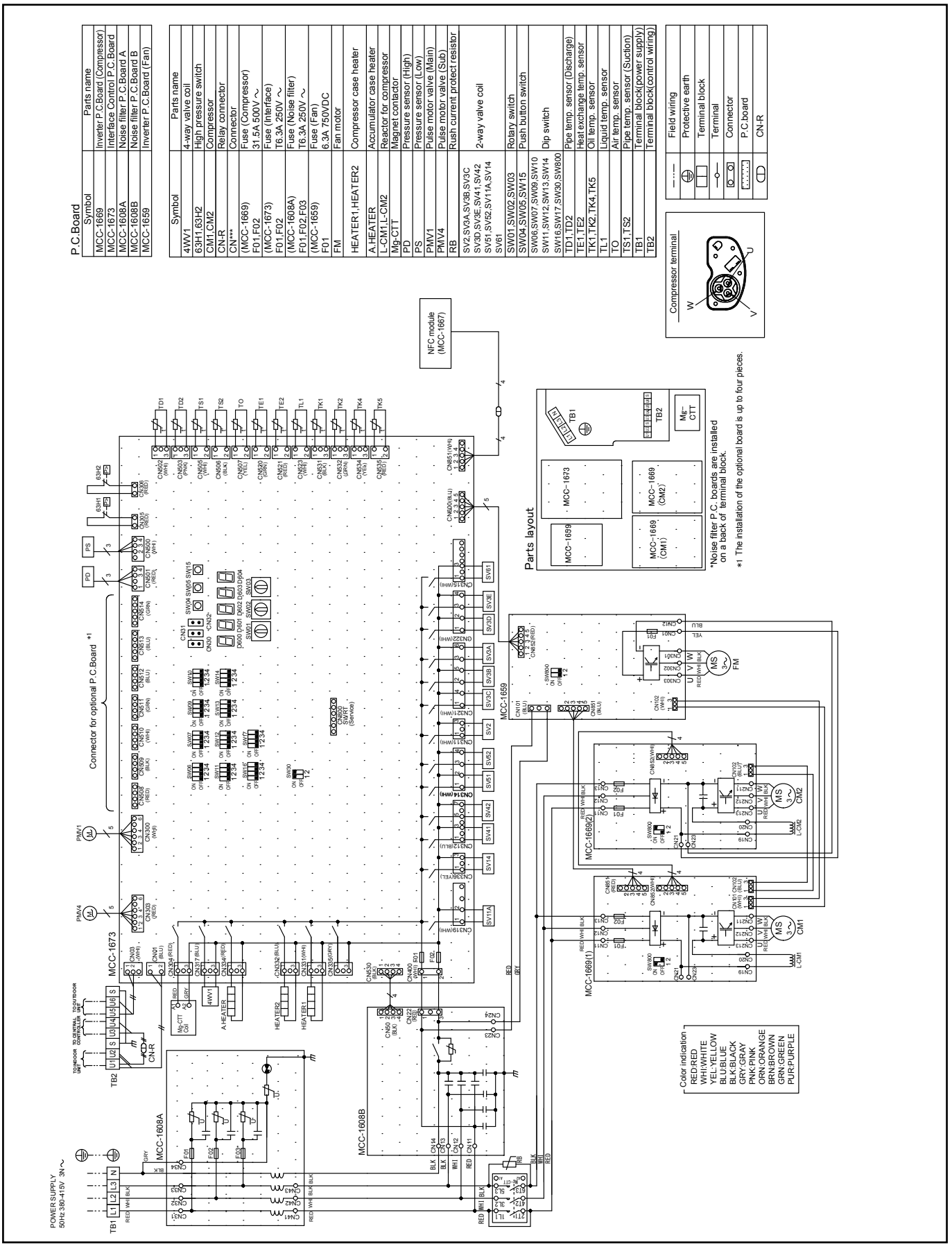
Outdoor Unit (16, 18, 20HP)

Model : MMY-MAP1606FT8P-E, MMY-MAP1806FT8P-E, MMY-MAP2006FT8P-E

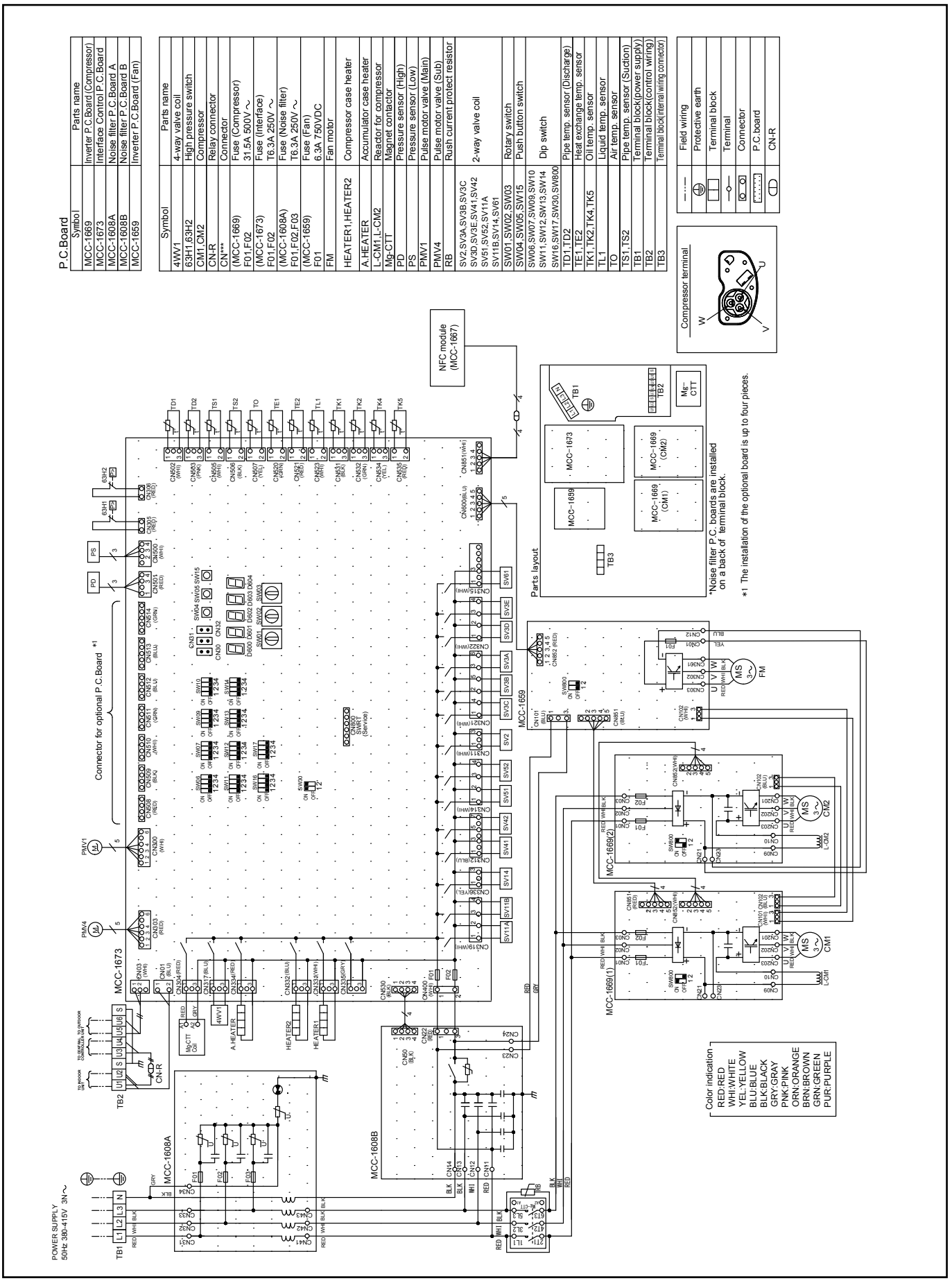


5-6. Wiring Diagrams

Model : MMY-MAP0806FT8P-E, MMY-MAP1006FT8P-E



Model : MMY-MAP1206FT8P-E , MMY-MAP1406FT8P-E



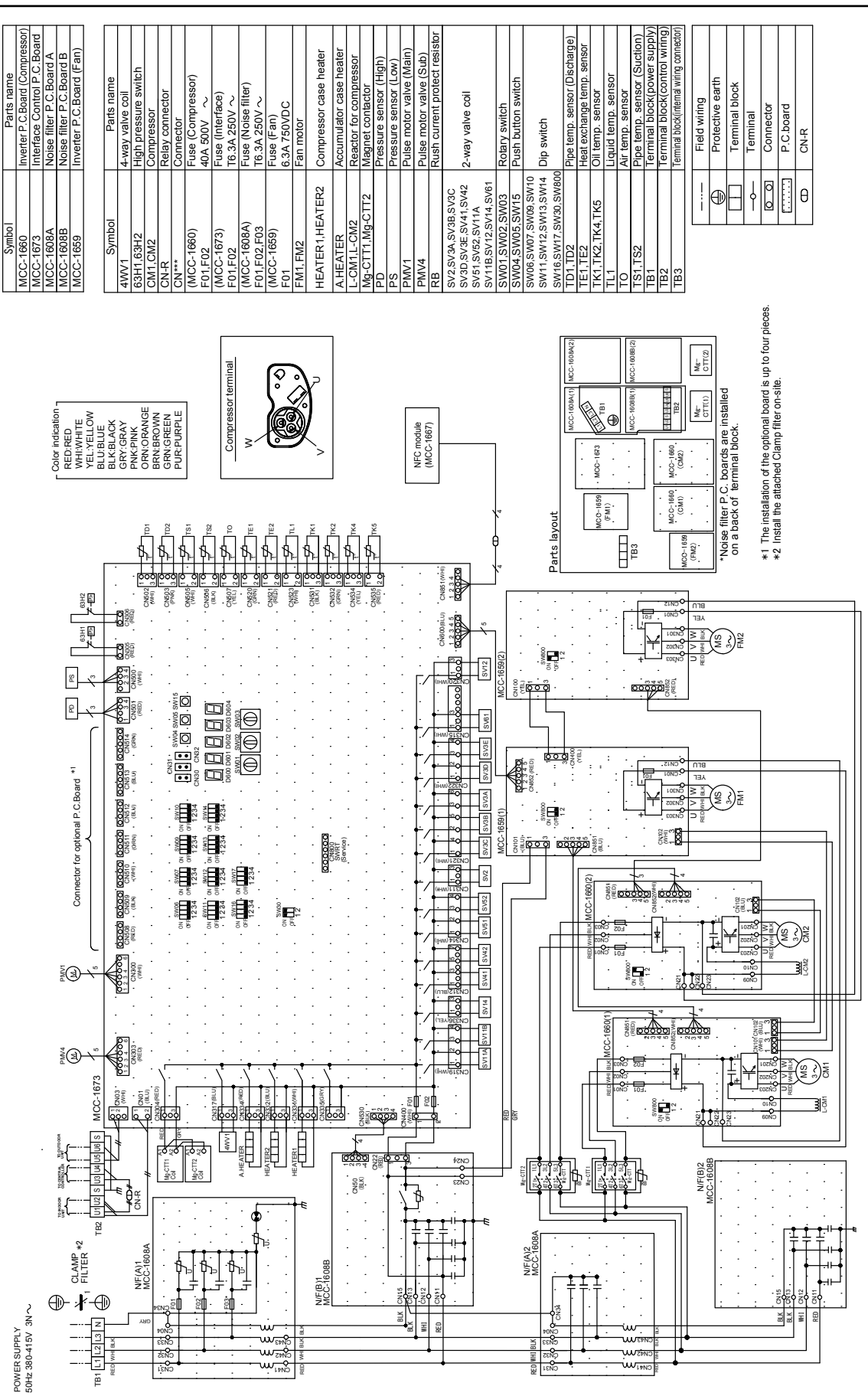
Model : MMY-MAP1606FT8P-E , MMY-MAP1806FT8P-E, MMY-MAP2006FT8P-E

P.C.Board

Symbol	Parts name
MCC-1660	Inverter P.C.Board (Compressor)
MCC-1673	Interface Control P.C.Board
MCC-1608A	Noise filter P.C.Board A
MCC-1608B	Noise filter P.C.Board B
MCC-1659	Inverter P.C.Board (Fan)

Symbol	Parts name
4WV1	4-way valve coil
63H1,63H2	High pressure switch
CM1,CM2	Compressor
CN-R	Relay connector
CN***	Connector
(MCC-1660)	Fuse (Compressor)
F01,F02	40A 500V ～
(MCC-1673)	Fuse (Interface)
F01,F02	T6.3A 250V ～
(MCC-1608A)	Fuse (Noise filter)
F01,F02,F03	T6.3A 250V ～
(MCC-1659)	Fuse (Fan)
F01	6.3A 750VDC
FM1, FM2	Fan motor
HEATER1,HEATER2	Compressor case heater
A.HEATER	Accumulator case heater
L-CM1,L-CM2	Reactor for compressor
Mg-CTT1,Mg-CTT2	Magnet contactor
PD	Pressure sensor (High)
PS	Pressure sensor (Low)
PMV1	Pulse motor valve (Main)
PMV4	Pulse motor valve (Sub)
RB	Rush current protect resistor
SV2,SV3A,SV3B,SV3C SV3D,SV3E,SV41,SV42 SV51,SV52,SV11A SV11B,SV12,SV14,SV61	2-way valve coil
SW01,SW02,SW03	Rotary switch
SW04,SW05,SW15	Push button switch
SW06,SW07,SW09,SW10 SW11,SW12,SW13,SW14 SW16,SW17,SW30,SW800	Dip switch
TD1,TD2	Pipe temp. sensor (Discharge)
TE1,TE2	Heat exchange temp. sensor
TK1,TK2,TK4,TK5	Oil temp. sensor
TL1	Liquid temp. sensor
TO	Air temp. sensor
TS1,TS2	Pipe temp. sensor (Suction)
TB1	Terminal block(power supply)
TB2	Terminal block(control wiring)
TB3	Terminal block(Internal wiring connector)

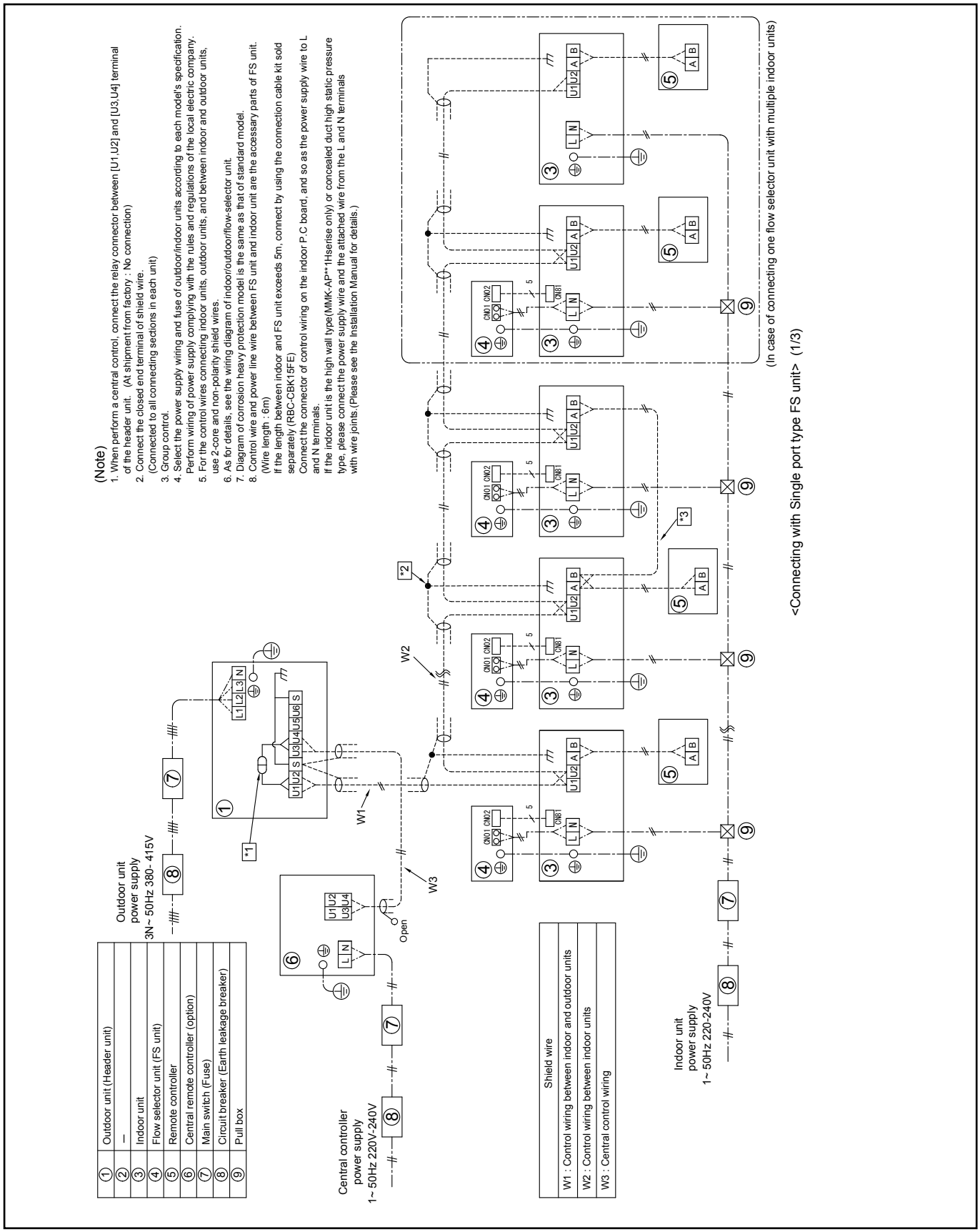
	Field wiring
	Protective earth
	Terminal block
	Terminal
	Connector
	P.C.board
	CN-R



5-7. Connecting Diagrams

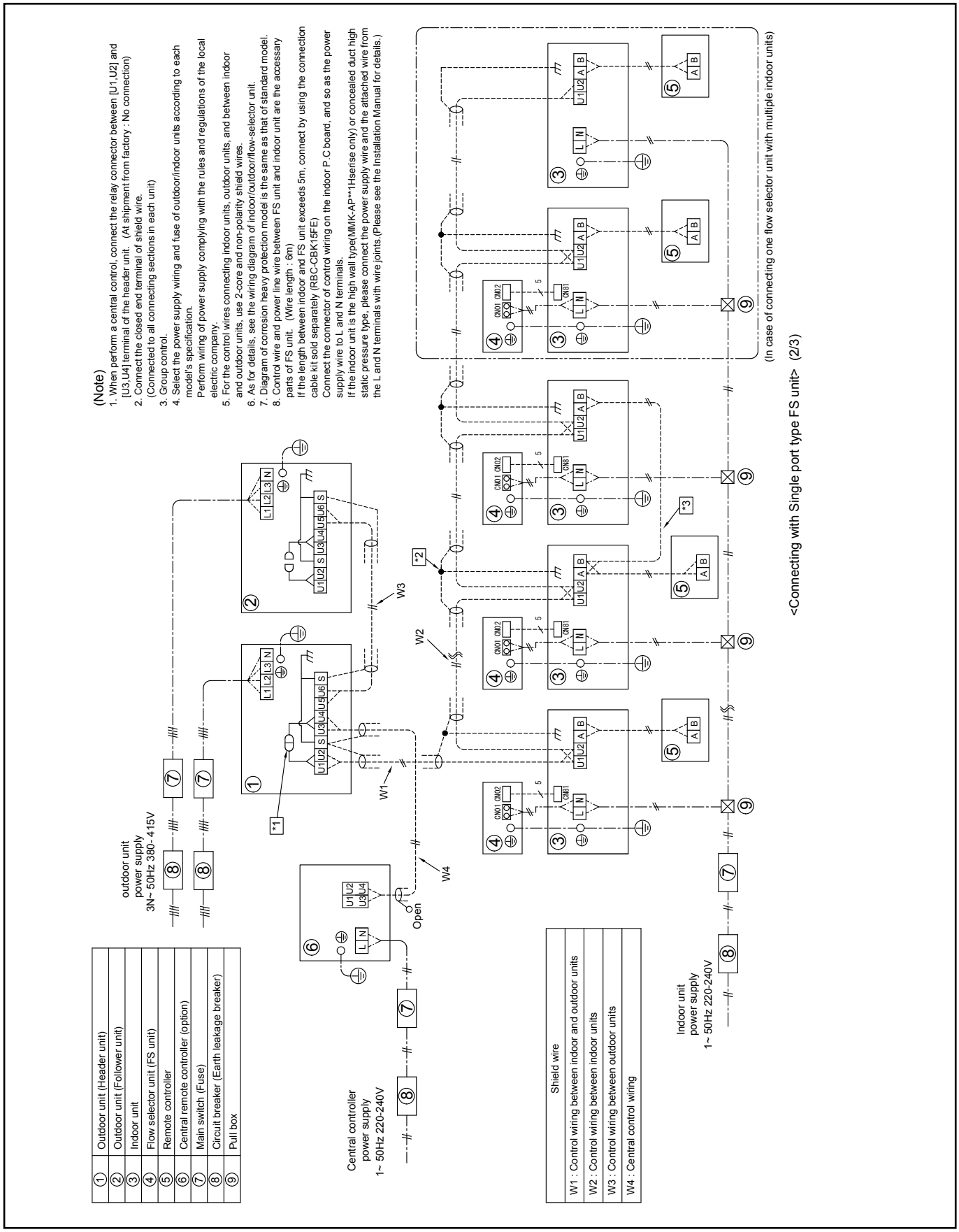
Single Unit connected

Model : MMY-MAP0806FT8P-E, MMY-MAP1006FT8P-E, MMY-MAP1206FT8P-E, MMY-MAP1406FT8P-E
MMY-MAP1606FT8P-E,MMY-MAP1806FT8P-E, MMY-MAP2006FT8P-E



Two Units connected

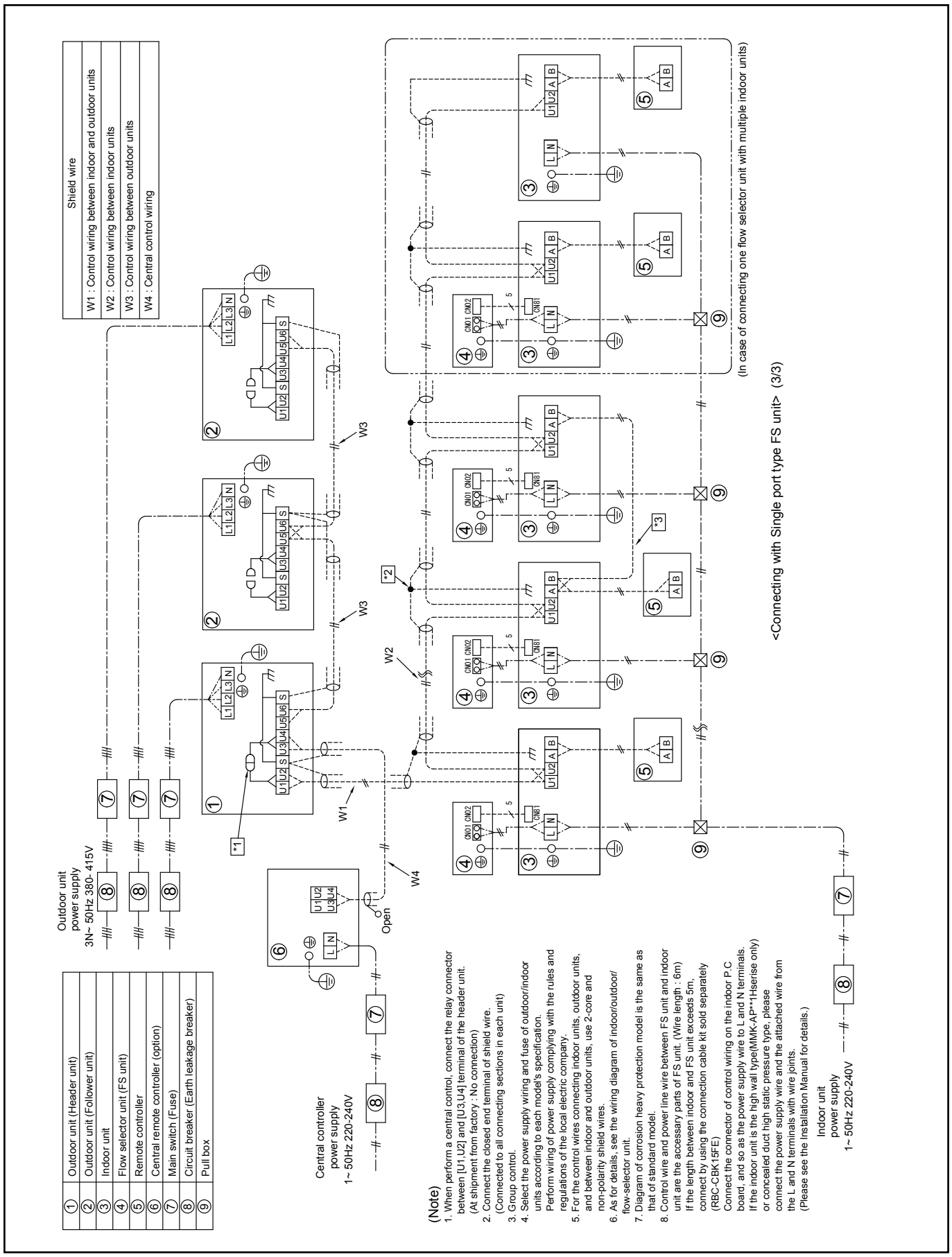
Model : MMY-AP2216FT8P-E, MMY-AP2416FT8P-E, MMY-AP2616FT8P-E, MMY-AP2816FT8P-E, MMY-AP3016FT8P-E, MMY-AP3216FT8P-E, MMY-AP3416FT8P-E, MMY-AP3616FT8P-E, MMY-AP3816FT8P-E, MMY-AP4016FT8P-E



<Connecting with Single port type FS unit> (2/3)

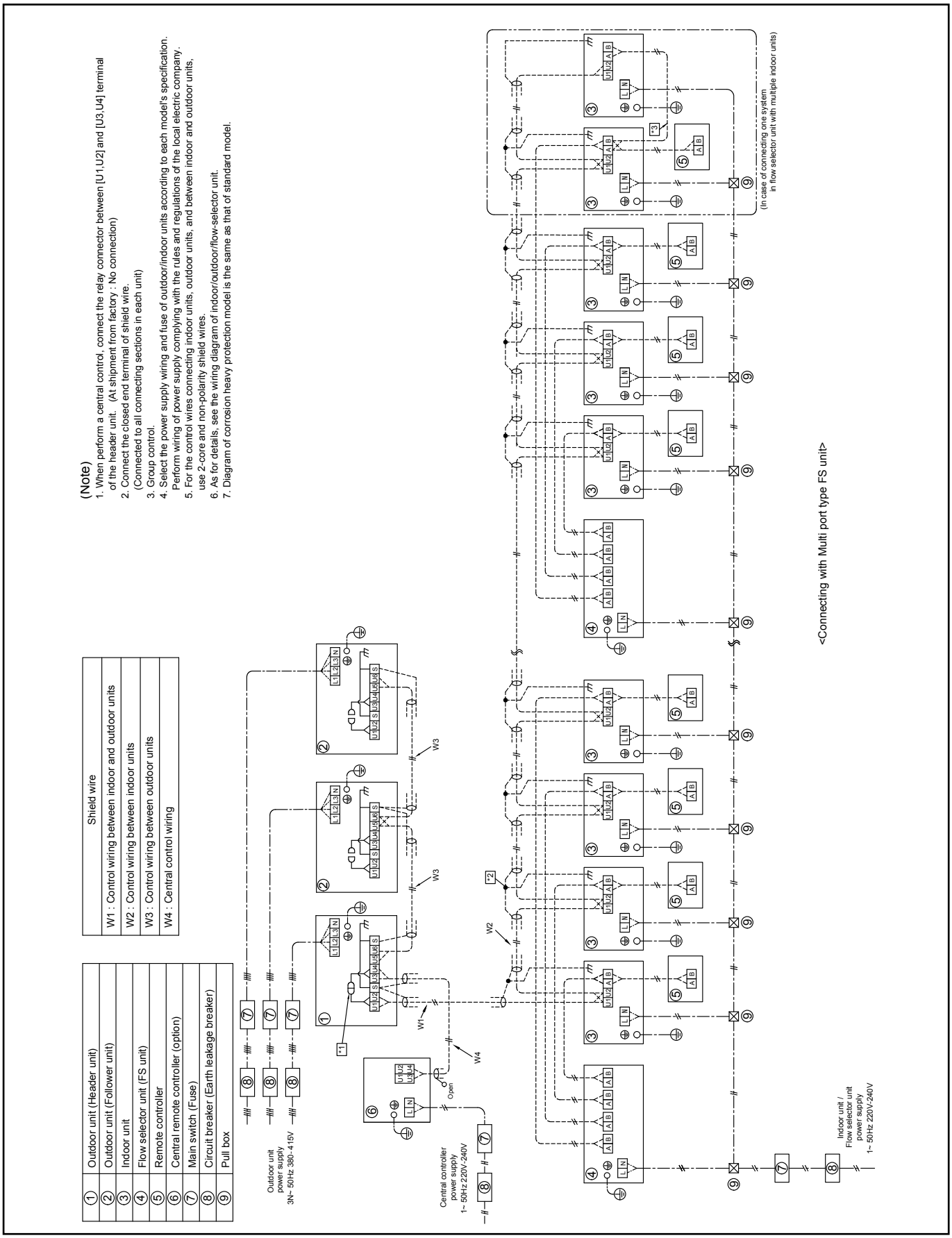
Three Units connected

Model : MMY-AP4216FT8P-E



Three Units connected

Model : MMY-AP4416FT8P-E, MMY-AP4616FT8P-E, MMY-AP4616FT8P-E, MMY-AP4816FT8P-E, MMY-AP5016FT8P-E, MMY-AP5216FT8P-E, MMY-AP5416FT8P-E



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 Pressure of Base Outdoor Units

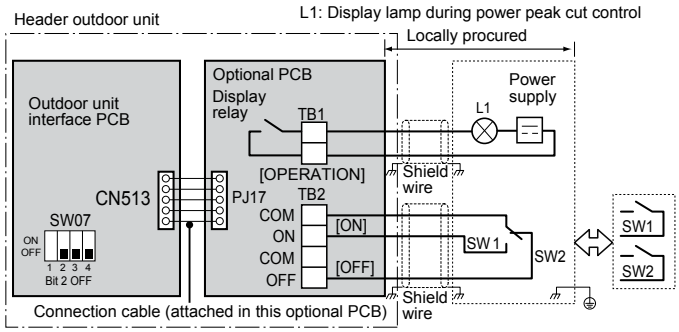
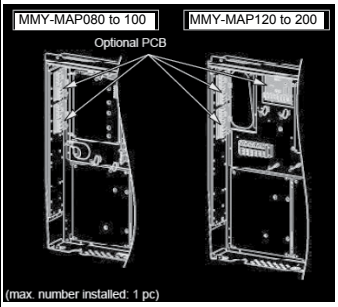
Model	MMY-	MAP0806*	MAP1006*	MAP1206*	MAP1406*	MAP1606*	MAP1806*	MAP2006*
Maximum external static pressure	Pa	60	50	50	40	40	40	40
(*) Outdoor unit air flow	m3/h	9700	9700	12200	12200	17300	17300	17900

Table 2: Maximum External Static Pressure for Combinated Use of Base Units

Standard models

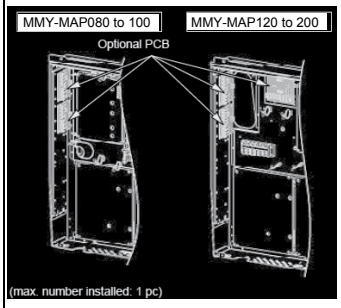
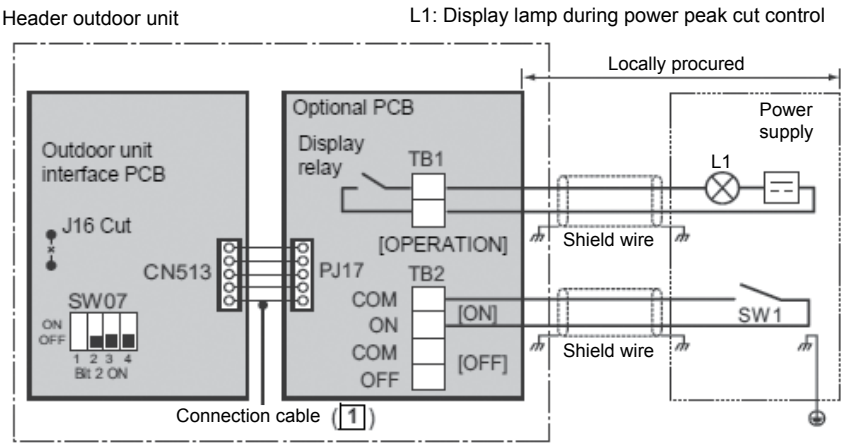
System	Combination			Maximum external static pressure
HP	HP			Pa
8	8			60
10	10			50
12	12			50
14	14			40
16	16			40
18	18			40
20	20			40
22	12	10		50
24	14	10		40
26	14	12		40
28	14	14		40
30	16	14		40
32	16	16		40
34	18	16		40
36	18	18		40
38	20	18		40
40	20	20		40
42	14	14	14	40
44	16	14	14	40
46	18	14	14	40
48	16	16	16	40
50	18	16	16	40
52	18	18	16	40

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

Model name	Appearance	Function
TCB-PCDM4E	 Size: 71 x 85 (mm)	[1] Power peak-cut Control • Purpose: Limiting air conditioning pe rformance with external signals and decreasing the peak power consumption. • Feature The upper limit capacity of the outdoor unit is restricted based on the outdoor power peak selected setting.
	Application	Standard Specifications (Wiring example)
		 For SW1 and SW2, be sure to provide no-voltage contacts for each terminal. The input signals of SW1 and SW2 may be pulse input (100 msec or more) or continuous make. Do not turn on [SW1] and [SW2] simultaneously.
		<SW07 (bit 2) OFF [2-stage switching]>

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

* Install the optional PCB in the outdoor header unit.

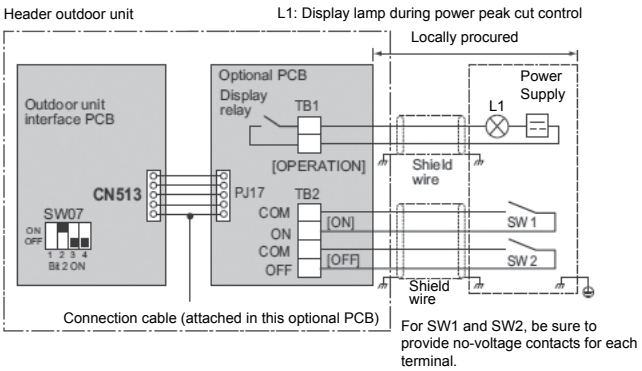
Model name	Appearance	Function
TCB-PCMO4E	 Size: 55.5 x 60 (mm) Application   * Install the optional PCB in the outdoor header unit.	For one input function Power peak-cut ON-OFF control is made possible on only the [ON] terminal input (SW1) by cutting the jumper lead (J16) of the center outdoor unit interface PCB. (Wiring example) 

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

<SW07 (bit 2) OFF [2.stage switching>
Power peak-cut control turns ON when SW1 in the wiring example is ON (continuous make)

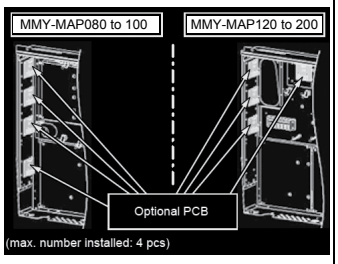
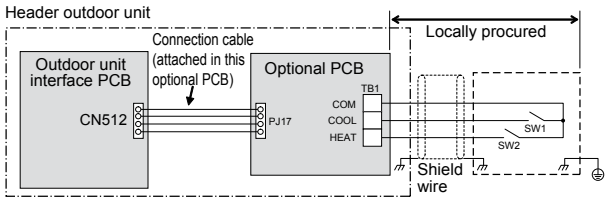
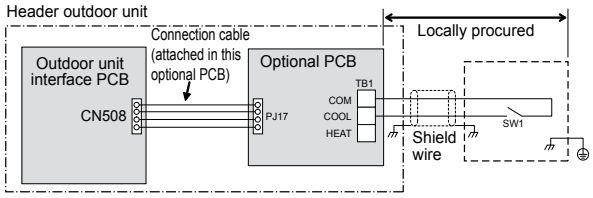
Enhanced Specifications

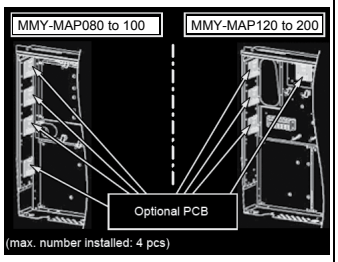
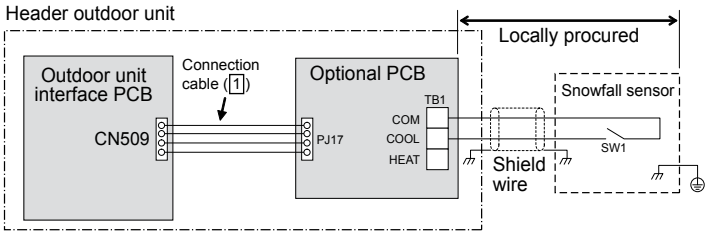
(Wiring example)



<SW07 (bit 2) ON [4-stage switching]>

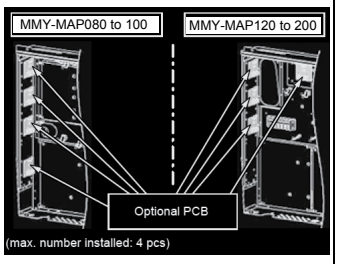
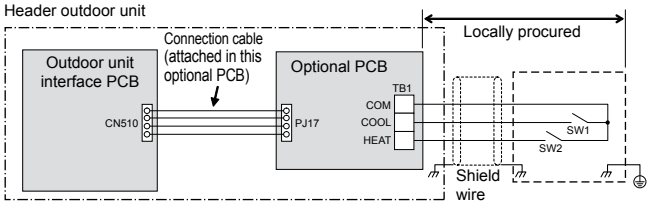
Input		SW07 (bit 1)		Display replay (L1)
SW1	SW2	Bit 1 OFF	Bit 1 ON	
OFF	OFF	100% (normal operation)	100% (normal operation)	OFF
ON	OFF	Apporx. 80% (Upper limit regulated)	Appox. 85% (upper limit regulated)	ON
OFF	ON	Approx. 60% (Upper Limit regulated)	Approx.75% (Upper Limit regulated)	ON
	ON	0% (forced stop)	Approx.60% (upper Limit regulated)	ON

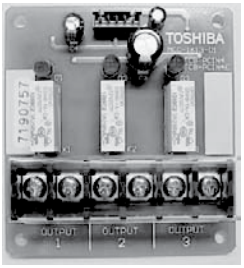
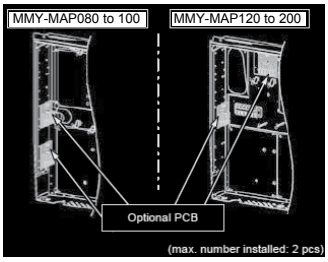
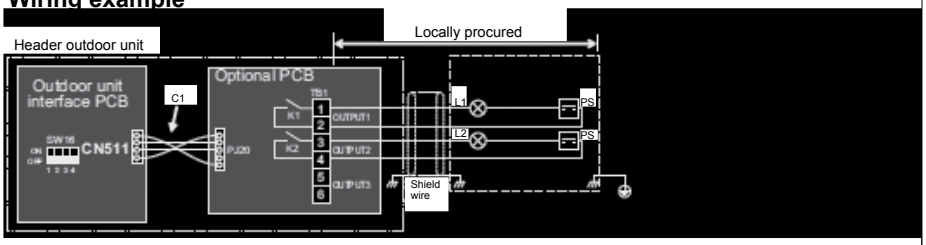
Model name	Appearance	Function
TCB-PCMO4E	 Size: 55.5 x 60 (mm) **Application**   * Install the optional PCB in the outdoor header unit.	[2] External master ON/OFF control • Feature The outdoor unit starts or stop the system. • Function By connecting the cable (attached in this optional PCB) to the interface PC board on an outdoor unit, all indoor units connected to the outdoor unit enable to operate simultaneously. • Operation The outdoor unit connection is for the header unit (U1).  SW1: Operation input switch SW2: Stop input switch Terminal / Input signal / Operation COOL (SW1) — ON / OFF — All indoor units operate together HEAT (SW2) — ON / OFF — All indoor units stop together Provide no-voltage pulse contacts for each terminal. Hold the ON state for at least 100 msec. Do not turn SW1 and SW2 ON simultaneously [3] Night time operation (sound reduction) control • Purpose: Reducing noise from an outdoor unit • Feature Sound level can be reduced by restricting the compressor and fan speed • Function As the cable (attached in this optional PCB) is connected to the “Interface PCB” on an outdoor unit, both compressor speed and fan speed are restricted while the signal of the night operation control is input. It makes the noise reduction during the night time operation. • Operation The outdoor unit connection is for the header unit (U1).  SW1: Night time signal switch Terminal / Input signal / Operation COOL (SW1) — ON / OFF — All indoor units operate together ON / OFF — All indoor units stop together Each terminal should be connected to dry contact. The input signal is recognized during its rising/falling phase. (After reaching the top/bottom of the rising/falling edge, the signal must remain there for at least 100 ms.)

Model name	Appearance	Function
TCB-PCMO4E	 Size: 55.5 x 60 (mm) **Application**   * Install the optional PCB in the outdoor header unit.	Sound reduction and approximation capacity (reference) 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) **[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 selection switch (snowfall sensor) Be sure to provide no-voltage continuous contacts for each terminal.

	Night operation sound reduction dB(A)	Capacity	
		COOL	HEAT
0806 type	50	Approx.85%	Approx.85%
1006 type	50	Approx.70%	Approx.70%
1206 type	53	Approx.80%	Approx.80%
1406 type	53	Approx.70%	Approx.70%
1606 type	54	Approx.65%	Approx.65%
1806 type	54	Approx.60%	Approx.60%
2006 type	54	Approx.55%	Approx.55%

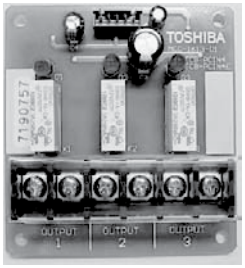
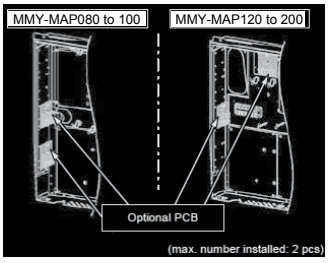
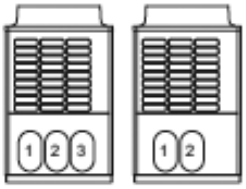
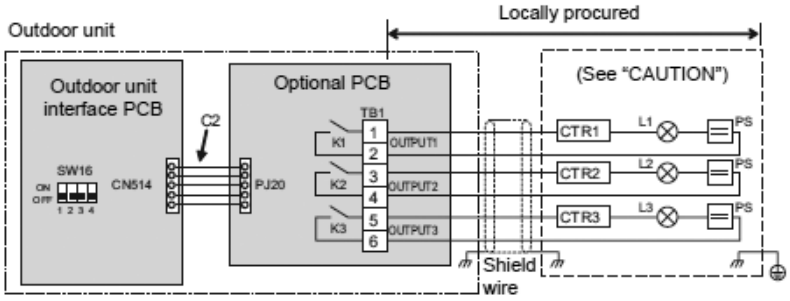
Terminal	Input signal	Operation
Cooling (SW1)	ON OFF	Snowfall fan control (Fan in outdoor unit operates.)
	ON OFF	Normal operation

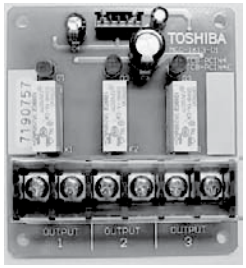
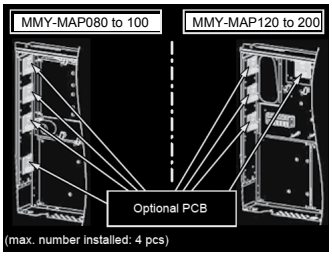
Model name	Appearance	Function
TCB-PCIN4E	 Size: 55.5 x 60 (mm) **Application**   * Install the optional PCB in the outdoor header unit.	[5] Operation mode selection control • Purpose: Limiting operation modes to cooling and heating only • Feature This control can restrict the selectable operation mode. ▼ Functions The heating/cooling mode of the system can be selected by connecting to the interface PCB of outdoor units. ▼ Operation The outdoor unit connection is for the header unit (U1).  SW1: Cooling mode specified input switch SW2: Heating mode specified input switch Input Signal / Cooling (SW1) / Heating (SW2) / Operation: Selected operation mode 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 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: J01 connected (factory default)** Unallowed indoor units in a mode other than the selected operation mode are not treated as priority (thermo OFF state). (Unallowed indoor units) Operation Mode / Operation State / Remote control Cooling unit / Air blow operation at blow rate set on remote control / ⏻, ❄ indicator is displayed. Heating unit / Air blow operation at super-slow blow rate Air blow unit / Regular air blow operation at blow rate set on remote control **Jumper lead: J01 cut** 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 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	 Size: 73 x 79 (mm) **Application**   * Install the optional PCB in the outdoor header unit.	**[6] Error / Operation Output** • Feature Operation and error monitoring is possible. **▼Function** The operation error output PCB can indicate operation operation and error states b connecting to the interface PCB of outdoor units. **▼Operation** Operation output: The operation indicator is on while any indoor unit in the system is operating. Error output : The error indicator is on when an error is occurred on even one of the indoor or outdoor units in the system. **Wiring example** 

C1	Attached connection cable 1 (4 wires)
CN511	Connector on interface side (green)
K1, K2	Relays
L1	Error indication Lamp
L2	Operation indication Lamp
OUTPUT1	Error output
OUTPUT2	Operation output
PJ20	Connector on optional PCB side
PS	Power supply unit
TB1	Terminal block

* [OUTPUT3] always output during AC power is connecting.

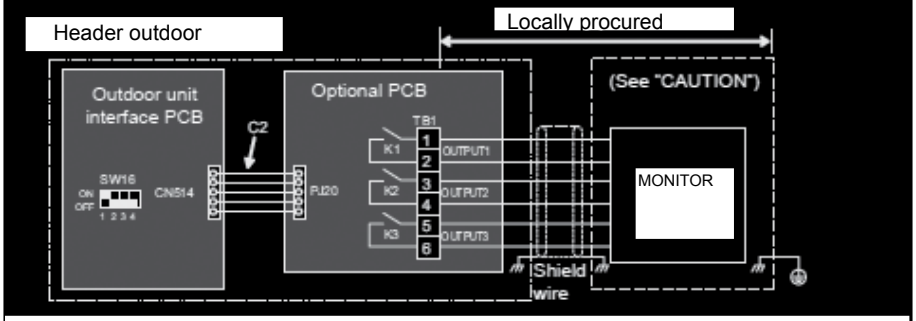
Model name	Appearance	Function
TCB-PCIN4E	 Size: 73 x 79 (mm) **Application**   * Install the optional PCB in individual outdoor unit	**[7] Compressor Operation Output** • Feature Outputs the operation status of the compressors in each outdoor unit. **▼ Functions** This function can be applied, for example, to the elapsed operation time count of each compressor mounted on an outdoor unit since the compressor in operation signal can be output externally **▼ Operations** During compressor operation, the relay of the output terminal corresponding to that compressor turns ON (closes) and turns OFF (opens) when compressor operation stops. As shown in the figure, the output terminals are “OUTPUT1”, “OUTPUT2” and “OUTPUT3” from the left compressor facing the front of the outdoor unit.  **Wiring example**  | C2 | Connector cable 2 ([2]) | | CN514 | Connector on interface side (green) | | CTR2 | Elapsed operation counter1 | | CTR2 | Elapsed operation counter2 | | CTR3 | Elapsed operation counter3 | | K1, K2, K3 | Relays | | L1, L2, L3 | Operation indication LEDs | | OUTPUT1 | Compressor 1 operation output terminal | | OUTPUT2 | Compressor 2 operation output terminal | | OUTPUT3 | Compressor 3 operation output terminal | | PJ20 | Connector on optional PCB side | | PS | Power supply unit | | TB1 | Teminal block |

Model name	Appearance	Function
TCB-PCIN4E	 Size: 73 x 79 (mm) **Application**   * Install the optional PCB in the outdoor header unit.	[8] Operating Rate Output • Feature Relay turn ON/OFF depending on the running rate of the system. **▼ Feature** The operation state can be remotely since the system operating rate single can be output externally. **▼ Operation** As shown in the table each of the output terminals turn 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 bit 1: ON 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

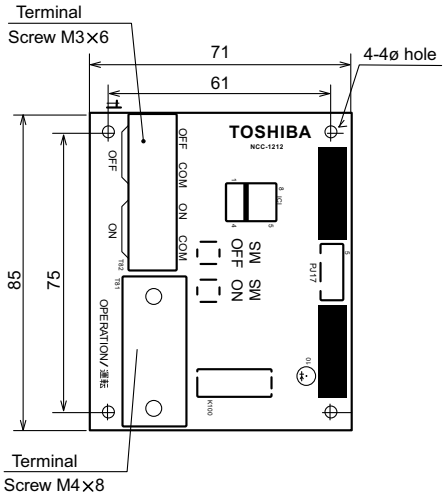
OFF=relay open ON=relay closed

Wiring example

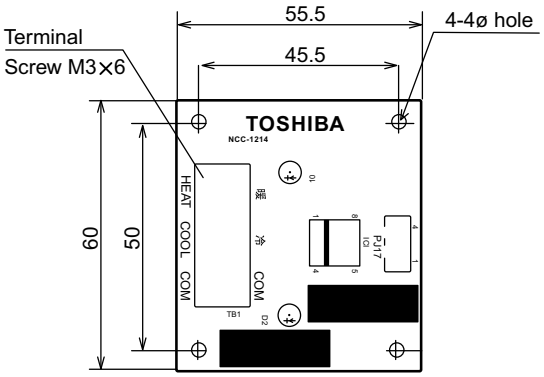


C2	Connector cable 2 (2)
CN514	Connector on interface side (green)
K1, K2, K3	Relays
MONITOR	Monitoring device
OUTPUT1	Compressor 1 operation output terminal
OUTPUT2	Compressor 2 operation output terminal
OUTPUT3	Compressor 3 operation output terminal
PJ20	Connector on optional PCB side
PS	Power supply unit
TB1	Teminal block

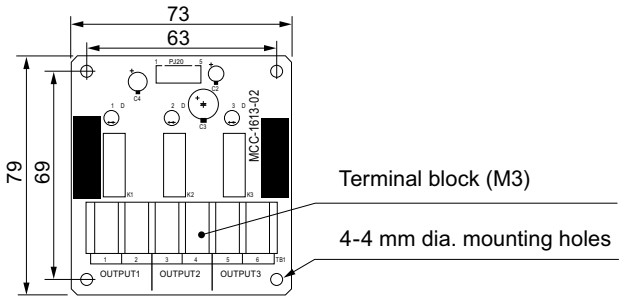
TCB-PCDM4E



TCB-PCMO4E



TCB-PCIN4E



5-10 Part load performance

MMY-MAP0806FT8P-E (8HP , 22.4kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	20.8	20.8	6.43	18.8	4.98	16.7	3.80	14.6	2.88	12.5	2.17	10.4	1.65	8.34	1.30	6.25	1.08
39 ℃	21.2	21.2	6.33	19.1	4.90	16.9	3.75	14.8	2.83	12.7	2.14	10.6	1.63	8.47	1.28	6.35	1.07
37 ℃	21.8	21.8	6.14	19.6	4.76	17.5	3.63	15.3	2.75	13.1	2.07	10.9	1.58	8.73	1.24	6.54	1.03
35 ℃	22.4	22.4	5.95	20.2	4.61	17.9	3.52	15.7	2.66	13.4	2.01	11.2	1.53	8.96	1.20	6.72	1.00
32 ℃	22.4	22.4	5.42	20.2	4.21	17.9	3.23	15.7	2.46	13.4	1.86	11.2	1.43	8.96	1.14	6.72	0.96
31 ℃	22.4	22.4	4.97	20.2	3.87	17.9	2.98	15.7	2.28	13.4	1.74	11.2	1.35	8.96	1.08	6.72	0.92
30 ℃	22.4	22.4	4.77	20.2	3.72	17.9	2.87	15.7	2.19	13.4	1.68	11.2	1.31	8.96	1.05	6.72	0.90
29 ℃	22.4	22.4	4.58	20.2	3.57	17.9	2.76	15.7	2.12	13.4	1.63	11.2	1.27	8.96	1.03	6.72	0.88
27 ℃	22.4	22.4	4.23	20.2	3.31	17.9	2.56	15.7	1.97	13.4	1.52	11.2	1.20	8.96	0.97	6.72	0.84
25 ℃	22.4	22.4	3.91	20.2	3.07	17.9	2.38	15.7	1.84	13.4	1.43	11.2	1.13	8.96	0.93	6.72	0.80
23 ℃	22.4	22.4	3.71	20.2	2.92	17.9	2.27	15.7	1.76	13.4	1.37	11.2	1.09	8.96	0.90	6.72	0.78
21 ℃	22.4	22.4	3.61	20.2	2.84	17.9	2.22	15.7	1.73	13.4	1.35	11.2	1.08	8.96	0.89	6.72	0.78
20 ℃	22.4	22.4	3.56	20.2	2.81	17.9	2.19	15.7	1.71	13.4	1.34	11.2	1.07	8.96	0.89	6.72	0.78
19 ℃	22.4	22.4	3.52	20.2	2.78	17.9	2.17	15.7	1.69	13.4	1.33	11.2	1.07	8.96	0.88	6.72	0.78
17 ℃	22.4	22.4	3.45	20.2	2.72	17.9	2.13	15.7	1.67	13.4	1.31	11.2	1.06	8.96	0.88	6.72	0.77
15 ℃	22.4	22.4	3.38	20.2	2.67	17.9	2.10	15.7	1.65	13.4	1.30	11.2	1.05	8.96	0.88	6.72	0.77

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	22.4	22.4	4.37	20.2	3.62	17.9	3.00	15.7	2.49	13.4	2.07	11.2	1.71	8.96	1.39	6.72	1.09
13.0	11.8	22.4	22.4	4.58	20.2	3.78	17.9	3.11	15.7	2.57	13.4	2.13	11.2	1.75	8.96	1.42	6.72	1.12
11.0	9.8	22.4	22.4	4.84	20.2	3.96	17.9	3.25	15.7	2.67	13.4	2.19	11.2	1.80	8.96	1.46	6.72	1.14
9.0	7.9	22.4	22.4	5.10	20.2	4.15	17.9	3.38	15.7	2.76	13.4	2.26	11.2	1.84	8.96	1.49	6.72	1.16
7.0	6.0	22.4	22.4	5.40	20.2	4.37	17.9	3.54	15.7	2.87	13.4	2.33	11.2	1.89	8.96	1.52	6.72	1.19
5.0	4.1	21.7	21.7	5.38	19.6	4.36	17.4	3.53	15.2	2.86	13.0	2.33	10.9	1.89	8.70	1.52	6.52	1.18
3.0	2.2	21.1	21.1	5.37	19.0	4.35	16.9	3.52	14.8	2.85	12.7	2.32	10.5	1.88	8.44	1.51	6.33	1.18
0.0	-0.7	20.1	20.1	5.34	18.1	4.33	16.1	3.50	14.1	2.84	12.1	2.31	10.0	1.87	8.04	1.51	6.03	1.17
-3.0	-3.7	19.1	19.1	5.32	17.2	4.30	15.2	3.48	13.3	2.83	11.4	2.30	9.53	1.86	7.62	1.50	5.72	1.17
-5.0	-5.6	18.4	18.4	5.30	16.6	4.29	14.7	3.47	12.9	2.82	11.0	2.29	9.20	1.86	7.36	1.49	5.52	1.16
-7.0	-7.6	17.7	17.7	5.28	15.9	4.28	14.2	3.46	12.4	2.81	10.6	2.28	8.86	1.85	7.09	1.49	5.31	1.16
-10	-10.5	16.7	16.7	5.26	15.0	4.26	13.4	3.45	11.7	2.79	10.0	2.27	8.36	1.84	6.69	1.48	5.01	1.16
-14.5	-15.0	15.2	15.2	5.22	13.6	4.23	12.1	3.42	10.6	2.77	9.10	2.25	7.58	1.83	6.07	1.47	4.55	1.15

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

MMY-MAP1006FT8P-E (10HP , 28kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	26.1	26.1	8.60	23.5	6.70	20.8	5.13	18.2	3.86	15.6	2.88	13.0	2.15	10.4	1.67	7.82	1.41
39 ℃	26.5	26.5	8.47	23.8	6.60	21.2	5.05	18.5	3.80	15.9	2.83	13.2	2.12	10.6	1.65	7.94	1.39
37 ℃	27.3	27.3	8.22	24.5	6.40	21.8	4.90	19.1	3.69	16.4	2.75	13.6	2.06	10.9	1.60	8.18	1.35
35 ℃	28.0	28.0	7.96	25.2	6.20	22.4	4.75	19.6	3.57	16.8	2.66	14.0	1.99	11.2	1.55	8.40	1.30
32 ℃	28.0	28.0	7.27	25.2	5.68	22.4	4.36	19.6	3.29	16.8	2.47	14.0	1.87	11.2	1.47	8.40	1.25
31 ℃	28.0	28.0	6.67	25.2	5.22	22.4	4.02	19.6	3.05	16.8	2.30	14.0	1.75	11.2	1.39	8.40	1.20
30 ℃	28.0	28.0	6.40	25.2	5.01	22.4	3.86	19.6	2.94	16.8	2.22	14.0	1.70	11.2	1.36	8.40	1.18
29 ℃	28.0	28.0	6.15	25.2	4.82	22.4	3.72	19.6	2.83	16.8	2.15	14.0	1.65	11.2	1.32	8.40	1.15
27 ℃	28.0	28.0	5.68	25.2	4.46	22.4	3.45	19.6	2.64	16.8	2.01	14.0	1.55	11.2	1.26	8.40	1.10
25 ℃	28.0	28.0	5.27	25.2	4.14	22.4	3.21	19.6	2.46	16.8	1.88	14.0	1.46	11.2	1.19	8.40	1.06
23 ℃	28.0	28.0	5.00	25.2	3.93	22.4	3.05	19.6	2.35	16.8	1.80	14.0	1.41	11.2	1.16	8.40	1.03
21 ℃	28.0	28.0	4.86	25.2	3.83	22.4	2.98	19.6	2.30	16.8	1.77	14.0	1.39	11.2	1.15	8.40	1.03
20 ℃	28.0	28.0	4.80	25.2	3.79	22.4	2.95	19.6	2.27	16.8	1.76	14.0	1.38	11.2	1.14	8.40	1.03
19 ℃	28.0	28.0	4.75	25.2	3.74	22.4	2.92	19.6	2.25	16.8	1.74	14.0	1.38	11.2	1.14	8.40	1.03
17 ℃	28.0	28.0	4.65	25.2	3.67	22.4	2.86	19.6	2.22	16.8	1.72	14.0	1.36	11.2	1.14	8.40	1.03
15 ℃	28.0	28.0	4.56	25.2	3.61	22.4	2.82	19.6	2.19	16.8	1.70	14.0	1.35	11.2	1.13	8.40	1.02

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	28.0	28.0	5.69	25.2	4.71	22.4	3.92	19.6	3.28	16.8	2.74	14.0	2.26	11.2	1.81	8.40	1.35
13.0	11.8	28.0	28.0	5.97	25.2	4.92	22.4	4.07	19.6	3.38	16.8	2.81	14.0	2.31	11.2	1.85	8.40	1.38
11.0	9.8	28.0	28.0	6.30	25.2	5.15	22.4	4.24	19.6	3.50	16.8	2.89	14.0	2.38	11.2	1.90	8.40	1.42
9.0	7.9	28.0	28.0	6.65	25.2	5.41	22.4	4.41	19.6	3.62	16.8	2.98	14.0	2.44	11.2	1.95	8.40	1.46
7.0	6.0	28.0	28.0	7.05	25.2	5.69	22.4	4.61	19.6	3.76	16.8	3.07	14.0	2.50	11.2	2.00	8.40	1.50
5.0	4.1	27.1	27.1	7.01	24.4	5.66	21.7	4.59	19.0	3.74	16.3	3.06	13.5	2.49	10.8	1.99	8.13	1.49
3.0	2.2	26.2	26.2	6.97	23.6	5.63	21.0	4.56	18.3	3.71	15.7	3.04	13.1	2.48	10.5	1.98	7.86	1.48
0.0	-0.7	24.8	24.8	6.91	22.3	5.58	19.9	4.52	17.4	3.68	14.9	3.01	12.4	2.45	9.93	1.96	7.45	1.47
-3.0	-3.7	23.4	23.4	6.84	21.1	5.52	18.7	4.48	16.4	3.65	14.0	2.98	11.7	2.43	9.36	1.94	7.02	1.45
-5.0	-5.6	22.5	22.5	6.80	20.3	5.49	18.0	4.45	15.8	3.63	13.5	2.97	11.3	2.42	9.00	1.93	6.75	1.45
-7.0	-7.6	21.6	21.6	6.76	19.4	5.46	17.2	4.42	15.1	3.60	12.9	2.95	10.8	2.40	8.62	1.92	6.47	1.44
-10	-10.5	20.2	20.2	6.70	18.2	5.41	16.1	4.38	14.1	3.57	12.1	2.92	10.1	2.38	8.07	1.90	6.05	1.42
-14.5	-15.0	18.0	18.0	6.60	16.2	5.33	14.4	4.32	12.6	3.52	10.8	2.88	9.02	2.35	7.22	1.87	5.41	1.40

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

MMY-MAP1206FT8P-E (12HP , 33.5kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	31.2	31.2	10.5	28.1	8.41	24.9	6.63	21.8	5.15	18.7	3.93	15.6	2.93	12.5	2.12	9.35	1.46
39 ℃	31.7	31.7	10.4	28.5	8.29	25.3	6.53	22.2	5.07	19.0	3.87	15.8	2.89	12.7	2.09	9.50	1.44
37 ℃	32.6	32.6	10.1	29.4	8.04	26.1	6.34	22.8	4.92	19.6	3.75	16.3	2.80	13.0	2.02	9.79	1.39
35 ℃	33.5	33.5	9.75	30.1	7.78	26.8	6.13	23.4	4.76	20.1	3.63	16.7	2.71	13.4	1.96	10.0	1.35
32 ℃	33.5	33.5	8.95	30.2	7.17	26.8	5.67	23.5	4.41	20.1	3.38	16.8	2.53	13.4	1.84	10.1	1.27
31 ℃	33.5	33.5	8.26	30.2	6.63	26.8	5.25	23.5	4.10	20.1	3.15	16.8	2.36	13.4	1.72	10.1	1.19
30 ℃	33.5	33.5	7.94	30.2	6.38	26.8	5.06	23.5	3.96	20.1	3.04	16.8	2.29	13.4	1.67	10.1	1.16
29 ℃	33.5	33.5	7.64	30.2	6.14	26.8	4.88	23.5	3.82	20.1	2.94	16.8	2.21	13.4	1.62	10.1	1.12
27 ℃	33.5	33.5	7.09	30.2	5.71	26.8	4.55	23.5	3.57	20.1	2.75	16.8	2.08	13.4	1.52	10.1	1.06
25 ℃	33.5	33.5	6.60	30.2	5.32	26.8	4.24	23.5	3.33	20.1	2.58	16.8	1.95	13.4	1.43	10.1	1.00
23 ℃	33.5	33.5	6.28	30.2	5.07	26.8	4.05	23.5	3.19	20.1	2.47	16.8	1.87	13.4	1.38	10.1	0.96
21 ℃	33.5	33.5	6.13	30.2	4.96	26.8	3.96	23.5	3.12	20.1	2.42	16.8	1.84	13.4	1.35	10.1	0.95
20 ℃	33.5	33.5	6.06	30.2	4.90	26.8	3.92	23.5	3.10	20.1	2.40	16.8	1.83	13.4	1.35	10.1	0.94
19 ℃	33.5	33.5	6.00	30.2	4.86	26.8	3.89	23.5	3.07	20.1	2.38	16.8	1.81	13.4	1.34	10.1	0.94
17 ℃	33.5	33.5	5.88	30.2	4.77	26.8	3.82	23.5	3.02	20.1	2.35	16.8	1.79	13.4	1.32	10.1	0.93
15 ℃	33.5	33.5	5.79	30.2	4.70	26.8	3.77	23.5	2.98	20.1	2.32	16.8	1.77	13.4	1.31	10.1	0.92

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	33.5	33.5	7.13	30.2	5.97	26.8	4.99	23.5	4.15	20.1	3.43	16.8	2.78	13.4	2.16	10.1	1.54
13.0	11.8	33.5	33.5	7.46	30.2	6.21	26.8	5.17	23.5	4.29	20.1	3.53	16.8	2.85	13.4	2.22	10.1	1.58
11.0	9.8	33.5	33.5	7.84	30.2	6.50	26.8	5.38	23.5	4.44	20.1	3.64	16.8	2.94	13.4	2.28	10.1	1.63
9.0	7.9	33.5	33.5	8.25	30.2	6.80	26.8	5.60	23.5	4.60	20.1	3.76	16.8	3.03	13.4	2.35	10.1	1.68
7.0	6.0	33.5	33.5	8.70	30.2	7.13	26.8	5.84	23.5	4.78	20.1	3.89	16.8	3.12	13.4	2.42	10.1	1.74
5.0	4.1	32.3	32.3	8.63	29.1	7.08	25.8	5.80	22.6	4.74	19.4	3.86	16.1	3.10	12.9	2.40	9.69	1.73
3.0	2.2	31.1	31.1	8.57	28.0	7.02	24.9	5.75	21.8	4.71	18.7	3.83	15.6	3.07	12.4	2.38	9.33	1.71
0.0	-0.7	29.3	29.3	8.47	26.3	6.94	23.4	5.69	20.5	4.65	17.6	3.78	14.6	3.04	11.7	2.36	8.78	1.69
-3.0	-3.7	27.4	27.4	8.36	24.6	6.85	21.9	5.62	19.2	4.59	16.4	3.74	13.7	3.00	11.0	2.33	8.21	1.67
-5.0	-5.6	26.2	26.2	8.30	23.6	6.80	20.9	5.57	18.3	4.56	15.7	3.71	13.1	2.97	10.5	2.31	7.85	1.66
-7.0	-7.6	24.9	24.9	8.23	22.4	6.74	19.9	5.52	17.4	4.52	14.9	3.68	12.5	2.95	10.0	2.29	7.47	1.64
-10	-10.5	23.1	23.1	8.13	20.8	6.66	18.5	5.46	16.2	4.46	13.8	3.63	11.5	2.91	9.23	2.26	6.92	1.62
-14.5	-15.0	20.2	20.2	7.97	18.2	6.53	16.2	5.35	14.2	4.38	12.1	3.56	10.1	2.86	8.10	2.22	6.07	1.59

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

MMY-MAP1406FT8P-E (14HP , 40kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	37.2	37.2	13.7	33.5	11.0	29.8	8.64	26.1	6.70	22.3	5.11	18.6	3.81	14.9	2.76	11.2	1.90
39 ℃	37.8	37.8	13.5	34.0	10.8	30.3	8.51	26.5	6.60	22.7	5.04	18.9	3.76	15.1	2.72	11.3	1.87
37 ℃	39.0	39.0	13.1	35.1	10.5	31.2	8.25	27.3	6.40	23.4	4.88	19.5	3.64	15.6	2.63	11.7	1.81
35 ℃	40.0	40.0	12.7	36.0	10.1	32.0	7.99	28.0	6.20	24.0	4.73	20.0	3.53	16.0	2.55	12.0	1.75
33 ℃	40.0	40.0	11.7	36.0	9.34	32.0	7.38	28.0	5.74	24.0	4.39	20.0	3.29	16.0	2.39	12.0	1.65
31 ℃	40.0	40.0	10.8	36.0	8.63	32.0	6.84	28.0	5.34	24.0	4.10	20.0	3.08	16.0	2.24	12.0	1.55
30 ℃	40.0	40.0	10.3	36.0	8.31	32.0	6.59	28.0	5.15	24.0	3.96	20.0	2.98	16.0	2.17	12.0	1.50
29 ℃	40.0	40.0	9.95	36.0	8.00	32.0	6.35	28.0	4.97	24.0	3.83	20.0	2.88	16.0	2.10	12.0	1.46
27 ℃	40.0	40.0	9.24	36.0	7.44	32.0	5.92	28.0	4.64	24.0	3.58	20.0	2.70	16.0	1.98	12.0	1.38
25 ℃	40.0	40.0	8.59	36.0	6.93	32.0	5.52	28.0	4.34	24.0	3.35	20.0	2.54	16.0	1.86	12.0	1.30
23 ℃	40.0	40.0	8.18	36.0	6.61	32.0	5.27	28.0	4.15	24.0	3.21	20.0	2.44	16.0	1.79	12.0	1.25
21 ℃	40.0	40.0	7.98	36.0	6.45	32.0	5.16	28.0	4.07	24.0	3.15	20.0	2.39	16.0	1.76	12.0	1.23
20 ℃	40.0	40.0	7.89	36.0	6.39	32.0	5.11	28.0	4.03	24.0	3.13	20.0	2.38	16.0	1.75	12.0	1.23
19 ℃	40.0	40.0	7.81	36.0	6.32	32.0	5.06	28.0	4.00	24.0	3.10	20.0	2.36	16.0	1.74	12.0	1.22
17 ℃	40.0	40.0	7.66	36.0	6.21	32.0	4.98	28.0	3.93	24.0	3.06	20.0	2.33	16.0	1.72	12.0	1.20
15 ℃	40.0	40.0	7.54	36.0	6.12	32.0	4.91	28.0	3.88	24.0	3.02	20.0	2.30	16.0	1.70	12.0	1.19

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	40.0	40.0	8.49	36.0	7.01	32.0	5.80	28.0	4.81	24.0	3.99	20.0	3.31	16.0	2.71	12.0	2.16
13.0	11.8	40.0	40.0	8.91	36.0	7.32	32.0	6.02	28.0	4.97	24.0	4.10	20.0	3.38	16.0	2.76	12.0	2.20
11.0	9.8	40.0	40.0	9.40	36.0	7.68	32.0	6.28	28.0	5.15	24.0	4.23	20.0	3.47	16.0	2.82	12.0	2.24
9.0	7.9	40.0	40.0	9.92	36.0	8.06	32.0	6.56	28.0	5.34	24.0	4.36	20.0	3.56	16.0	2.88	12.0	2.28
7.0	6.0	40.0	40.0	10.5	36.0	8.49	32.0	6.86	28.0	5.55	24.0	4.50	20.0	3.65	16.0	2.95	12.0	2.33
5.0	4.1	38.7	38.7	10.4	34.8	8.44	31.0	6.82	27.1	5.52	23.2	4.47	19.4	3.63	15.5	2.93	11.6	2.31
3.0	2.2	37.4	37.4	10.4	33.7	8.39	29.9	6.78	26.2	5.49	22.5	4.45	18.7	3.61	15.0	2.91	11.2	2.30
0.0	-0.7	35.5	35.5	10.3	31.9	8.32	28.4	6.72	24.8	5.44	21.3	4.41	17.7	3.58	14.2	2.89	10.6	2.28
-3.0	-3.7	33.4	33.4	10.2	30.1	8.24	26.7	6.66	23.4	5.39	20.1	4.37	16.7	3.55	13.4	2.86	10.0	2.26
-5.0	-5.6	32.1	32.1	10.1	28.9	8.19	25.7	6.62	22.5	5.36	19.3	4.34	16.1	3.52	12.9	2.84	9.64	2.24
-7.0	-7.6	30.8	30.8	10.1	27.7	8.14	24.6	6.58	21.6	5.32	18.5	4.32	15.4	3.50	12.3	2.83	9.24	2.23
-10	-10.5	28.8	28.8	10.0	25.9	8.07	23.1	6.52	20.2	5.27	17.3	4.28	14.4	3.47	11.5	2.80	8.65	2.21
-14.5	-15.0	25.8	25.8	9.83	23.2	7.95	20.6	6.43	18.0	5.20	15.5	4.22	12.9	3.42	10.3	2.76	7.73	2.18

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

MMY-MAP1606FT8P-E (16HP , 45kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	41.9	41.9	15.0	37.7	11.9	33.5	9.24	29.3	7.08	25.1	5.32	20.9	3.90	16.8	2.78	12.6	1.88
39 ℃	42.6	42.6	14.8	38.3	11.7	34.0	9.11	29.8	6.97	25.5	5.24	21.3	3.84	17.0	2.73	12.8	1.85
37 ℃	43.8	43.8	14.3	39.4	11.3	35.1	8.83	30.7	6.76	26.3	5.08	21.9	3.73	17.5	2.65	13.1	1.80
35 ℃	45.0	45.0	13.9	40.5	11.0	36.0	8.55	31.5	6.55	27.0	4.92	22.5	3.61	18.0	2.57	13.5	1.74
33 ℃	45.0	45.0	12.7	40.5	10.1	36.0	7.88	31.5	6.05	27.0	4.56	22.5	3.36	18.0	2.40	13.5	1.63
31 ℃	45.0	45.0	11.7	40.5	9.31	36.0	7.28	31.5	5.61	27.0	4.24	22.5	3.14	18.0	2.25	13.5	1.53
30 ℃	45.0	45.0	11.3	40.5	8.95	36.0	7.01	31.5	5.41	27.0	4.10	22.5	3.03	18.0	2.18	13.5	1.49
29 ℃	45.0	45.0	10.8	40.5	8.61	36.0	6.76	31.5	5.22	27.0	3.96	22.5	2.93	18.0	2.11	13.5	1.44
27 ℃	45.0	45.0	10.0	40.5	7.99	36.0	6.28	31.5	4.86	27.0	3.70	22.5	2.75	18.0	1.98	13.5	1.36
25 ℃	45.0	45.0	9.31	40.5	7.43	36.0	5.85	31.5	4.54	27.0	3.46	22.5	2.58	18.0	1.86	13.5	1.28
23 ℃	45.0	45.0	8.85	40.5	7.08	36.0	5.58	31.5	4.34	27.0	3.31	22.5	2.47	18.0	1.79	13.5	1.23
21 ℃	45.0	45.0	8.63	40.5	6.91	36.0	5.45	31.5	4.24	27.0	3.25	22.5	2.43	18.0	1.76	13.5	1.22
20 ℃	45.0	45.0	8.53	40.5	6.83	36.0	5.40	31.5	4.20	27.0	3.22	22.5	2.41	18.0	1.75	13.5	1.21
19 ℃	45.0	45.0	8.44	40.5	6.76	36.0	5.35	31.5	4.17	27.0	3.19	22.5	2.39	18.0	1.74	13.5	1.20
17 ℃	45.0	45.0	8.27	40.5	6.63	36.0	5.25	31.5	4.10	27.0	3.14	22.5	2.36	18.0	1.72	13.5	1.19
15 ℃	45.0	45.0	8.13	40.5	6.53	36.0	5.17	31.5	4.04	27.0	3.10	22.5	2.33	18.0	1.70	13.5	1.18

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	45.0	45.0	10.0	40.5	8.35	36.0	6.92	31.5	5.71	27.0	4.68	22.5	3.81	18.0	3.09	13.5	2.47
13.0	11.8	45.0	45.0	10.5	40.5	8.71	36.0	7.19	31.5	5.90	27.0	4.82	22.5	3.91	18.0	3.15	13.5	2.51
11.0	9.8	45.0	45.0	11.0	40.5	9.12	36.0	7.50	31.5	6.13	27.0	4.98	22.5	4.02	18.0	3.22	13.5	2.55
9.0	7.9	45.0	45.0	11.6	40.5	9.55	36.0	7.82	31.5	6.36	27.0	5.14	22.5	4.13	18.0	3.29	13.5	2.60
7.0	6.0	45.0	45.0	12.2	40.5	10.0	36.0	8.17	31.5	6.62	27.0	5.33	22.5	4.26	18.0	3.37	13.5	2.65
5.0	4.1	43.4	43.4	12.1	39.0	9.95	34.7	8.11	30.4	6.57	26.0	5.29	21.7	4.22	17.4	3.35	13.0	2.63
3.0	2.2	41.8	41.8	12.0	37.6	9.87	33.4	8.05	29.2	6.52	25.1	5.24	20.9	4.19	16.7	3.32	12.5	2.61
0.0	-0.7	39.3	39.3	11.9	35.4	9.75	31.5	7.95	27.5	6.44	23.6	5.18	19.7	4.14	15.7	3.28	11.8	2.58
-3.0	-3.7	36.8	36.8	11.7	33.1	9.63	29.4	7.86	25.7	6.36	22.1	5.12	18.4	4.09	14.7	3.24	11.0	2.54
-5.0	-5.6	35.2	35.2	11.6	31.6	9.56	28.1	7.79	24.6	6.31	21.1	5.08	17.6	4.06	14.1	3.22	10.5	2.52
-7.0	-7.6	33.5	33.5	11.5	30.1	9.48	26.8	7.73	23.4	6.26	20.1	5.04	16.7	4.02	13.4	3.19	10.0	2.50
-10	-10.5	31.0	31.0	11.4	27.9	9.36	24.8	7.63	21.7	6.18	18.6	4.97	15.5	3.97	12.4	3.15	9.30	2.47
-14.5	-15.0	27.2	27.2	11.2	24.5	9.18	21.8	7.49	19.0	6.06	16.3	4.88	13.6	3.90	10.9	3.09	8.16	2.42

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

MMY-MAP1806FT8P-E (18HP , 50.4kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	46.9	46.9	17.3	42.2	13.3	37.5	10.0	32.8	7.43	28.1	5.47	23.5	4.01	18.8	2.98	14.1	2.28
39 ℃	47.7	47.7	17.0	42.9	13.1	38.1	9.85	33.4	7.32	28.6	5.39	23.8	3.95	19.1	2.93	14.3	2.25
37 ℃	49.1	49.1	16.5	44.2	12.7	39.3	9.55	34.4	7.10	29.4	5.22	24.5	3.83	19.6	2.85	14.7	2.18
35 ℃	50.4	50.4	16.0	45.4	12.3	40.3	9.25	35.3	6.88	30.2	5.06	25.2	3.71	20.2	2.76	15.1	2.11
33 ℃	50.4	50.4	14.6	45.4	11.2	40.3	8.47	35.3	6.33	30.2	4.68	25.2	3.46	20.2	2.59	15.1	2.01
31 ℃	50.4	50.4	13.3	45.4	10.3	40.3	7.80	35.3	5.85	30.2	4.35	25.2	3.24	20.2	2.45	15.1	1.91
30 ℃	50.4	50.4	12.8	45.4	9.84	40.3	7.49	35.3	5.63	30.2	4.20	25.2	3.14	20.2	2.38	15.1	1.86
29 ℃	50.4	50.4	12.2	45.4	9.45	40.3	7.20	35.3	5.42	30.2	4.05	25.2	3.04	20.2	2.31	15.1	1.82
27 ℃	50.4	50.4	11.3	45.4	8.73	40.3	6.67	35.3	5.04	30.2	3.79	25.2	2.85	20.2	2.19	15.1	1.73
25 ℃	50.4	50.4	10.4	45.4	8.09	40.3	6.20	35.3	4.70	30.2	3.54	25.2	2.68	20.2	2.07	15.1	1.64
23 ℃	50.4	50.4	9.88	45.4	7.67	40.3	5.89	35.3	4.48	30.2	3.39	25.2	2.58	20.2	2.00	15.1	1.59
21 ℃	50.4	50.4	9.59	45.4	7.47	40.3	5.74	35.3	4.38	30.2	3.33	25.2	2.54	20.2	1.97	15.1	1.58
20 ℃	50.4	50.4	9.47	45.4	7.37	40.3	5.68	35.3	4.33	30.2	3.30	25.2	2.52	20.2	1.96	15.1	1.58
19 ℃	50.4	50.4	9.35	45.4	7.29	40.3	5.62	35.3	4.29	30.2	3.27	25.2	2.51	20.2	1.95	15.1	1.57
17 ℃	50.4	50.4	9.15	45.4	7.14	40.3	5.51	35.3	4.22	30.2	3.22	25.2	2.48	20.2	1.94	15.1	1.56
15 ℃	50.4	50.4	8.97	45.4	7.01	40.3	5.42	35.3	4.16	30.2	3.18	25.2	2.45	20.2	1.92	15.1	1.56

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	50.4	50.4	11.4	45.4	9.62	40.3	8.07	35.3	6.72	30.2	5.53	25.2	4.47	20.2	3.50	15.1	2.58
13.0	11.8	50.4	50.4	11.9	45.4	10.0	40.3	8.36	35.3	6.94	30.2	5.70	25.2	4.59	20.2	3.59	15.1	2.64
11.0	9.8	50.4	50.4	12.5	45.4	10.4	40.3	8.69	35.3	7.19	30.2	5.89	25.2	4.73	20.2	3.69	15.1	2.72
9.0	7.9	50.4	50.4	13.0	45.4	10.9	40.3	9.04	35.3	7.45	30.2	6.08	25.2	4.87	20.2	3.79	15.1	2.79
7.0	6.0	50.4	50.4	13.7	45.4	11.4	40.3	9.42	35.3	7.73	30.2	6.29	25.2	5.02	20.2	3.90	15.1	2.87
5.0	4.1	48.8	48.8	13.6	43.9	11.3	39.0	9.36	34.1	7.69	29.3	6.25	24.4	5.00	19.5	3.88	14.6	2.85
3.0	2.2	47.2	47.2	13.5	42.4	11.3	37.7	9.31	33.0	7.64	28.3	6.21	23.6	4.97	18.9	3.86	14.1	2.83
0.0	-0.7	44.7	44.7	13.4	40.2	11.2	35.7	9.23	31.3	7.58	26.8	6.16	22.3	4.92	17.9	3.82	13.4	2.81
-3.0	-3.7	42.1	42.1	13.3	37.9	11.1	33.7	9.14	29.5	7.51	25.3	6.10	21.1	4.88	16.8	3.79	12.6	2.78
-5.0	-5.6	40.5	40.5	13.2	36.5	11.0	32.4	9.09	28.4	7.46	24.3	6.07	20.3	4.85	16.2	3.77	12.2	2.77
-7.0	-7.6	38.8	38.8	13.1	34.9	10.9	31.0	9.03	27.2	7.42	23.3	6.03	19.4	4.82	15.5	3.74	11.6	2.75
-10	-10.5	36.3	36.3	13.0	32.7	10.8	29.1	8.95	25.4	7.35	21.8	5.97	18.2	4.78	14.5	3.71	10.9	2.72
-14.5	-15.0	32.5	32.5	12.8	29.2	10.7	26.0	8.82	22.7	7.24	19.5	5.89	16.2	4.71	13.0	3.66	9.75	2.69

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

MMY-MAP2006FT8P-E (20HP, 56.0kW system)

Cooling

Outdoor Unit Dry-Bulb (℃)	Outdoor Unit 100% Cooling Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	52.1	52.1	20.1	46.9	16.2	41.7	12.9	36.5	10.2	31.3	7.88	26.1	5.94	20.8	4.27	15.6	2.79
39 ℃	53.0	53.0	19.8	47.7	16.0	42.4	12.7	37.1	10.0	31.8	7.76	26.5	5.85	21.2	4.21	15.9	2.74
37 ℃	54.5	54.5	19.2	49.1	15.5	43.6	12.3	38.2	9.72	32.7	7.53	27.3	5.68	21.8	4.08	16.4	2.66
35 ℃	56.0	56.0	18.6	50.4	15.0	44.8	12.0	39.2	9.41	33.6	7.29	28.0	5.50	22.4	3.95	16.8	2.58
33 ℃	56.0	56.0	17.1	50.4	13.8	44.8	11.1	39.2	8.74	33.6	6.79	28.0	5.13	22.4	3.69	16.8	2.40
31 ℃	56.0	56.0	15.8	50.4	12.8	44.8	10.3	39.2	8.14	33.6	6.34	28.0	4.80	22.4	3.46	16.8	2.24
30 ℃	56.0	56.0	15.2	50.4	12.3	44.8	9.91	39.2	7.86	33.6	6.13	28.0	4.64	22.4	3.35	16.8	2.17
29 ℃	56.0	56.0	14.7	50.4	11.9	44.8	9.57	39.2	7.60	33.6	5.93	28.0	4.50	22.4	3.24	16.8	2.10
27 ℃	56.0	56.0	13.6	50.4	11.1	44.8	8.93	39.2	7.11	33.6	5.56	28.0	4.22	22.4	3.04	16.8	1.97
25 ℃	56.0	56.0	12.7	50.4	10.3	44.8	8.35	39.2	6.66	33.6	5.21	28.0	3.96	22.4	2.85	16.8	1.84
23 ℃	56.0	56.0	12.1	50.4	9.87	44.8	7.98	39.2	6.37	33.6	5.00	28.0	3.80	22.4	2.74	16.8	1.77
21 ℃	56.0	56.0	11.8	50.4	9.66	44.8	7.82	39.2	6.25	33.6	4.91	28.0	3.73	22.4	2.69	16.8	1.73
20 ℃	56.0	56.0	11.7	50.4	9.56	44.8	7.75	39.2	6.20	33.6	4.87	28.0	3.70	22.4	2.67	16.8	1.72
19 ℃	56.0	56.0	11.6	50.4	9.47	44.8	7.68	39.2	6.15	33.6	4.83	28.0	3.68	22.4	2.65	16.8	1.70
17 ℃	56.0	56.0	11.4	50.4	9.32	44.8	7.56	39.2	6.06	33.6	4.76	28.0	3.63	22.4	2.61	16.8	1.68
15 ℃	56.0	56.0	11.2	50.4	9.18	44.8	7.46	39.2	5.98	33.6	4.70	28.0	3.59	22.4	2.58	16.8	1.66

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	56.0	56.0	13.3	50.4	11.2	44.8	9.42	39.2	7.84	33.6	6.44	28.0	5.17	22.4	3.97	16.8	2.82
13.0	11.8	56.0	56.0	13.8	50.4	11.6	44.8	9.75	39.2	8.10	33.6	6.64	28.0	5.32	22.4	4.09	16.8	2.90
11.0	9.8	56.0	56.0	14.5	50.4	12.1	44.8	10.1	39.2	8.39	33.6	6.86	28.0	5.48	22.4	4.21	16.8	3.00
9.0	7.9	56.0	56.0	15.1	50.4	12.7	44.8	10.5	39.2	8.70	33.6	7.09	28.0	5.65	22.4	4.34	16.8	3.09
7.0	6.0	56.0	56.0	15.9	50.4	13.2	44.8	11.0	39.2	9.03	33.6	7.33	28.0	5.84	22.4	4.48	16.8	3.19
5.0	4.1	54.0	54.0	15.8	48.6	13.1	43.2	10.9	37.8	8.96	32.4	7.28	27.0	5.79	21.6	4.44	16.2	3.17
3.0	2.2	52.0	52.0	15.7	46.8	13.0	41.6	10.8	36.4	8.89	31.2	7.22	26.0	5.75	20.8	4.41	15.6	3.14
0.0	-0.7	48.9	48.9	15.5	44.0	12.9	39.1	10.7	34.2	8.78	29.4	7.14	24.5	5.68	19.6	4.36	14.7	3.10
-3.0	-3.7	45.8	45.8	15.3	41.2	12.7	36.6	10.5	32.0	8.67	27.5	7.05	22.9	5.61	18.3	4.30	13.7	3.07
-5.0	-5.6	43.8	43.8	15.2	39.4	12.6	35.0	10.5	30.6	8.61	26.3	6.99	21.9	5.57	17.5	4.27	13.1	3.04
-7.0	-7.6	41.6	41.6	15.0	37.5	12.5	33.3	10.4	29.2	8.53	25.0	6.93	20.8	5.52	16.7	4.23	12.5	3.02
-10	-10.5	38.6	38.6	14.8	34.7	12.4	30.9	10.3	27.0	8.43	23.2	6.85	19.3	5.45	15.4	4.18	11.6	2.98
-14.5	-15.0	33.8	33.8	14.6	30.5	12.1	27.1	10.1	23.7	8.27	20.3	6.72	16.9	5.35	13.5	4.10	10.2	2.92

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

MMY-MAP2216FT8P-E (22HP, 61.5kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	57.2	57.2	19.1	51.5	15.1	45.8	11.8	40.1	9.01	34.3	6.80	28.6	5.08	22.9	3.79	17.2	2.87
39 ℃	58.2	58.2	18.9	52.3	14.9	46.5	11.6	40.7	8.88	34.9	6.70	29.1	5.01	23.3	3.73	17.4	2.83
37 ℃	59.9	59.9	18.3	53.9	14.4	47.9	11.2	41.9	8.61	35.9	6.50	29.9	4.86	24.0	3.62	18.0	2.74
35 ℃	61.5	61.5	17.7	55.3	14.0	49.2	10.9	43.0	8.34	36.9	6.29	30.7	4.70	24.6	3.51	18.4	2.65
33 ℃	61.5	61.5	16.2	55.4	12.8	49.2	10.0	43.1	7.71	36.9	5.85	30.8	4.39	24.6	3.30	18.5	2.52
31 ℃	61.5	61.5	14.9	55.4	11.8	49.2	9.27	43.1	7.15	36.9	5.45	30.8	4.12	24.6	3.11	18.5	2.39
30 ℃	61.5	61.5	14.3	55.4	11.4	49.2	8.92	43.1	6.89	36.9	5.26	30.8	3.99	24.6	3.02	18.5	2.33
29 ℃	61.5	61.5	13.8	55.4	11.0	49.2	8.60	43.1	6.65	36.9	5.09	30.8	3.86	24.6	2.94	18.5	2.28
27 ℃	61.5	61.5	12.8	55.4	10.2	49.2	7.99	43.1	6.20	36.9	4.76	30.8	3.63	24.6	2.78	18.5	2.16
25 ℃	61.5	61.5	11.9	55.4	9.46	49.2	7.45	43.1	5.79	36.9	4.46	30.8	3.41	24.6	2.62	18.5	2.05
23 ℃	61.5	61.5	11.3	55.4	9.01	49.2	7.10	43.1	5.54	36.9	4.27	30.8	3.28	24.6	2.53	18.5	1.99
21 ℃	61.5	61.5	11.0	55.4	8.79	49.2	6.94	43.1	5.42	36.9	4.20	30.8	3.23	24.6	2.50	18.5	1.98
20 ℃	61.5	61.5	10.9	55.4	8.69	49.2	6.87	43.1	5.37	36.9	4.16	30.8	3.21	24.6	2.49	18.5	1.97
19 ℃	61.5	61.5	10.7	55.4	8.60	49.2	6.80	43.1	5.32	36.9	4.13	30.8	3.19	24.6	2.48	18.5	1.96
17 ℃	61.5	61.5	10.5	55.4	8.44	49.2	6.69	43.1	5.24	36.9	4.07	30.8	3.15	24.6	2.46	18.5	1.95
15 ℃	61.5	61.5	10.4	55.4	8.31	49.2	6.59	43.1	5.17	36.9	4.02	30.8	3.12	24.6	2.44	18.5	1.94

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	61.5	61.5	12.8	55.4	10.7	49.2	8.91	43.1	7.43	36.9	6.17	30.8	5.04	24.6	3.97	18.5	2.88
13.0	11.8	61.5	61.5	13.4	55.4	11.1	49.2	9.24	43.1	7.67	36.9	6.34	30.8	5.17	24.6	4.07	18.5	2.97
11.0	9.8	61.5	61.5	14.1	55.4	11.7	49.2	9.62	43.1	7.94	36.9	6.54	30.8	5.31	24.6	4.18	18.5	3.05
9.0	7.9	61.5	61.5	14.9	55.4	12.2	49.2	10.0	43.1	8.22	36.9	6.74	30.8	5.46	24.6	4.30	18.5	3.14
7.0	6.0	61.5	61.5	15.7	55.4	12.8	49.2	10.5	43.1	8.54	36.9	6.96	30.8	5.62	24.6	4.42	18.5	3.24
5.0	4.1	59.4	59.4	15.6	53.5	12.7	47.5	10.4	41.6	8.48	35.6	6.91	29.7	5.59	23.8	4.39	17.8	3.21
3.0	2.2	57.3	57.3	15.5	51.6	12.6	45.8	10.3	40.1	8.42	34.4	6.87	28.6	5.55	22.9	4.36	17.2	3.19
0.0	-0.7	54.1	54.1	15.4	48.7	12.5	43.3	10.2	37.9	8.33	32.5	6.79	27.0	5.49	21.6	4.31	16.2	3.16
-3.0	-3.7	50.8	50.8	15.2	45.7	12.4	40.6	10.1	35.5	8.24	30.5	6.72	25.4	5.43	20.3	4.27	15.2	3.13
-5.0	-5.6	48.7	48.7	15.1	43.8	12.3	38.9	10.0	34.1	8.18	29.2	6.67	24.3	5.39	19.5	4.24	14.6	3.10
-7.0	-7.6	46.5	46.5	15.0	41.8	12.2	37.2	9.95	32.5	8.12	27.9	6.62	23.2	5.35	18.6	4.20	13.9	3.08
-10	-10.5	43.3	43.3	14.8	38.9	12.1	34.6	9.84	30.3	8.03	26.0	6.55	21.6	5.29	17.3	4.16	13.0	3.05
-14.5	-15.0	38.3	38.3	14.6	34.5	11.9	30.6	9.67	26.8	7.90	23.0	6.44	19.1	5.20	15.3	4.09	11.5	3.00

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

MMY-AP2416FT8P-E (24HP, 68kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	63.3	63.3	22.3	57.0	17.7	50.6	13.8	44.3	10.6	38.0	7.99	31.6	5.97	25.3	4.43	19.0	3.31
39 ℃	64.3	64.3	22.0	57.9	17.4	51.4	13.6	45.0	10.4	38.6	7.87	32.2	5.88	25.7	4.36	19.3	3.26
37 ℃	66.2	66.2	21.3	59.6	16.9	53.0	13.2	46.4	10.1	39.7	7.63	33.1	5.70	26.5	4.23	19.9	3.16
35 ℃	68.0	68.0	20.7	61.2	16.3	54.4	12.7	47.6	9.77	40.8	7.39	34.0	5.52	27.2	4.10	20.4	3.06
33 ℃	68.0	68.0	18.9	61.2	15.0	54.4	11.7	47.6	9.04	40.8	6.86	34.0	5.16	27.2	3.85	20.4	2.90
31 ℃	68.0	68.0	17.4	61.2	13.8	54.4	10.9	47.6	8.39	40.8	6.40	34.0	4.83	27.2	3.63	20.4	2.75
30 ℃	68.0	68.0	16.7	61.2	13.3	54.4	10.5	47.6	8.09	40.8	6.18	34.0	4.68	27.2	3.53	20.4	2.68
29 ℃	68.0	68.0	16.1	61.2	12.8	54.4	10.1	47.6	7.80	40.8	5.97	34.0	4.53	27.2	3.43	20.4	2.61
27 ℃	68.0	68.0	14.9	61.2	11.9	54.4	9.37	47.6	7.28	40.8	5.59	34.0	4.26	27.2	3.23	20.4	2.48
25 ℃	68.0	68.0	13.9	61.2	11.1	54.4	8.73	47.6	6.80	40.8	5.24	34.0	4.00	27.2	3.05	20.4	2.35
23 ℃	68.0	68.0	13.2	61.2	10.5	54.4	8.33	47.6	6.50	40.8	5.02	34.0	3.85	27.2	2.95	20.4	2.28
21 ℃	68.0	68.0	12.8	61.2	10.3	54.4	8.14	47.6	6.36	40.8	4.93	34.0	3.79	27.2	2.91	20.4	2.26
20 ℃	68.0	68.0	12.7	61.2	10.2	54.4	8.05	47.6	6.30	40.8	4.89	34.0	3.76	27.2	2.90	20.4	2.25
19 ℃	68.0	68.0	12.6	61.2	10.1	54.4	7.98	47.6	6.25	40.8	4.85	34.0	3.74	27.2	2.88	20.4	2.25
17 ℃	68.0	68.0	12.3	61.2	9.88	54.4	7.84	47.6	6.15	40.8	4.78	34.0	3.69	27.2	2.85	20.4	2.23
15 ℃	68.0	68.0	12.1	61.2	9.72	54.4	7.72	47.6	6.07	40.8	4.72	34.0	3.65	27.2	2.83	20.4	2.22

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Otudoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	68.0	68.0	14.2	61.2	11.7	54.4	9.73	47.6	8.09	40.8	6.73	34.0	5.56	27.2	4.52	20.4	3.51
13.0	11.8	68.0	68.0	14.9	61.2	12.2	54.4	10.1	47.6	8.34	40.8	6.91	34.0	5.69	27.2	4.62	20.4	3.58
11.0	9.8	68.0	68.0	15.7	61.2	12.8	54.4	10.5	47.6	8.64	40.8	7.12	34.0	5.84	27.2	4.72	20.4	3.66
9.0	7.9	68.0	68.0	16.6	61.2	13.5	54.4	11.0	47.6	8.96	40.8	7.33	34.0	5.99	27.2	4.83	20.4	3.74
7.0	6.0	68.0	68.0	17.5	61.2	14.2	54.4	11.5	47.6	9.31	40.8	7.57	34.0	6.16	27.2	4.95	20.4	3.82
5.0	4.1	65.8	65.8	17.4	59.2	14.1	52.6	11.4	46.1	9.25	39.5	7.53	32.9	6.12	26.3	4.92	19.7	3.80
3.0	2.2	63.6	63.6	17.3	57.3	14.0	50.9	11.3	44.5	9.20	38.2	7.49	31.8	6.09	25.4	4.89	19.1	3.78
0.0	-0.7	60.3	60.3	17.2	54.3	13.9	48.2	11.2	42.2	9.12	36.2	7.42	30.1	6.03	24.1	4.85	18.1	3.75
-3.0	-3.7	56.8	56.8	17.0	51.2	13.8	45.5	11.1	39.8	9.03	34.1	7.35	28.4	5.98	22.7	4.80	17.1	3.71
-5.0	-5.6	54.6	54.6	16.9	49.2	13.7	43.7	11.1	38.3	8.98	32.8	7.31	27.3	5.94	21.9	4.77	16.4	3.69
-7.0	-7.6	52.3	52.3	16.8	47.1	13.6	41.9	11.0	36.6	8.93	31.4	7.26	26.2	5.91	20.9	4.74	15.7	3.67
-10	-10.5	49.0	49.0	16.7	44.1	13.5	39.2	10.9	34.3	8.84	29.4	7.20	24.5	5.85	19.6	4.70	14.7	3.63
-14.5	-15.0	43.8	43.8	16.4	39.4	13.3	35.1	10.7	30.7	8.72	26.3	7.09	21.9	5.77	17.5	4.63	13.1	3.58

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

MMY-AP2616FT8P-E (26HP, 73.5kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	68.4	68.4	24.3	61.6	19.4	54.7	15.3	47.9	11.9	41.0	9.04	34.2	6.74	27.4	4.88	20.5	3.35
39 ℃	69.5	69.5	23.9	62.6	19.1	55.6	15.0	48.7	11.7	41.7	8.90	34.8	6.64	27.8	4.80	20.9	3.31
37 ℃	71.6	71.6	23.2	64.4	18.5	57.3	14.6	50.1	11.3	42.9	8.63	35.8	6.44	28.6	4.66	21.5	3.21
35 ℃	73.5	73.5	22.5	66.1	17.9	58.8	14.1	51.4	11.0	44.1	8.36	36.7	6.24	29.4	4.51	22.0	3.10
33 ℃	73.5	73.5	20.6	66.2	16.5	58.8	13.0	51.5	10.2	44.1	7.77	36.8	5.82	29.4	4.22	22.1	2.92
31 ℃	73.5	73.5	19.0	66.2	15.3	58.8	12.1	51.5	9.44	44.1	7.24	36.8	5.44	29.4	3.96	22.1	2.74
30 ℃	73.5	73.5	18.3	66.2	14.7	58.8	11.6	51.5	9.11	44.1	7.00	36.8	5.26	29.4	3.84	22.1	2.66
29 ℃	73.5	73.5	17.6	66.2	14.1	58.8	11.2	51.5	8.79	44.1	6.77	36.8	5.10	29.4	3.72	22.1	2.58
27 ℃	73.5	73.5	16.3	66.2	13.2	58.8	10.5	51.5	8.21	44.1	6.33	36.8	4.78	29.4	3.50	22.1	2.43
25 ℃	73.5	73.5	15.2	66.2	12.3	58.8	9.76	51.5	7.67	44.1	5.93	36.8	4.49	29.4	3.29	22.1	2.30
23 ℃	73.5	73.5	14.5	66.2	11.7	58.8	9.32	51.5	7.34	44.1	5.68	36.8	4.31	29.4	3.17	22.1	2.21
21 ℃	73.5	73.5	14.1	66.2	11.4	58.8	9.12	51.5	7.19	44.1	5.58	36.8	4.24	29.4	3.12	22.1	2.18
20 ℃	73.5	73.5	13.9	66.2	11.3	58.8	9.03	51.5	7.13	44.1	5.53	36.8	4.20	29.4	3.10	22.1	2.17
19 ℃	73.5	73.5	13.8	66.2	11.2	58.8	8.95	51.5	7.06	44.1	5.49	36.8	4.17	29.4	3.08	22.1	2.15
17 ℃	73.5	73.5	13.5	66.2	11.0	58.8	8.80	51.5	6.96	44.1	5.41	36.8	4.12	29.4	3.04	22.1	2.13
15 ℃	73.5	73.5	13.3	66.2	10.8	58.8	8.67	51.5	6.86	44.1	5.34	36.8	4.07	29.4	3.01	22.1	2.11

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0℃ dry-bulb / 19.0℃ 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		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
Dry-Bulb (℃)	Wet-Bulb (℃)		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	73.5	73.5	15.6	66.2	13.0	58.8	10.8	51.5	8.96	44.1	7.42	36.8	6.08	29.4	4.87	22.1	3.70
13.0	11.8	73.5	73.5	16.4	66.2	13.5	58.8	11.2	51.5	9.25	44.1	7.63	36.8	6.23	29.4	4.98	22.1	3.78
11.0	9.8	73.5	73.5	17.2	66.2	14.2	58.8	11.7	51.5	9.59	44.1	7.87	36.8	6.41	29.4	5.11	22.1	3.87
9.0	7.9	73.5	73.5	18.2	66.2	14.9	58.8	12.2	51.5	9.94	44.1	8.12	36.8	6.58	29.4	5.23	22.1	3.97
7.0	6.0	73.5	73.5	19.2	66.2	15.6	58.8	12.7	51.5	10.3	44.1	8.39	36.8	6.77	29.4	5.37	22.1	4.06
5.0	4.1	71.0	71.0	19.1	63.9	15.5	56.8	12.6	49.7	10.3	42.6	8.33	35.5	6.73	28.4	5.33	21.3	4.04
3.0	2.2	68.5	68.5	18.9	61.7	15.4	54.8	12.5	48.0	10.2	41.1	8.28	34.3	6.68	27.4	5.30	20.6	4.01
0.0	-0.7	64.7	64.7	18.8	58.3	15.3	51.8	12.4	45.3	10.1	38.8	8.19	32.4	6.61	25.9	5.24	19.4	3.97
-3.0	-3.7	60.8	60.8	18.6	54.7	15.1	48.6	12.3	42.6	10.0	36.5	8.11	30.4	6.54	24.3	5.19	18.2	3.93
-5.0	-5.6	58.3	58.3	18.4	52.5	15.0	46.7	12.2	40.8	9.91	35.0	8.05	29.2	6.50	23.3	5.15	17.5	3.90
-7.0	-7.6	55.7	55.7	18.3	50.1	14.9	44.6	12.1	39.0	9.84	33.4	7.99	27.9	6.45	22.3	5.11	16.7	3.87
-10	-10.5	51.9	51.9	18.1	46.7	14.7	41.5	12.0	36.3	9.74	31.1	7.91	26.0	6.38	20.8	5.06	15.6	3.83
-14.5	-15.0	46.0	46.0	17.8	41.4	14.5	36.8	11.8	32.2	9.58	27.6	7.78	23.0	6.28	18.4	4.98	13.8	3.77

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

MMY-AP2816FT8P-E (28HP, 80.0kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	74.5	74.5	27.4	67.0	21.9	59.6	17.3	52.1	13.4	44.7	10.2	37.2	7.62	29.8	5.51	22.3	3.79
39 ℃	75.6	75.6	27.0	68.1	21.6	60.5	17.0	53.0	13.2	45.4	10.1	37.8	7.51	30.3	5.43	22.7	3.74
37 ℃	77.9	77.9	26.2	70.1	20.9	62.3	16.5	54.5	12.8	46.7	9.77	39.0	7.28	31.2	5.27	23.4	3.62
35 ℃	80.0	80.0	25.4	72.0	20.3	64.0	16.0	56.0	12.4	48.0	9.46	40.0	7.05	32.0	5.10	24.0	3.51
33 ℃	80.0	80.0	23.3	72.0	18.7	64.0	14.8	56.0	11.5	48.0	8.79	40.0	6.58	32.0	4.78	24.0	3.30
31 ℃	80.0	80.0	21.5	72.0	17.3	64.0	13.7	56.0	10.7	48.0	8.19	40.0	6.15	32.0	4.48	24.0	3.10
30 ℃	80.0	80.0	20.7	72.0	16.6	64.0	13.2	56.0	10.3	48.0	7.92	40.0	5.95	32.0	4.34	24.0	3.01
29 ℃	80.0	80.0	19.9	72.0	16.0	64.0	12.7	56.0	9.95	48.0	7.65	40.0	5.76	32.0	4.21	24.0	2.92
27 ℃	80.0	80.0	18.5	72.0	14.9	64.0	11.8	56.0	9.28	48.0	7.16	40.0	5.41	32.0	3.96	24.0	2.75
25 ℃	80.0	80.0	17.2	72.0	13.9	64.0	11.0	56.0	8.68	48.0	6.71	40.0	5.08	32.0	3.72	24.0	2.60
23 ℃	80.0	80.0	16.4	72.0	13.2	64.0	10.5	56.0	8.30	48.0	6.43	40.0	4.87	32.0	3.58	24.0	2.50
21 ℃	80.0	80.0	16.0	72.0	12.9	64.0	10.3	56.0	8.13	48.0	6.31	40.0	4.79	32.0	3.53	24.0	2.47
20 ℃	80.0	80.0	15.8	72.0	12.8	64.0	10.2	56.0	8.06	48.0	6.26	40.0	4.75	32.0	3.50	24.0	2.45
19 ℃	80.0	80.0	15.6	72.0	12.6	64.0	10.1	56.0	7.99	48.0	6.21	40.0	4.72	32.0	3.48	24.0	2.44
17 ℃	80.0	80.0	15.3	72.0	12.4	64.0	9.95	56.0	7.87	48.0	6.12	40.0	4.66	32.0	3.44	24.0	2.41
15 ℃	80.0	80.0	15.1	72.0	12.2	64.0	9.81	56.0	7.76	48.0	6.04	40.0	4.60	32.0	3.40	24.0	2.39

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	80.0	80.0	17.0	72.0	14.0	64.0	11.6	56.0	9.62	48.0	7.98	40.0	6.61	32.0	5.42	24.0	4.32
13.0	11.8	80.0	80.0	17.8	72.0	14.6	64.0	12.0	56.0	9.93	48.0	8.20	40.0	6.76	32.0	5.53	24.0	4.40
11.0	9.8	80.0	80.0	18.8	72.0	15.4	64.0	12.6	56.0	10.3	48.0	8.45	40.0	6.93	32.0	5.64	24.0	4.48
9.0	7.9	80.0	80.0	19.8	72.0	16.1	64.0	13.1	56.0	10.7	48.0	8.71	40.0	7.11	32.0	5.76	24.0	4.56
7.0	6.0	80.0	80.0	21.0	72.0	17.0	64.0	13.7	56.0	11.1	48.0	9.00	40.0	7.30	32.0	5.89	24.0	4.65
5.0	4.1	77.4	77.4	20.9	69.7	16.9	61.9	13.6	54.2	11.0	46.5	8.95	38.7	7.26	31.0	5.86	23.2	4.62
3.0	2.2	74.9	74.9	20.8	67.4	16.8	59.9	13.6	52.4	11.0	44.9	8.90	37.4	7.22	29.9	5.83	22.5	4.60
0.0	-0.7	70.9	70.9	20.6	63.8	16.6	56.7	13.4	49.6	10.9	42.6	8.82	35.5	7.16	28.4	5.78	21.3	4.56
-3.0	-3.7	66.9	66.9	20.4	60.2	16.5	53.5	13.3	46.8	10.8	40.1	8.74	33.4	7.09	26.7	5.72	20.1	4.52
-5.0	-5.6	64.3	64.3	20.3	57.9	16.4	51.4	13.2	45.0	10.7	38.6	8.69	32.1	7.05	25.7	5.69	19.3	4.49
-7.0	-7.6	61.6	61.6	20.1	55.4	16.3	49.3	13.2	43.1	10.6	36.9	8.63	30.8	7.01	24.6	5.65	18.5	4.46
-10	-10.5	57.7	57.7	20.0	51.9	16.1	46.1	13.0	40.4	10.5	34.6	8.55	28.8	6.94	23.1	5.60	17.3	4.42
-14.5	-15.0	51.6	51.6	19.7	46.4	15.9	41.3	12.9	36.1	10.4	30.9	8.43	25.8	6.84	20.6	5.52	15.5	4.36

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

MMY-AP3016FT8P-E (30HP, 85kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	79.1	79.1	28.7	71.2	22.8	63.3	17.8	55.4	13.8	47.5	10.4	39.6	7.71	31.6	5.53	23.7	3.78
39 ℃	80.4	80.4	28.3	72.3	22.4	64.3	17.6	56.3	13.6	48.2	10.3	40.2	7.60	32.2	5.45	24.1	3.72
37 ℃	82.8	82.8	27.4	74.5	21.8	66.2	17.0	57.9	13.2	49.7	9.94	41.4	7.37	33.1	5.29	24.8	3.61
35 ℃	85.0	85.0	26.6	76.5	21.1	68.0	16.5	59.5	12.7	51.0	9.63	42.5	7.14	34.0	5.12	25.5	3.49
33 ℃	85.0	85.0	24.3	76.5	19.4	68.0	15.2	59.5	11.8	51.0	8.94	42.5	6.65	34.0	4.79	25.5	3.28
31 ℃	85.0	85.0	22.4	76.5	17.9	68.0	14.1	59.5	10.9	51.0	8.32	42.5	6.21	34.0	4.49	25.5	3.08
30 ℃	85.0	85.0	21.6	76.5	17.2	68.0	13.6	59.5	10.6	51.0	8.04	42.5	6.01	34.0	4.35	25.5	2.99
29 ℃	85.0	85.0	20.7	76.5	16.6	68.0	13.1	59.5	10.2	51.0	7.77	42.5	5.82	34.0	4.21	25.5	2.90
27 ℃	85.0	85.0	19.2	76.5	15.4	68.0	12.2	59.5	9.51	51.0	7.27	42.5	5.45	34.0	3.96	25.5	2.74
25 ℃	85.0	85.0	17.9	76.5	14.3	68.0	11.4	59.5	8.88	51.0	6.80	42.5	5.12	34.0	3.72	25.5	2.58
23 ℃	85.0	85.0	17.0	76.5	13.7	68.0	10.8	59.5	8.49	51.0	6.51	42.5	4.91	34.0	3.58	25.5	2.48
21 ℃	85.0	85.0	16.6	76.5	13.3	68.0	10.6	59.5	8.31	51.0	6.39	42.5	4.82	34.0	3.52	25.5	2.45
20 ℃	85.0	85.0	16.4	76.5	13.2	68.0	10.5	59.5	8.23	51.0	6.33	42.5	4.79	34.0	3.50	25.5	2.43
19 ℃	85.0	85.0	16.2	76.5	13.1	68.0	10.4	59.5	8.16	51.0	6.28	42.5	4.75	34.0	3.48	25.5	2.42
17 ℃	85.0	85.0	15.9	76.5	12.8	68.0	10.2	59.5	8.03	51.0	6.19	42.5	4.69	34.0	3.43	25.5	2.39
15 ℃	85.0	85.0	15.6	76.5	12.6	68.0	10.1	59.5	7.92	51.0	6.11	42.5	4.63	34.0	3.40	25.5	2.37

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	85.0	85.0	18.5	76.5	15.4	68.0	12.7	59.5	10.5	51.0	8.67	42.5	7.12	34.0	5.80	25.5	4.63
13.0	11.8	85.0	85.0	19.4	76.5	16.0	68.0	13.2	59.5	10.9	51.0	8.92	42.5	7.29	34.0	5.91	25.5	4.71
11.0	9.8	85.0	85.0	20.4	76.5	16.8	68.0	13.8	59.5	11.3	51.0	9.20	42.5	7.49	34.0	6.04	25.5	4.79
9.0	7.9	85.0	85.0	21.5	76.5	17.6	68.0	14.4	59.5	11.7	51.0	9.50	42.5	7.69	34.0	6.18	25.5	4.88
7.0	6.0	85.0	85.0	22.7	76.5	18.5	68.0	15.0	59.5	12.2	51.0	9.83	42.5	7.91	34.0	6.32	25.5	4.97
5.0	4.1	82.1	82.1	22.5	73.9	18.4	65.7	14.9	57.5	12.1	49.3	9.76	41.0	7.85	32.8	6.28	24.6	4.94
3.0	2.2	79.2	79.2	22.4	71.3	18.3	63.4	14.8	55.4	12.0	47.5	9.69	39.6	7.80	31.7	6.24	23.8	4.91
0.0	-0.7	74.8	74.8	22.2	67.3	18.1	59.8	14.7	52.3	11.9	44.9	9.59	37.4	7.72	29.9	6.17	22.4	4.85
-3.0	-3.7	70.2	70.2	21.9	63.2	17.9	56.2	14.5	49.1	11.7	42.1	9.49	35.1	7.64	28.1	6.10	21.1	4.80
-5.0	-5.6	67.3	67.3	21.8	60.6	17.7	53.8	14.4	47.1	11.7	40.4	9.42	33.7	7.58	26.9	6.06	20.2	4.77
-7.0	-7.6	64.3	64.3	21.6	57.8	17.6	51.4	14.3	45.0	11.6	38.6	9.35	32.1	7.53	25.7	6.02	19.3	4.73
-10	-10.5	59.8	59.8	21.4	53.9	17.4	47.9	14.2	41.9	11.5	35.9	9.25	29.9	7.45	23.9	5.95	18.0	4.68
-14.5	-15.0	53.0	53.0	21.0	47.7	17.1	42.4	13.9	37.1	11.3	31.8	9.09	26.5	7.32	21.2	5.85	15.9	4.60

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

MMY-AP3216FT8P-E (32HP, 90.4kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	84.1	84.1	31.0	75.7	24.2	67.3	18.6	58.9	14.1	50.5	10.6	42.1	7.82	33.7	5.73	25.2	4.18
39 ℃	85.5	85.5	30.5	76.9	23.9	68.4	18.4	59.8	13.9	51.3	10.4	42.7	7.71	34.2	5.65	25.6	4.12
37 ℃	88.0	88.0	29.6	79.2	23.1	70.4	17.8	61.6	13.5	52.8	10.1	44.0	7.47	35.2	5.48	26.4	3.99
35 ℃	90.4	90.4	28.7	81.4	22.4	72.3	17.2	63.3	13.1	54.2	9.8	45.2	7.24	36.2	5.31	27.1	3.86
33 ℃	90.4	90.4	26.2	81.4	20.5	72.3	15.9	63.3	12.1	54.2	9.08	45.2	6.75	36.2	4.98	27.1	3.65
31 ℃	90.4	90.4	24.1	81.4	18.9	72.3	14.6	63.3	11.2	54.2	8.45	45.2	6.32	36.2	4.69	27.1	3.46
30 ℃	90.4	90.4	23.1	81.4	18.2	72.3	14.1	63.3	10.8	54.2	8.16	45.2	6.11	36.2	4.55	27.1	3.37
29 ℃	90.4	90.4	22.2	81.4	17.5	72.3	13.6	63.3	10.4	54.2	7.88	45.2	5.92	36.2	4.42	27.1	3.28
27 ℃	90.4	90.4	20.5	81.4	16.2	72.3	12.6	63.3	9.68	54.2	7.37	45.2	5.56	36.2	4.16	27.1	3.10
25 ℃	90.4	90.4	19.0	81.4	15.0	72.3	11.7	63.3	9.04	54.2	6.90	45.2	5.22	36.2	3.93	27.1	2.94
23 ℃	90.4	90.4	18.1	81.4	14.3	72.3	11.2	63.3	8.63	54.2	6.61	45.2	5.02	36.2	3.79	27.1	2.84
21 ℃	90.4	90.4	17.6	81.4	13.9	72.3	10.9	63.3	8.45	54.2	6.48	45.2	4.93	36.2	3.74	27.1	2.82
20 ℃	90.4	90.4	17.4	81.4	13.8	72.3	10.8	63.3	8.36	54.2	6.42	45.2	4.90	36.2	3.71	27.1	2.80
19 ℃	90.4	90.4	17.2	81.4	13.6	72.3	10.7	63.3	8.29	54.2	6.37	45.2	4.86	36.2	3.69	27.1	2.79
17 ℃	90.4	90.4	16.8	81.4	13.3	72.3	10.5	63.3	8.15	54.2	6.28	45.2	4.80	36.2	3.66	27.1	2.77
15 ℃	90.4	90.4	16.5	81.4	13.1	72.3	10.3	63.3	8.04	54.2	6.20	45.2	4.75	36.2	3.62	27.1	2.75

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	90.4	90.4	19.9	81.4	16.6	72.3	13.9	63.3	11.5	54.2	9.52	45.2	7.78	36.2	6.21	27.1	4.74
13.0	11.8	90.4	90.4	20.8	81.4	17.3	72.3	14.4	63.3	11.9	54.2	9.80	45.2	7.97	36.2	6.35	27.1	4.84
11.0	9.8	90.4	90.4	21.8	81.4	18.1	72.3	15.0	63.3	12.3	54.2	10.1	45.2	8.20	36.2	6.51	27.1	4.96
9.0	7.9	90.4	90.4	23.0	81.4	19.0	72.3	15.6	63.3	12.8	54.2	10.4	45.2	8.43	36.2	6.67	27.1	5.07
7.0	6.0	90.4	90.4	24.4	81.4	19.9	72.3	16.3	63.3	13.3	54.2	10.8	45.2	8.68	36.2	6.85	27.1	5.19
5.0	4.1	87.5	87.5	24.1	78.7	19.8	70.0	16.2	61.2	13.2	52.5	10.7	43.7	8.63	35.0	6.81	26.2	5.16
3.0	2.2	84.6	84.6	23.9	76.1	19.6	67.7	16.1	59.2	13.1	50.7	10.7	42.3	8.58	33.8	6.77	25.4	5.13
0.0	-0.7	80.1	80.1	23.7	72.1	19.5	64.1	15.9	56.1	13.0	48.1	10.6	40.1	8.50	32.1	6.71	24.0	5.09
-3.0	-3.7	75.6	75.6	23.5	68.0	19.3	60.4	15.8	52.9	12.9	45.3	10.5	37.8	8.42	30.2	6.65	22.7	5.04
-5.0	-5.6	72.6	72.6	23.3	65.4	19.2	58.1	15.7	50.9	12.8	43.6	10.4	36.3	8.37	29.1	6.61	21.8	5.01
-7.0	-7.6	69.6	69.6	23.2	62.6	19.1	55.7	15.6	48.7	12.7	41.8	10.3	34.8	8.32	27.8	6.57	20.9	4.98
-10	-10.5	65.2	65.2	23.0	58.6	18.9	52.1	15.5	45.6	12.6	39.1	10.2	32.6	8.25	26.1	6.51	19.5	4.93
-14.5	-15.0	58.3	58.3	22.7	52.4	18.6	46.6	15.2	40.8	12.4	35.0	10.1	29.1	8.13	23.3	6.42	17.5	4.86

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

MMY-AP3416FT8P-E (34HP, 95.4kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	88.8	88.8	32.3	79.9	25.1	71.0	19.2	62.1	14.5	53.3	10.8	44.4	7.91	35.5	5.75	26.6	4.16
39 ℃	90.2	90.2	31.8	81.2	24.8	72.2	19.0	63.1	14.3	54.1	10.6	45.1	7.80	36.1	5.67	27.1	4.10
37 ℃	92.9	92.9	30.9	83.6	24.0	74.3	18.4	65.0	13.9	55.7	10.3	46.5	7.56	37.2	5.50	27.9	3.97
35 ℃	95.4	95.4	29.9	85.8	23.2	76.3	17.8	66.8	13.4	57.2	10.0	47.7	7.32	38.2	5.32	28.6	3.85
33 ℃	95.4	95.4	27.3	85.9	21.3	76.3	16.4	66.8	12.4	57.2	9.24	47.7	6.82	38.2	4.99	28.6	3.64
31 ℃	95.4	95.4	25.0	85.9	19.6	76.3	15.1	66.8	11.5	57.2	8.59	47.7	6.38	38.2	4.70	28.6	3.44
30 ℃	95.4	95.4	24.0	85.9	18.8	76.3	14.5	66.8	11.0	57.2	8.30	47.7	6.17	38.2	4.56	28.6	3.35
29 ℃	95.4	95.4	23.1	85.9	18.1	76.3	14.0	66.8	10.6	57.2	8.01	47.7	5.97	38.2	4.42	28.6	3.26
27 ℃	95.4	95.4	21.3	85.9	16.7	76.3	13.0	66.8	9.91	57.2	7.49	47.7	5.60	38.2	4.17	28.6	3.09
25 ℃	95.4	95.4	19.7	85.9	15.5	76.3	12.0	66.8	9.24	57.2	7.00	47.7	5.26	38.2	3.93	28.6	2.92
23 ℃	95.4	95.4	18.7	85.9	14.8	76.3	11.5	66.8	8.82	57.2	6.70	47.7	5.05	38.2	3.79	28.6	2.83
21 ℃	95.4	95.4	18.2	85.9	14.4	76.3	11.2	66.8	8.62	57.2	6.57	47.7	4.97	38.2	3.74	28.6	2.80
20 ℃	95.4	95.4	18.0	85.9	14.2	76.3	11.1	66.8	8.54	57.2	6.51	47.7	4.93	38.2	3.71	28.6	2.78
19 ℃	95.4	95.4	17.8	85.9	14.0	76.3	11.0	66.8	8.46	57.2	6.46	47.7	4.90	38.2	3.69	28.6	2.77
17 ℃	95.4	95.4	17.4	85.9	13.8	76.3	10.8	66.8	8.32	57.2	6.36	47.7	4.83	38.2	3.65	28.6	2.75
15 ℃	95.4	95.4	17.1	85.9	13.5	76.3	10.6	66.8	8.19	57.2	6.28	47.7	4.78	38.2	3.62	28.6	2.73

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	95.4	95.4	21.4	85.9	18.0	76.3	15.0	66.8	12.4	57.2	10.2	47.7	8.28	38.2	6.58	28.6	5.05
13.0	11.8	95.4	95.4	22.4	85.9	18.7	76.3	15.6	66.8	12.8	57.2	10.5	47.7	8.50	38.2	6.74	28.6	5.15
11.0	9.8	95.4	95.4	23.5	85.9	19.6	76.3	16.2	66.8	13.3	57.2	10.9	47.7	8.75	38.2	6.91	28.6	5.27
9.0	7.9	95.4	95.4	24.6	85.9	20.4	76.3	16.9	66.8	13.8	57.2	11.2	47.7	9.01	38.2	7.09	28.6	5.39
7.0	6.0	95.4	95.4	25.9	85.9	21.4	76.3	17.6	66.8	14.4	57.2	11.6	47.7	9.28	38.2	7.28	28.6	5.51
5.0	4.1	92.2	92.2	25.7	82.9	21.3	73.7	17.5	64.5	14.3	55.3	11.5	46.1	9.22	36.9	7.23	27.6	5.48
3.0	2.2	88.9	88.9	25.6	80.0	21.1	71.1	17.4	62.3	14.2	53.4	11.5	44.5	9.16	35.6	7.18	26.7	5.44
0.0	-0.7	84.0	84.0	25.3	75.6	20.9	67.2	17.2	58.8	14.0	50.4	11.3	42.0	9.06	33.6	7.11	25.2	5.38
-3.0	-3.7	78.9	78.9	25.0	71.0	20.7	63.1	17.0	55.2	13.9	47.3	11.2	39.4	8.97	31.6	7.03	23.7	5.33
-5.0	-5.6	75.7	75.7	24.9	68.1	20.5	60.5	16.9	53.0	13.8	45.4	11.1	37.8	8.91	30.3	6.98	22.7	5.29
-7.0	-7.6	72.3	72.3	24.7	65.0	20.4	57.8	16.8	50.6	13.7	43.4	11.1	36.1	8.84	28.9	6.93	21.7	5.25
-10	-10.5	67.3	67.3	24.4	60.6	20.2	53.9	16.6	47.1	13.5	40.4	10.9	33.7	8.75	26.9	6.86	20.2	5.20
-14.5	-15.0	59.7	59.7	24.0	53.7	19.8	47.7	16.3	41.8	13.3	35.8	10.8	29.8	8.61	23.9	6.75	17.9	5.11

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

MMY-AP3616FT8P-E (36HP, 100.8kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	93.8	93.8	34.6	84.4	26.5	75.0	20.0	65.7	14.9	56.3	10.9	46.9	8.02	37.5	5.96	28.1	4.56
39 ℃	95.3	95.3	34.1	85.8	26.1	76.3	19.7	66.7	14.6	57.2	10.8	47.7	7.90	38.1	5.87	28.6	4.49
37 ℃	98.2	98.2	33.0	88.3	25.3	78.5	19.1	68.7	14.2	58.9	10.4	49.1	7.66	39.3	5.69	29.4	4.36
35 ℃	100.8	100.8	32.0	90.7	24.5	80.6	18.5	70.6	13.8	60.5	10.1	50.4	7.42	40.3	5.51	30.2	4.22
33 ℃	100.8	100.8	29.1	90.7	22.4	80.6	16.9	70.6	12.7	60.5	9.37	50.4	6.92	40.3	5.19	30.2	4.01
31 ℃	100.8	100.8	26.6	90.7	20.5	80.6	15.6	70.6	11.7	60.5	8.70	50.4	6.48	40.3	4.90	30.2	3.82
30 ℃	100.8	100.8	25.5	90.7	19.7	80.6	15.0	70.6	11.3	60.5	8.40	50.4	6.27	40.3	4.76	30.2	3.72
29 ℃	100.8	100.8	24.5	90.7	18.9	80.6	14.4	70.6	10.8	60.5	8.11	50.4	6.08	40.3	4.62	30.2	3.63
27 ℃	100.8	100.8	22.6	90.7	17.5	80.6	13.3	70.6	10.1	60.5	7.57	50.4	5.71	40.3	4.37	30.2	3.45
25 ℃	100.8	100.8	20.9	90.7	16.2	80.6	12.4	70.6	9.39	60.5	7.09	50.4	5.37	40.3	4.13	30.2	3.28
23 ℃	100.8	100.8	19.8	90.7	15.3	80.6	11.8	70.6	8.96	60.5	6.78	50.4	5.16	40.3	3.99	30.2	3.19
21 ℃	100.8	100.8	19.2	90.7	14.9	80.6	11.5	70.6	8.76	60.5	6.65	50.4	5.08	40.3	3.95	30.2	3.16
20 ℃	100.8	100.8	18.9	90.7	14.7	80.6	11.4	70.6	8.67	60.5	6.59	50.4	5.04	40.3	3.93	30.2	3.15
19 ℃	100.8	100.8	18.7	90.7	14.6	80.6	11.2	70.6	8.58	60.5	6.54	50.4	5.01	40.3	3.91	30.2	3.15
17 ℃	100.8	100.8	18.3	90.7	14.3	80.6	11.0	70.6	8.44	60.5	6.44	50.4	4.95	40.3	3.88	30.2	3.13
15 ℃	100.8	100.8	17.9	90.7	14.0	80.6	10.8	70.6	8.31	60.5	6.36	50.4	4.90	40.3	3.85	30.2	3.11

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	100.8	100.8	22.8	90.7	19.2	80.6	16.1	70.6	13.4	60.5	11.1	50.4	8.94	40.3	7.00	30.2	5.16
13.0	11.8	100.8	100.8	23.8	90.7	20.0	80.6	16.7	70.6	13.9	60.5	11.4	50.4	9.19	40.3	7.18	30.2	5.29
11.0	9.8	100.8	100.8	24.9	90.7	20.9	80.6	17.4	70.6	14.4	60.5	11.8	50.4	9.46	40.3	7.38	30.2	5.43
9.0	7.9	100.8	100.8	26.1	90.7	21.8	80.6	18.1	70.6	14.9	60.5	12.2	50.4	9.75	40.3	7.58	30.2	5.58
7.0	6.0	100.8	100.8	27.4	90.7	22.8	80.6	18.8	70.6	15.5	60.5	12.6	50.4	10.0	40.3	7.80	30.2	5.73
5.0	4.1	97.6	97.6	27.2	87.8	22.6	78.0	18.7	68.3	15.4	58.5	12.5	48.8	10.0	39.0	7.76	29.3	5.70
3.0	2.2	94.3	94.3	27.1	84.9	22.5	75.4	18.6	66.0	15.3	56.6	12.4	47.2	9.93	37.7	7.71	28.3	5.67
0.0	-0.7	89.4	89.4	26.8	80.4	22.3	71.5	18.5	62.6	15.2	53.6	12.3	44.7	9.85	35.7	7.65	26.8	5.62
-3.0	-3.7	84.2	84.2	26.6	75.8	22.1	67.4	18.3	59.0	15.0	50.5	12.2	42.1	9.76	33.7	7.58	25.3	5.56
-5.0	-5.6	81.0	81.0	26.4	72.9	22.0	64.8	18.2	56.7	14.9	48.6	12.1	40.5	9.70	32.4	7.53	24.3	5.53
-7.0	-7.6	77.6	77.6	26.3	69.8	21.8	62.1	18.1	54.3	14.8	46.6	12.1	38.8	9.64	31.0	7.48	23.3	5.50
-10	-10.5	72.6	72.6	26.0	65.4	21.6	58.1	17.9	50.9	14.7	43.6	11.9	36.3	9.55	29.1	7.42	21.8	5.45
-14.5	-15.0	65.0	65.0	25.7	58.5	21.3	52.0	17.6	45.5	14.5	39.0	11.8	32.5	9.42	26.0	7.31	19.5	5.37

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

MMY-AP3816FT8P-E (38HP, 106.4kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	99.0	99.0	37.4	89.1	29.4	79.2	22.9	69.3	17.6	59.4	13.3	49.5	10.0	39.6	7.25	29.7	5.07
39 ℃	100.6	100.6	36.8	90.6	29.0	80.5	22.6	70.4	17.3	60.4	13.1	50.3	9.81	40.2	7.14	30.2	4.99
37 ℃	103.6	103.6	35.7	93.3	28.1	82.9	21.9	72.5	16.8	62.2	12.8	51.8	9.51	41.4	6.93	31.1	4.84
35 ℃	106.4	106.4	34.6	95.7	27.2	85.1	21.2	74.5	16.3	63.8	12.3	53.2	9.21	42.6	6.71	31.9	4.69
33 ℃	106.4	106.4	31.7	95.8	25.0	85.1	19.5	74.5	15.1	63.8	11.5	53.2	8.59	42.6	6.29	31.9	4.41
31 ℃	106.4	106.4	29.1	95.8	23.1	85.1	18.1	74.5	14.0	63.8	10.7	53.2	8.04	42.6	5.90	31.9	4.15
30 ℃	106.4	106.4	28.0	95.8	22.2	85.1	17.4	74.5	13.5	63.8	10.3	53.2	7.78	42.6	5.72	31.9	4.03
29 ℃	106.4	106.4	26.9	95.8	21.4	85.1	16.8	74.5	13.0	63.8	10.0	53.2	7.53	42.6	5.55	31.9	3.91
27 ℃	106.4	106.4	24.9	95.8	19.8	85.1	15.6	74.5	12.1	63.8	9.34	53.2	7.07	42.6	5.23	31.9	3.69
25 ℃	106.4	106.4	23.1	95.8	18.4	85.1	14.5	74.5	11.4	63.8	8.75	53.2	6.64	42.6	4.92	31.9	3.48
23 ℃	106.4	106.4	22.0	95.8	17.5	85.1	13.9	74.5	10.9	63.8	8.39	53.2	6.38	42.6	4.74	31.9	3.36
21 ℃	106.4	106.4	21.4	95.8	17.1	85.1	13.6	74.5	10.6	63.8	8.23	53.2	6.27	42.6	4.67	31.9	3.31
20 ℃	106.4	106.4	21.2	95.8	16.9	85.1	13.4	74.5	10.5	63.8	8.16	53.2	6.23	42.6	4.63	31.9	3.29
19 ℃	106.4	106.4	20.9	95.8	16.8	85.1	13.3	74.5	10.4	63.8	8.10	53.2	6.18	42.6	4.61	31.9	3.28
17 ℃	106.4	106.4	20.5	95.8	16.5	85.1	13.1	74.5	10.3	63.8	7.98	53.2	6.10	42.6	4.55	31.9	3.24
15 ℃	106.4	106.4	20.2	95.8	16.2	85.1	12.9	74.5	10.1	63.8	7.88	53.2	6.04	42.6	4.51	31.9	3.21

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	106.4	106.4	24.7	95.8	20.9	85.1	17.5	74.5	14.6	63.8	12.0	53.2	9.65	42.6	7.48	31.9	5.41
13.0	11.8	106.4	106.4	25.8	95.8	21.7	85.1	18.1	74.5	15.1	63.8	12.4	53.2	9.93	42.6	7.69	31.9	5.56
11.0	9.8	106.4	106.4	27.0	95.8	22.6	85.1	18.9	74.5	15.6	63.8	12.8	53.2	10.2	42.6	7.92	31.9	5.72
9.0	7.9	106.4	106.4	28.2	95.8	23.6	85.1	19.6	74.5	16.2	63.8	13.2	53.2	10.5	42.6	8.15	31.9	5.89
7.0	6.0	106.4	106.4	29.6	95.8	24.7	85.1	20.4	74.5	16.8	63.8	13.6	53.2	10.9	42.6	8.39	31.9	6.07
5.0	4.1	102.8	102.8	29.4	92.5	24.5	82.2	20.3	71.9	16.7	61.7	13.5	51.4	10.8	41.1	8.34	30.8	6.03
3.0	2.2	99.1	99.1	29.2	89.2	24.3	79.3	20.2	69.4	16.6	59.5	13.5	49.6	10.7	39.7	8.28	29.7	5.98
0.0	-0.7	93.6	93.6	28.9	84.2	24.1	74.9	19.9	65.5	16.4	56.2	13.3	46.8	10.6	37.4	8.19	28.1	5.92
-3.0	-3.7	87.9	87.9	28.6	79.1	23.8	70.3	19.7	61.5	16.2	52.7	13.2	43.9	10.5	35.2	8.10	26.4	5.86
-5.0	-5.6	84.3	84.3	28.4	75.8	23.7	67.4	19.6	59.0	16.1	50.6	13.1	42.1	10.4	33.7	8.05	25.3	5.82
-7.0	-7.6	80.4	80.4	28.2	72.4	23.5	64.4	19.4	56.3	16.0	48.3	13.0	40.2	10.4	32.2	7.99	24.1	5.77
-10	-10.5	74.9	74.9	27.9	67.4	23.2	59.9	19.2	52.4	15.8	44.9	12.8	37.5	10.2	30.0	7.90	22.5	5.71
-14.5	-15.0	66.3	66.3	27.4	59.7	22.8	53.1	18.9	46.4	15.5	39.8	12.6	33.2	10.1	26.5	7.77	19.9	5.62

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

MMY-AP4016FT8P-E (40HP, 112kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	104.2	104.2	40.2	93.8	32.4	83.4	25.8	73.0	20.4	62.5	15.8	52.1	11.9	41.7	8.55	31.3	5.57
39 ℃	105.9	105.9	39.6	95.3	31.9	84.7	25.5	74.1	20.0	63.5	15.5	53.0	11.7	42.4	8.42	31.8	5.49
37 ℃	109.1	109.1	38.4	98.2	30.9	87.3	24.7	76.3	19.4	65.4	15.1	54.5	11.4	43.6	8.17	32.7	5.32
35 ℃	112.0	112.0	37.2	100.8	30.0	89.6	23.9	78.4	18.8	67.2	14.6	56.0	11.0	44.8	7.91	33.6	5.15
33 ℃	112.0	112.0	34.2	100.8	27.7	89.6	22.1	78.4	17.5	67.2	13.6	56.0	10.3	44.8	7.39	33.6	4.81
31 ℃	112.0	112.0	31.6	100.8	25.6	89.6	20.6	78.4	16.3	67.2	12.7	56.0	9.60	44.8	6.91	33.6	4.49
30 ℃	112.0	112.0	30.4	100.8	24.7	89.6	19.8	78.4	15.7	67.2	12.3	56.0	9.29	44.8	6.69	33.6	4.34
29 ℃	112.0	112.0	29.3	100.8	23.8	89.6	19.1	78.4	15.2	67.2	11.9	56.0	8.99	44.8	6.48	33.6	4.20
27 ℃	112.0	112.0	27.2	100.8	22.2	89.6	17.9	78.4	14.2	67.2	11.1	56.0	8.44	44.8	6.08	33.6	3.93
25 ℃	112.0	112.0	25.4	100.8	20.7	89.6	16.7	78.4	13.3	67.2	10.4	56.0	7.92	44.8	5.71	33.6	3.69
23 ℃	112.0	112.0	24.2	100.8	19.7	89.6	16.0	78.4	12.7	67.2	9.99	56.0	7.60	44.8	5.48	33.6	3.53
21 ℃	112.0	112.0	23.6	100.8	19.3	89.6	15.6	78.4	12.5	67.2	9.81	56.0	7.47	44.8	5.38	33.6	3.46
20 ℃	112.0	112.0	23.4	100.8	19.1	89.6	15.5	78.4	12.4	67.2	9.73	56.0	7.41	44.8	5.34	33.6	3.43
19 ℃	112.0	112.0	23.1	100.8	18.9	89.6	15.4	78.4	12.3	67.2	9.66	56.0	7.35	44.8	5.30	33.6	3.41
17 ℃	112.0	112.0	22.7	100.8	18.6	89.6	15.1	78.4	12.1	67.2	9.52	56.0	7.26	44.8	5.23	33.6	3.36
15 ℃	112.0	112.0	22.4	100.8	18.4	89.6	14.9	78.4	12.0	67.2	9.41	56.0	7.17	44.8	5.17	33.6	3.31

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	112.0	112.0	26.6	100.8	22.5	89.6	18.9	78.4	15.7	67.2	12.9	56.0	10.4	44.8	7.97	33.6	5.66
13.0	11.8	112.0	112.0	27.7	100.8	23.4	89.6	19.6	78.4	16.3	67.2	13.3	56.0	10.7	44.8	8.20	33.6	5.83
11.0	9.8	112.0	112.0	29.0	100.8	24.4	89.6	20.3	78.4	16.8	67.2	13.8	56.0	11.0	44.8	8.45	33.6	6.01
9.0	7.9	112.0	112.0	30.4	100.8	25.4	89.6	21.1	78.4	17.4	67.2	14.2	56.0	11.3	44.8	8.71	33.6	6.20
7.0	6.0	112.0	112.0	31.8	100.8	26.6	89.6	22.0	78.4	18.1	67.2	14.7	56.0	11.7	44.8	8.98	33.6	6.40
5.0	4.1	108.0	108.0	31.7	97.2	26.4	86.4	21.9	75.6	18.0	64.8	14.6	54.0	11.6	43.2	8.91	32.4	6.35
3.0	2.2	104.0	104.0	31.4	93.6	26.2	83.2	21.7	72.8	17.8	62.4	14.5	52.0	11.5	41.6	8.84	31.2	6.30
0.0	-0.7	97.9	97.9	31.0	88.1	25.9	78.3	21.4	68.5	17.6	58.7	14.3	48.9	11.4	39.1	8.74	29.4	6.23
-3.0	-3.7	91.5	91.5	30.7	82.4	25.5	73.2	21.2	64.1	17.4	54.9	14.1	45.8	11.3	36.6	8.63	27.5	6.15
-5.0	-5.6	87.5	87.5	30.4	78.8	25.3	70.0	21.0	61.3	17.3	52.5	14.0	43.8	11.2	35.0	8.56	26.3	6.10
-7.0	-7.6	83.3	83.3	30.2	75.0	25.1	66.6	20.8	58.3	17.1	50.0	13.9	41.6	11.1	33.3	8.49	25.0	6.05
-10	-10.5	77.2	77.2	29.8	69.5	24.8	61.7	20.6	54.0	16.9	46.3	13.7	38.6	10.9	30.9	8.39	23.2	5.98
-14.5	-15.0	67.7	67.7	29.2	60.9	24.3	54.1	20.2	47.4	16.6	40.6	13.5	33.8	10.7	27.1	8.23	20.3	5.86

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

MMY-AP4216FT8P-E (42HP, 120kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	111.7	111.7	41.2	100.5	32.9	89.3	25.9	78.2	20.1	67.0	15.3	55.8	11.4	44.7	8.27	33.5	5.69
39 ℃	113.5	113.5	40.6	102.1	32.4	90.8	25.5	79.4	19.8	68.1	15.1	56.7	11.3	45.4	8.15	34.0	5.61
37 ℃	116.9	116.9	39.3	105.2	31.4	93.5	24.7	81.8	19.2	70.1	14.6	58.4	10.9	46.7	7.90	35.1	5.44
35 ℃	120.0	120.0	38.1	108.0	30.4	96.0	24.0	84.0	18.6	72.0	14.2	60.0	10.6	48.0	7.65	36.0	5.26
33 ℃	120.0	120.0	35.0	108.0	28.0	96.0	22.1	84.0	17.2	72.0	13.2	60.0	9.87	48.0	7.16	36.0	4.95
31 ℃	120.0	120.0	32.3	108.0	25.9	96.0	20.5	84.0	16.0	72.0	12.3	60.0	9.23	48.0	6.72	36.0	4.65
30 ℃	120.0	120.0	31.0	108.0	24.9	96.0	19.8	84.0	15.5	72.0	11.9	60.0	8.93	48.0	6.51	36.0	4.51
29 ℃	120.0	120.0	29.9	108.0	24.0	96.0	19.1	84.0	14.9	72.0	11.5	60.0	8.64	48.0	6.31	36.0	4.38
27 ℃	120.0	120.0	27.7	108.0	22.3	96.0	17.8	84.0	13.9	72.0	10.7	60.0	8.11	48.0	5.94	36.0	4.13
25 ℃	120.0	120.0	25.8	108.0	20.8	96.0	16.6	84.0	13.0	72.0	10.1	60.0	7.61	48.0	5.59	36.0	3.89
23 ℃	120.0	120.0	24.5	108.0	19.8	96.0	15.8	84.0	12.5	72.0	9.64	60.0	7.31	48.0	5.37	36.0	3.75
21 ℃	120.0	120.0	23.9	108.0	19.4	96.0	15.5	84.0	12.2	72.0	9.46	60.0	7.18	48.0	5.29	36.0	3.70
20 ℃	120.0	120.0	23.7	108.0	19.2	96.0	15.3	84.0	12.1	72.0	9.38	60.0	7.13	48.0	5.25	36.0	3.68
19 ℃	120.0	120.0	23.4	108.0	19.0	96.0	15.2	84.0	12.0	72.0	9.31	60.0	7.08	48.0	5.22	36.0	3.65
17 ℃	120.0	120.0	23.0	108.0	18.6	96.0	14.9	84.0	11.8	72.0	9.18	60.0	6.99	48.0	5.16	36.0	3.61
15 ℃	120.0	120.0	22.6	108.0	18.4	96.0	14.7	84.0	11.6	72.0	9.06	60.0	6.91	48.0	5.10	36.0	3.58

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	120.0	120.0	25.5	108.0	21.0	96.0	17.4	84.0	14.4	72.0	12.0	60.0	9.92	48.0	8.13	36.0	6.49
13.0	11.8	120.0	120.0	26.7	108.0	22.0	96.0	18.1	84.0	14.9	72.0	12.3	60.0	10.1	48.0	8.29	36.0	6.60
11.0	9.8	120.0	120.0	28.2	108.0	23.0	96.0	18.8	84.0	15.4	72.0	12.7	60.0	10.4	48.0	8.47	36.0	6.72
9.0	7.9	120.0	120.0	29.7	108.0	24.2	96.0	19.7	84.0	16.0	72.0	13.1	60.0	10.7	48.0	8.65	36.0	6.84
7.0	6.0	120.0	120.0	31.5	108.0	25.5	96.0	20.6	84.0	16.6	72.0	13.5	60.0	11.0	48.0	8.84	36.0	6.98
5.0	4.1	116.1	116.1	31.3	104.5	25.3	92.9	20.5	81.3	16.6	69.7	13.4	58.1	10.9	46.5	8.79	34.8	6.94
3.0	2.2	112.3	112.3	31.1	101.0	25.2	89.8	20.3	78.6	16.5	67.4	13.3	56.1	10.8	44.9	8.74	33.7	6.90
0.0	-0.7	106.4	106.4	30.9	95.7	25.0	85.1	20.2	74.5	16.3	63.8	13.2	53.2	10.7	42.6	8.66	31.9	6.84
-3.0	-3.7	100.3	100.3	30.6	90.3	24.7	80.2	20.0	70.2	16.2	60.2	13.1	50.1	10.6	40.1	8.58	30.1	6.77
-5.0	-5.6	96.4	96.4	30.4	86.8	24.6	77.1	19.9	67.5	16.1	57.9	13.0	48.2	10.6	38.6	8.53	28.9	6.73
-7.0	-7.6	92.4	92.4	30.2	83.1	24.4	73.9	19.7	64.7	16.0	55.4	12.9	46.2	10.5	36.9	8.48	27.7	6.69
-10	-10.5	86.5	86.5	29.9	77.8	24.2	69.2	19.6	60.5	15.8	51.9	12.8	43.2	10.4	34.6	8.40	25.9	6.63
-14.5	-15.0	77.3	77.3	29.5	69.6	23.9	61.9	19.3	54.1	15.6	46.4	12.6	38.7	10.3	30.9	8.28	23.2	6.54

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

MMY-AP4416FT8P-E (44HP, 125kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	116.3	116.3	42.5	104.7	33.8	93.1	26.5	81.4	20.5	69.8	15.5	58.2	11.5	46.5	8.29	34.9	5.67
39 ℃	118.2	118.2	41.8	106.4	33.3	94.6	26.1	82.7	20.2	70.9	15.3	59.1	11.4	47.3	8.17	35.5	5.59
37 ℃	121.7	121.7	40.6	109.6	32.3	97.4	25.3	85.2	19.6	73.0	14.8	60.9	11.0	48.7	7.92	36.5	5.42
35 ℃	125.0	125.0	39.3	112.5	31.3	100.0	24.5	87.5	19.0	75.0	14.4	62.5	10.7	50.0	7.67	37.5	5.25
33 ℃	125.0	125.0	36.1	112.5	28.8	100.0	22.6	87.5	17.5	75.0	13.4	62.5	9.94	50.0	7.18	37.5	4.93
31 ℃	125.0	125.0	33.2	112.5	26.6	100.0	21.0	87.5	16.3	75.0	12.4	62.5	9.29	50.0	6.73	37.5	4.64
30 ℃	125.0	125.0	31.9	112.5	25.6	100.0	20.2	87.5	15.7	75.0	12.0	62.5	8.99	50.0	6.52	37.5	4.50
29 ℃	125.0	125.0	30.7	112.5	24.6	100.0	19.5	87.5	15.2	75.0	11.6	62.5	8.70	50.0	6.32	37.5	4.36
27 ℃	125.0	125.0	28.5	112.5	22.9	100.0	18.1	87.5	14.1	75.0	10.9	62.5	8.16	50.0	5.94	37.5	4.11
25 ℃	125.0	125.0	26.5	112.5	21.3	100.0	16.9	87.5	13.2	75.0	10.2	62.5	7.65	50.0	5.59	37.5	3.88
23 ℃	125.0	125.0	25.2	112.5	20.3	100.0	16.1	87.5	12.6	75.0	9.74	62.5	7.35	50.0	5.37	37.5	3.73
21 ℃	125.0	125.0	24.6	112.5	19.8	100.0	15.8	87.5	12.4	75.0	9.56	62.5	7.22	50.0	5.29	37.5	3.68
20 ℃	125.0	125.0	24.3	112.5	19.6	100.0	15.6	87.5	12.3	75.0	9.47	62.5	7.16	50.0	5.25	37.5	3.66
19 ℃	125.0	125.0	24.1	112.5	19.4	100.0	15.5	87.5	12.2	75.0	9.40	62.5	7.11	50.0	5.21	37.5	3.64
17 ℃	125.0	125.0	23.6	112.5	19.1	100.0	15.2	87.5	12.0	75.0	9.26	62.5	7.01	50.0	5.15	37.5	3.60
15 ℃	125.0	125.0	23.2	112.5	18.8	100.0	15.0	87.5	11.8	75.0	9.14	62.5	6.93	50.0	5.10	37.5	3.56

TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0℃ dry-bulb / 19.0℃ 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		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
Dry-Bulb (℃)	Wet-Bulb (℃)		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	125.0	125.0	27.0	112.5	22.4	100.0	18.5	87.5	15.3	75.0	12.7	62.5	10.4	50.0	8.51	37.5	6.80
13.0	11.8	125.0	125.0	28.3	112.5	23.4	100.0	19.2	87.5	15.8	75.0	13.0	62.5	10.7	50.0	8.67	37.5	6.91
11.0	9.8	125.0	125.0	29.8	112.5	24.5	100.0	20.1	87.5	16.4	75.0	13.4	62.5	11.0	50.0	8.86	37.5	7.03
9.0	7.9	125.0	125.0	31.4	112.5	25.7	100.0	20.9	87.5	17.0	75.0	13.9	62.5	11.2	50.0	9.06	37.5	7.16
7.0	6.0	125.0	125.0	33.2	112.5	27.0	100.0	21.9	87.5	17.7	75.0	14.3	62.5	11.6	50.0	9.27	37.5	7.30
5.0	4.1	120.8	120.8	33.0	108.7	26.8	96.6	21.8	84.6	17.6	72.5	14.2	60.4	11.5	48.3	9.21	36.2	7.25
3.0	2.2	116.6	116.6	32.8	105.0	26.7	93.3	21.6	81.6	17.5	70.0	14.1	58.3	11.4	46.7	9.15	35.0	7.20
0.0	-0.7	110.2	110.2	32.4	99.2	26.4	88.2	21.4	77.2	17.3	66.1	14.0	55.1	11.3	44.1	9.06	33.1	7.13
-3.0	-3.7	103.6	103.6	32.1	93.3	26.1	82.9	21.2	72.5	17.1	62.2	13.9	51.8	11.2	41.5	8.97	31.1	7.06
-5.0	-5.6	99.5	99.5	31.9	89.5	25.9	79.6	21.0	69.6	17.0	59.7	13.8	49.7	11.1	39.8	8.91	29.8	7.01
-7.0	-7.6	95.0	95.0	31.7	85.5	25.8	76.0	20.9	66.5	16.9	57.0	13.7	47.5	11.0	38.0	8.84	28.5	6.96
-10	-10.5	88.7	88.7	31.3	79.8	25.5	70.9	20.7	62.1	16.7	53.2	13.5	44.3	10.9	35.5	8.75	26.6	6.89
-14.5	-15.0	78.8	78.8	30.8	70.9	25.1	63.0	20.3	55.1	16.5	47.3	13.3	39.4	10.7	31.5	8.61	23.6	6.78

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

MMY-AP4616FT8P-E (46HP, 130.4kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	121.4	121.4	44.7	109.2	35.2	97.1	27.3	84.9	20.8	72.8	15.7	60.7	11.6	48.5	8.49	36.4	6.07
39 ℃	123.3	123.3	44.1	111.0	34.7	98.6	26.9	86.3	20.5	74.0	15.5	61.7	11.5	49.3	8.37	37.0	5.98
37 ℃	127.0	127.0	42.7	114.3	33.6	101.6	26.1	88.9	19.9	76.2	15.0	63.5	11.1	50.8	8.11	38.1	5.80
35 ℃	130.4	130.4	41.4	117.3	32.5	104.3	25.2	91.3	19.3	78.2	14.5	65.2	10.8	52.2	7.86	39.1	5.62
33 ℃	130.4	130.4	37.9	117.4	29.9	104.3	23.2	91.3	17.8	78.2	13.5	65.2	10.0	52.2	7.37	39.1	5.30
31 ℃	130.4	130.4	34.8	117.4	27.5	104.3	21.5	91.3	16.5	78.2	12.5	65.2	9.39	52.2	6.93	39.1	5.01
30 ℃	130.4	130.4	33.4	117.4	26.5	104.3	20.7	91.3	15.9	78.2	12.1	65.2	9.09	52.2	6.72	39.1	4.87
29 ℃	130.4	130.4	32.1	117.4	25.5	104.3	19.9	91.3	15.4	78.2	11.7	65.2	8.80	52.2	6.52	39.1	4.74
27 ℃	130.4	130.4	29.8	117.4	23.6	104.3	18.5	91.3	14.3	78.2	10.9	65.2	8.26	52.2	6.14	39.1	4.48
25 ℃	130.4	130.4	27.6	117.4	21.9	104.3	17.2	91.3	13.4	78.2	10.3	65.2	7.76	52.2	5.79	39.1	4.24
23 ℃	130.4	130.4	26.2	117.4	20.9	104.3	16.4	91.3	12.8	78.2	9.82	65.2	7.45	52.2	5.58	39.1	4.09
21 ℃	130.4	130.4	25.6	117.4	20.4	104.3	16.1	91.3	12.5	78.2	9.63	65.2	7.33	52.2	5.50	39.1	4.05
20 ℃	130.4	130.4	25.2	117.4	20.1	104.3	15.9	91.3	12.4	78.2	9.55	65.2	7.27	52.2	5.46	39.1	4.03
19 ℃	130.4	130.4	25.0	117.4	19.9	104.3	15.7	91.3	12.3	78.2	9.48	65.2	7.22	52.2	5.43	39.1	4.01
17 ℃	130.4	130.4	24.5	117.4	19.6	104.3	15.5	91.3	12.1	78.2	9.34	65.2	7.13	52.2	5.37	39.1	3.97
15 ℃	130.4	130.4	24.1	117.4	19.2	104.3	15.2	91.3	11.9	78.2	9.22	65.2	7.06	52.2	5.33	39.1	3.94

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	130.4	130.4	28.4	117.4	23.6	104.3	19.7	91.3	16.3	78.2	13.5	65.2	11.1	52.2	8.92	39.1	6.90
13.0	11.8	130.4	130.4	29.7	117.4	24.6	104.3	20.4	91.3	16.9	78.2	13.9	65.2	11.4	52.2	9.11	39.1	7.04
11.0	9.8	130.4	130.4	31.2	117.4	25.8	104.3	21.3	91.3	17.5	78.2	14.3	65.2	11.7	52.2	9.33	39.1	7.20
9.0	7.9	130.4	130.4	32.9	117.4	27.0	104.3	22.2	91.3	18.1	78.2	14.8	65.2	12.0	52.2	9.56	39.1	7.35
7.0	6.0	130.4	130.4	34.7	117.4	28.4	104.3	23.1	91.3	18.8	78.2	15.3	65.2	12.3	52.2	9.80	39.1	7.52
5.0	4.1	126.2	126.2	34.5	113.6	28.2	101.0	23.0	88.3	18.7	75.7	15.2	63.1	12.3	50.5	9.74	37.9	7.47
3.0	2.2	122.0	122.0	34.3	109.8	28.0	97.6	22.9	85.4	18.6	73.2	15.1	61.0	12.2	48.8	9.68	36.6	7.43
0.0	-0.7	115.6	115.6	34.0	104.0	27.8	92.5	22.7	80.9	18.5	69.4	15.0	57.8	12.1	46.2	9.60	34.7	7.37
-3.0	-3.7	109.0	109.0	33.7	98.1	27.5	87.2	22.5	76.3	18.3	65.4	14.8	54.5	12.0	43.6	9.51	32.7	7.30
-5.0	-5.6	104.8	104.8	33.5	94.3	27.4	83.8	22.3	73.4	18.2	62.9	14.8	52.4	11.9	41.9	9.45	31.4	7.26
-7.0	-7.6	100.4	100.4	33.3	90.3	27.2	80.3	22.2	70.3	18.1	60.2	14.7	50.2	11.8	40.2	9.40	30.1	7.21
-10	-10.5	94.0	94.0	33.0	84.6	27.0	75.2	22.0	65.8	17.9	56.4	14.5	47.0	11.7	37.6	9.31	28.2	7.14
-14.5	-15.0	84.0	84.0	32.5	75.6	26.6	67.2	21.7	58.8	17.6	50.4	14.3	42.0	11.6	33.6	9.18	25.2	7.04

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

MMY-AP4816FT8P-E (48HP, 135.4kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	126.0	126.0	46.0	113.4	36.1	100.8	27.9	88.2	21.2	75.6	15.9	63.0	11.7	50.4	8.51	37.8	6.06
39 ℃	128.0	128.0	45.3	115.2	35.6	102.4	27.5	89.6	20.9	76.8	15.7	64.0	11.6	51.2	8.38	38.4	5.97
37 ℃	131.9	131.9	44.0	118.7	34.5	105.5	26.6	92.3	20.3	79.1	15.2	65.9	11.2	52.7	8.13	39.6	5.79
35 ℃	135.4	135.4	42.6	121.8	33.4	108.3	25.8	94.8	19.6	81.2	14.7	67.7	10.8	54.2	7.87	40.6	5.60
33 ℃	135.4	135.4	39.0	121.9	30.6	108.3	23.7	94.8	18.1	81.2	13.6	67.7	10.1	54.2	7.38	40.6	5.29
31 ℃	135.4	135.4	35.8	121.9	28.2	108.3	21.9	94.8	16.8	81.2	12.7	67.7	9.45	54.2	6.94	40.6	4.99
30 ℃	135.4	135.4	34.4	121.9	27.1	108.3	21.1	94.8	16.2	81.2	12.3	67.7	9.15	54.2	6.73	40.6	4.85
29 ℃	135.4	135.4	33.0	121.9	26.1	108.3	20.3	94.8	15.6	81.2	11.8	67.7	8.85	54.2	6.53	40.6	4.72
27 ℃	135.4	135.4	30.5	121.9	24.2	108.3	18.9	94.8	14.5	81.2	11.1	67.7	8.31	54.2	6.15	40.6	4.46
25 ℃	135.4	135.4	28.3	121.9	22.5	108.3	17.6	94.8	13.6	81.2	10.4	67.7	7.80	54.2	5.79	40.6	4.22
23 ℃	135.4	135.4	26.9	121.9	21.4	108.3	16.7	94.8	13.0	81.2	9.92	67.7	7.49	54.2	5.58	40.6	4.08
21 ℃	135.4	135.4	26.2	121.9	20.8	108.3	16.4	94.8	12.7	81.2	9.73	67.7	7.36	54.2	5.50	40.6	4.03
20 ℃	135.4	135.4	25.9	121.9	20.6	108.3	16.2	94.8	12.6	81.2	9.64	67.7	7.31	54.2	5.46	40.6	4.01
19 ℃	135.4	135.4	25.6	121.9	20.4	108.3	16.0	94.8	12.5	81.2	9.56	67.7	7.25	54.2	5.43	40.6	3.99
17 ℃	135.4	135.4	25.1	121.9	20.0	108.3	15.7	94.8	12.2	81.2	9.42	67.7	7.16	54.2	5.37	40.6	3.96
15 ℃	135.4	135.4	24.6	121.9	19.7	108.3	15.5	94.8	12.1	81.2	9.30	67.7	7.08	54.2	5.32	40.6	3.93

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	135.4	135.4	29.9	121.9	25.0	108.3	20.8	94.8	17.2	81.2	14.2	67.7	11.6	54.2	9.29	40.6	7.21
13.0	11.8	135.4	135.4	31.3	121.9	26.0	108.3	21.6	94.8	17.8	81.2	14.6	67.7	11.9	54.2	9.50	40.6	7.35
11.0	9.8	135.4	135.4	32.9	121.9	27.2	108.3	22.5	94.8	18.5	81.2	15.1	67.7	12.2	54.2	9.73	40.6	7.51
9.0	7.9	135.4	135.4	34.5	121.9	28.5	108.3	23.4	94.8	19.2	81.2	15.6	67.7	12.6	54.2	10.0	40.6	7.67
7.0	6.0	135.4	135.4	36.6	121.9	29.9	108.3	24.5	94.8	19.9	81.2	16.1	67.7	12.9	54.2	10.2	40.6	7.84
5.0	4.1	130.9	130.9	36.2	117.8	29.7	104.7	24.3	91.6	19.8	78.5	16.0	65.4	12.9	52.4	10.2	39.3	7.79
3.0	2.2	126.4	126.4	35.9	113.7	29.5	101.1	24.1	88.5	19.6	75.8	15.9	63.2	12.8	50.5	10.1	37.9	7.74
0.0	-0.7	119.5	119.5	35.6	107.5	29.2	95.6	23.9	83.6	19.5	71.7	15.8	59.7	12.6	47.8	10.0	35.8	7.66
-3.0	-3.7	112.3	112.3	35.2	101.1	28.9	89.9	23.7	78.6	19.3	67.4	15.6	56.2	12.5	44.9	9.89	33.7	7.58
-5.0	-5.6	107.8	107.8	35.0	97.0	28.7	86.2	23.5	75.5	19.1	64.7	15.5	53.9	12.4	43.1	9.83	32.3	7.53
-7.0	-7.6	103.1	103.1	34.7	92.7	28.5	82.4	23.3	72.1	19.0	61.8	15.4	51.5	12.3	41.2	9.76	30.9	7.48
-10	-10.5	96.2	96.2	34.4	86.5	28.3	76.9	23.1	67.3	18.8	57.7	15.2	48.1	12.2	38.5	9.66	28.8	7.41
-14.5	-15.0	85.5	85.5	33.8	76.9	27.8	68.4	22.7	59.8	18.5	51.3	15.0	42.7	12.0	34.2	9.51	25.6	7.29

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

MMY-AP5016FT8P-E (50HP, 140.8kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	131.0	131.0	48.3	117.9	37.5	104.8	28.6	91.7	21.6	78.6	16.0	65.5	11.8	52.4	8.71	39.3	6.46
39 ℃	133.1	133.1	47.6	119.8	36.9	106.5	28.2	93.2	21.3	79.9	15.8	66.6	11.7	53.3	8.58	39.9	6.36
37 ℃	137.1	137.1	46.1	123.4	35.8	109.7	27.4	96.0	20.6	82.3	15.3	68.6	11.3	54.8	8.32	41.1	6.17
35 ℃	140.8	140.8	44.7	126.7	34.7	112.6	26.5	98.5	20.0	84.5	14.8	70.4	10.9	56.3	8.06	42.2	5.97
33 ℃	140.8	140.8	40.8	126.7	31.7	112.6	24.3	98.6	18.4	84.5	13.8	70.4	10.2	56.3	7.58	42.2	5.66
31 ℃	140.8	140.8	37.4	126.7	29.2	112.6	22.4	98.6	17.0	84.5	12.8	70.4	9.56	56.3	7.13	42.2	5.37
30 ℃	140.8	140.8	35.9	126.7	28.0	112.6	21.6	98.6	16.4	84.5	12.4	70.4	9.25	56.3	6.93	42.2	5.23
29 ℃	140.8	140.8	34.4	126.7	26.9	112.6	20.8	98.6	15.8	84.5	11.9	70.4	8.96	56.3	6.73	42.2	5.09
27 ℃	140.8	140.8	31.8	126.7	24.9	112.6	19.3	98.6	14.7	84.5	11.2	70.4	8.41	56.3	6.35	42.2	4.83
25 ℃	140.8	140.8	29.4	126.7	23.1	112.6	17.9	98.6	13.7	84.5	10.4	70.4	7.90	56.3	5.99	42.2	4.58
23 ℃	140.8	140.8	27.9	126.7	22.0	112.6	17.1	98.6	13.1	84.5	10.0	70.4	7.60	56.3	5.78	42.2	4.44
21 ℃	140.8	140.8	27.2	126.7	21.4	112.6	16.6	98.6	12.8	84.5	9.81	70.4	7.47	56.3	5.71	42.2	4.40
20 ℃	140.8	140.8	26.8	126.7	21.1	112.6	16.5	98.6	12.7	84.5	9.72	70.4	7.42	56.3	5.68	42.2	4.38
19 ℃	140.8	140.8	26.5	126.7	20.9	112.6	16.3	98.6	12.6	84.5	9.64	70.4	7.37	56.3	5.65	42.2	4.36
17 ℃	140.8	140.8	26.0	126.7	20.5	112.6	16.0	98.6	12.4	84.5	9.50	70.4	7.28	56.3	5.59	42.2	4.33
15 ℃	140.8	140.8	25.5	126.7	20.1	112.6	15.7	98.6	12.2	84.5	9.38	70.4	7.20	56.3	5.55	42.2	4.31

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	140.8	140.8	31.3	126.7	26.3	112.6	21.9	98.6	18.3	84.5	15.1	70.4	12.2	56.3	9.71	42.2	7.32
13.0	11.8	140.8	140.8	32.7	126.7	27.3	112.6	22.7	98.6	18.8	84.5	15.5	70.4	12.6	56.3	9.94	42.2	7.49
11.0	9.8	140.8	140.8	34.3	126.7	28.5	112.6	23.7	98.6	19.5	84.5	16.0	70.4	12.9	56.3	10.2	42.2	7.67
9.0	7.9	140.8	140.8	36.0	126.7	29.8	112.6	24.6	98.6	20.2	84.5	16.5	70.4	13.3	56.3	10.5	42.2	7.86
7.0	6.0	140.8	140.8	38.1	126.7	31.3	112.6	25.7	98.6	21.0	84.5	17.1	70.4	13.7	56.3	10.8	42.2	8.06
5.0	4.1	136.3	136.3	37.7	122.6	31.1	109.0	25.5	95.4	20.9	81.8	17.0	68.1	13.6	54.5	10.7	40.9	8.01
3.0	2.2	131.7	131.7	37.5	118.6	30.9	105.4	25.4	92.2	20.8	79.0	16.9	65.9	13.5	52.7	10.6	39.5	7.97
0.0	-0.7	124.8	124.8	37.1	112.3	30.6	99.9	25.2	87.4	20.6	74.9	16.7	62.4	13.4	49.9	10.5	37.4	7.90
-3.0	-3.7	117.7	117.7	36.8	105.9	30.4	94.1	24.9	82.4	20.4	70.6	16.6	58.8	13.3	47.1	10.4	35.3	7.82
-5.0	-5.6	113.2	113.2	36.6	101.8	30.2	90.5	24.8	79.2	20.3	67.9	16.5	56.6	13.2	45.3	10.4	33.9	7.78
-7.0	-7.6	108.4	108.4	36.3	97.5	30.0	86.7	24.6	75.9	20.2	65.0	16.4	54.2	13.1	43.4	10.3	32.5	7.73
-10	-10.5	101.5	101.5	36.0	91.3	29.7	81.2	24.4	71.0	20.0	60.9	16.2	50.7	13.0	40.6	10.2	30.4	7.66
-14.5	-15.0	90.8	90.8	35.5	81.7	29.3	72.6	24.1	63.5	19.7	54.5	16.0	45.4	12.8	36.3	10.1	27.2	7.55

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

MMY-AP5216FT8P-E (52HP, 145.8kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	135.7	135.7	49.6	122.1	38.4	108.5	29.2	95.0	21.9	81.4	16.3	67.8	11.9	54.3	8.73	40.7	6.44
39 ℃	137.9	137.9	48.9	124.1	37.8	110.3	28.8	96.5	21.6	82.7	16.0	68.9	11.7	55.1	8.60	41.4	6.35
37 ℃	142.0	142.0	47.4	127.8	36.7	113.6	27.9	99.4	21.0	85.2	15.5	71.0	11.4	56.8	8.34	42.6	6.15
35 ℃	145.8	145.8	45.9	131.2	35.5	116.6	27.1	102.0	20.3	87.5	15.0	72.9	11.0	58.3	8.08	43.7	5.96
33 ℃	145.8	145.8	41.8	131.2	32.5	116.6	24.8	102.1	18.7	87.5	13.9	72.9	10.3	58.3	7.59	43.7	5.64
31 ℃	145.8	145.8	38.4	131.2	29.8	116.6	22.9	102.1	17.3	87.5	12.9	72.9	9.62	58.3	7.14	43.7	5.35
30 ℃	145.8	145.8	36.8	131.2	28.6	116.6	22.0	102.1	16.7	87.5	12.5	72.9	9.31	58.3	6.93	43.7	5.21
29 ℃	145.8	145.8	35.3	131.2	27.5	116.6	21.2	102.1	16.1	87.5	12.1	72.9	9.01	58.3	6.73	43.7	5.07
27 ℃	145.8	145.8	32.6	131.2	25.5	116.6	19.6	102.1	14.9	87.5	11.3	72.9	8.46	58.3	6.35	43.7	4.81
25 ℃	145.8	145.8	30.2	131.2	23.6	116.6	18.2	102.1	13.9	87.5	10.5	72.9	7.95	58.3	6.00	43.7	4.56
23 ℃	145.8	145.8	28.6	131.2	22.4	116.6	17.4	102.1	13.3	87.5	10.1	72.9	7.63	58.3	5.78	43.7	4.42
21 ℃	145.8	145.8	27.8	131.2	21.8	116.6	16.9	102.1	13.0	87.5	9.90	72.9	7.51	58.3	5.71	43.7	4.38
20 ℃	145.8	145.8	27.5	131.2	21.6	116.6	16.8	102.1	12.9	87.5	9.81	72.9	7.45	58.3	5.68	43.7	4.36
19 ℃	145.8	145.8	27.1	131.2	21.3	116.6	16.6	102.1	12.7	87.5	9.73	72.9	7.40	58.3	5.65	43.7	4.35
17 ℃	145.8	145.8	26.6	131.2	20.9	116.6	16.3	102.1	12.5	87.5	9.58	72.9	7.31	58.3	5.59	43.7	4.32
15 ℃	145.8	145.8	26.1	131.2	20.5	116.6	16.0	102.1	12.3	87.5	9.46	72.9	7.23	58.3	5.54	43.7	4.29

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

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	145.8	145.8	32.8	131.2	27.6	116.6	23.1	102.1	19.2	87.5	15.7	72.9	12.8	58.3	10.1	43.7	7.63
13.0	11.8	145.8	145.8	34.3	131.2	28.7	116.6	23.9	102.1	19.8	87.5	16.2	72.9	13.1	58.3	10.3	43.7	7.80
11.0	9.8	145.8	145.8	35.9	131.2	30.0	116.6	24.9	102.1	20.5	87.5	16.7	72.9	13.5	58.3	10.6	43.7	7.99
9.0	7.9	145.8	145.8	37.7	131.2	31.3	116.6	25.9	102.1	21.3	87.5	17.3	72.9	13.9	58.3	10.9	43.7	8.18
7.0	6.0	145.8	145.8	39.6	131.2	32.8	116.6	27.0	102.1	22.1	87.5	17.9	72.9	14.3	58.3	11.2	43.7	8.38
5.0	4.1	140.9	140.9	39.3	126.8	32.6	112.8	26.8	98.7	21.9	84.6	17.8	70.5	14.2	56.4	11.1	42.3	8.33
3.0	2.2	136.1	136.1	39.1	122.5	32.4	108.9	26.7	95.3	21.8	81.7	17.7	68.0	14.1	54.4	11.0	40.8	8.27
0.0	-0.7	128.7	128.7	38.7	115.8	32.1	102.9	26.4	90.1	21.6	77.2	17.5	64.3	14.0	51.5	10.9	38.6	8.19
-3.0	-3.7	121.0	121.0	38.3	108.9	31.7	96.8	26.1	84.7	21.4	72.6	17.3	60.5	13.8	48.4	10.8	36.3	8.11
-5.0	-5.6	116.2	116.2	38.1	104.6	31.5	92.9	26.0	81.3	21.2	69.7	17.2	58.1	13.8	46.5	10.7	34.9	8.06
-7.0	-7.6	111.1	111.1	37.8	100.0	31.3	88.8	25.8	77.7	21.1	66.6	17.1	55.5	13.7	44.4	10.7	33.3	8.00
-10	-10.5	103.7	103.7	37.4	93.3	31.0	82.9	25.5	72.6	20.9	62.2	16.9	51.8	13.5	41.5	10.6	31.1	7.92
-14.5	-15.0	92.2	92.2	36.8	82.9	30.5	73.7	25.1	64.5	20.6	55.3	16.7	46.1	13.3	36.9	10.4	27.6	7.79

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

MMY-AP5416FT8P-E (54HP, 151.2kW system)

Cooling

Outdoor Unit (℃)	Outdoor Unit 100% Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)															
		100%		90%		80%		70%		60%		50%		40%		30%	
		TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
40 ℃	140.7	140.7	51.9	126.6	39.8	112.6	30.0	98.5	22.3	84.4	16.4	70.4	12.0	56.3	8.93	42.2	6.84
39 ℃	143.0	143.0	51.1	128.7	39.2	114.4	29.6	100.1	22.0	85.8	16.2	71.5	11.9	57.2	8.80	42.9	6.74
37 ℃	147.2	147.2	49.5	132.5	38.0	117.8	28.7	103.1	21.3	88.3	15.7	73.6	11.5	58.9	8.54	44.2	6.54
35 ℃	151.2	151.2	48.0	136.1	36.8	120.9	27.8	105.8	20.6	90.7	15.2	75.6	11.1	60.5	8.27	45.4	6.33
33 ℃	151.2	151.2	43.7	136.1	33.6	121.0	25.4	105.8	19.0	90.7	14.0	75.6	10.4	60.5	7.78	45.4	6.02
31 ℃	151.2	151.2	39.9	136.1	30.8	121.0	23.4	105.8	17.5	90.7	13.1	75.6	9.72	60.5	7.34	45.4	5.72
30 ℃	151.2	151.2	38.3	136.1	29.5	121.0	22.5	105.8	16.9	90.7	12.6	75.6	9.41	60.5	7.14	45.4	5.58
29 ℃	151.2	151.2	36.7	136.1	28.4	121.0	21.6	105.8	16.3	90.7	12.2	75.6	9.11	60.5	6.94	45.4	5.45
27 ℃	151.2	151.2	33.8	136.1	26.2	121.0	20.0	105.8	15.1	90.7	11.4	75.6	8.56	60.5	6.56	45.4	5.18
25 ℃	151.2	151.2	31.3	136.1	24.3	121.0	18.6	105.8	14.1	90.7	10.6	75.6	8.05	60.5	6.20	45.4	4.93
23 ℃	151.2	151.2	29.6	136.1	23.0	121.0	17.7	105.8	13.4	90.7	10.2	75.6	7.74	60.5	5.99	45.4	4.78
21 ℃	151.2	151.2	28.8	136.1	22.4	121.0	17.2	105.8	13.1	90.7	10.0	75.6	7.62	60.5	5.92	45.4	4.75
20 ℃	151.2	151.2	28.4	136.1	22.1	121.0	17.0	105.8	13.0	90.7	9.89	75.6	7.57	60.5	5.89	45.4	4.73
19 ℃	151.2	151.2	28.1	136.1	21.9	121.0	16.8	105.8	12.9	90.7	9.81	75.6	7.52	60.5	5.86	45.4	4.72
17 ℃	151.2	151.2	27.4	136.1	21.4	121.0	16.5	105.8	12.7	90.7	9.66	75.6	7.43	60.5	5.81	45.4	4.69
15 ℃	151.2	151.2	26.9	136.1	21.0	121.0	16.3	105.8	12.5	90.7	9.54	75.6	7.35	60.5	5.77	45.4	4.67

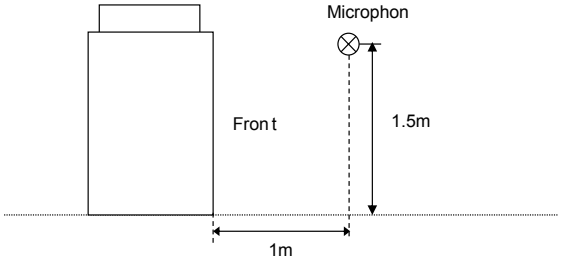
TC : Total Capacity PI : Power Input
Indoor air temperature conditions : 27.0℃ dry-bulb / 19.0℃ wet bulb

Heating

Outdoor Unit		Outdoor Unit 100% Heating Capacity (kW)	Compressor + Outdoor Fan Power consumption (kW)														
Dry-Bulb (℃)	Wet-Bulb (℃)		100% Capacity		90% Capacity		80% Capacity		70% Capacity		60% Capacity		50% Capacity		40% Capacity		30% Capacity	
			TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)	TC (kW)	PI (kW)
15.0	13.7	151.2	151.2	34.2	136.1	28.9	121.0	24.2	105.8	20.2	90.7	16.6	75.6	13.4	60.5	10.5	45.4	7.74
13.0	11.8	151.2	151.2	35.7	136.1	30.0	121.0	25.1	105.8	20.8	90.7	17.1	75.6	13.8	60.5	10.8	45.4	7.93
11.0	9.8	151.2	151.2	37.4	136.1	31.3	121.0	26.1	105.8	21.6	90.7	17.7	75.6	14.2	60.5	11.1	45.4	8.15
9.0	7.9	151.2	151.2	39.1	136.1	32.7	121.0	27.1	105.8	22.4	90.7	18.2	75.6	14.6	60.5	11.4	45.4	8.37
7.0	6.0	151.2	151.2	41.1	136.1	34.2	121.0	28.3	105.8	23.2	90.7	18.9	75.6	15.1	60.5	11.7	45.4	8.60
5.0	4.1	146.3	146.3	40.9	131.7	34.0	117.1	28.1	102.4	23.1	87.8	18.7	73.2	15.0	58.5	11.6	43.9	8.55
3.0	2.2	141.5	141.5	40.6	127.3	33.8	113.2	27.9	99.0	22.9	84.9	18.6	70.7	14.9	56.6	11.6	42.4	8.50
0.0	-0.7	134.0	134.0	40.3	120.6	33.5	107.2	27.7	93.8	22.7	80.4	18.5	67.0	14.8	53.6	11.5	40.2	8.42
-3.0	-3.7	126.4	126.4	39.9	113.7	33.2	101.1	27.4	88.5	22.5	75.8	18.3	63.2	14.6	50.5	11.4	37.9	8.35
-5.0	-5.6	121.5	121.5	39.7	109.4	33.0	97.2	27.3	85.1	22.4	72.9	18.2	60.8	14.5	48.6	11.3	36.5	8.30
-7.0	-7.6	116.4	116.4	39.4	104.8	32.8	93.1	27.1	81.5	22.2	69.8	18.1	58.2	14.5	46.6	11.2	34.9	8.25
-10	-10.5	109.0	109.0	39.1	98.1	32.5	87.2	26.8	76.3	22.0	65.4	17.9	54.5	14.3	43.6	11.1	32.7	8.17
-14.5	-15.0	97.5	97.5	38.5	87.7	32.0	78.0	26.5	68.2	21.7	58.5	17.7	48.7	14.1	39.0	11.0	29.2	8.06

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

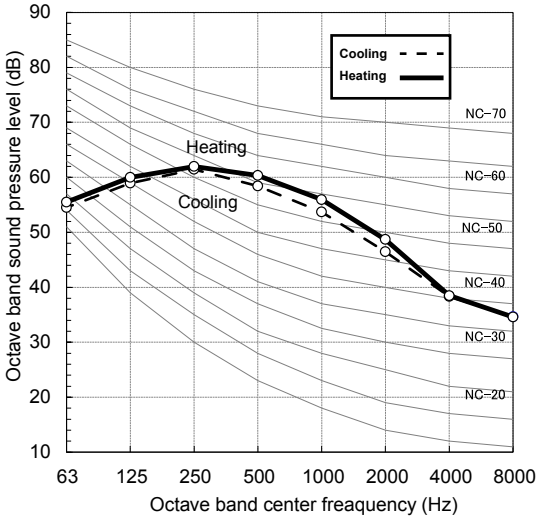
5-11. Sound pressure level data



Standard model

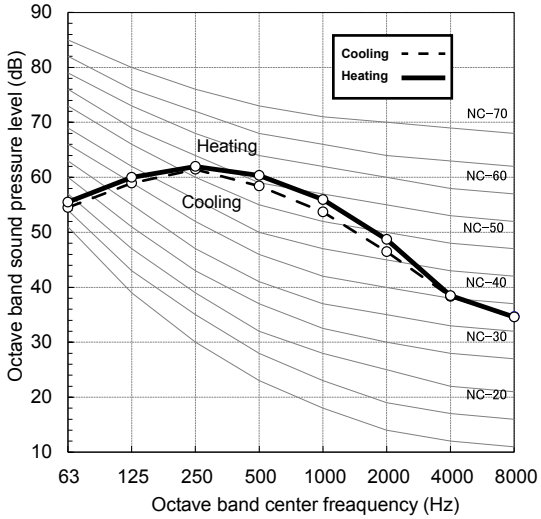
MMY-MAP0806FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	59.0	61.0



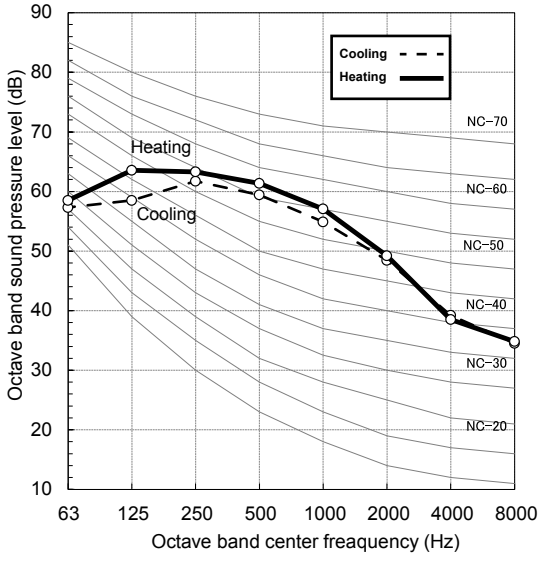
MMY-MAP1006FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	59.0	61.0



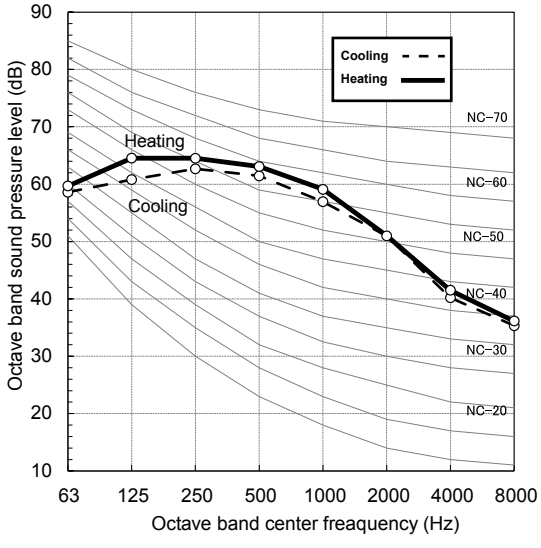
MMY-MAP1206FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	60.0	62.0



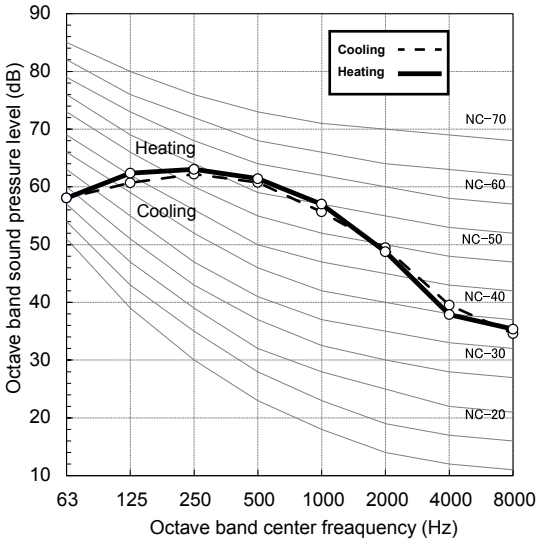
MMY-MAP1406FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	62.0	64.0



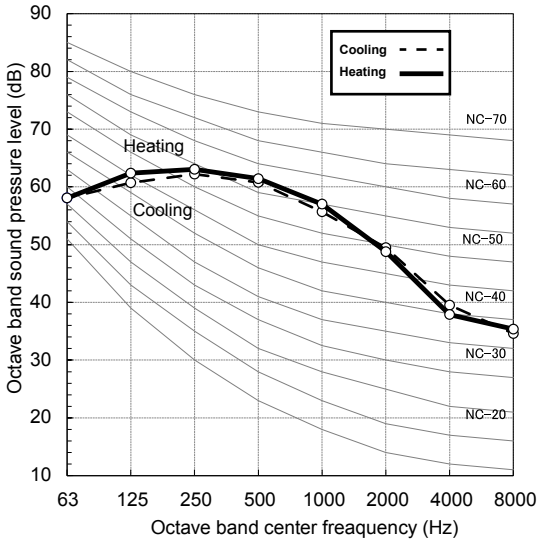
MMY-MAP1604FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	61.0	62.0



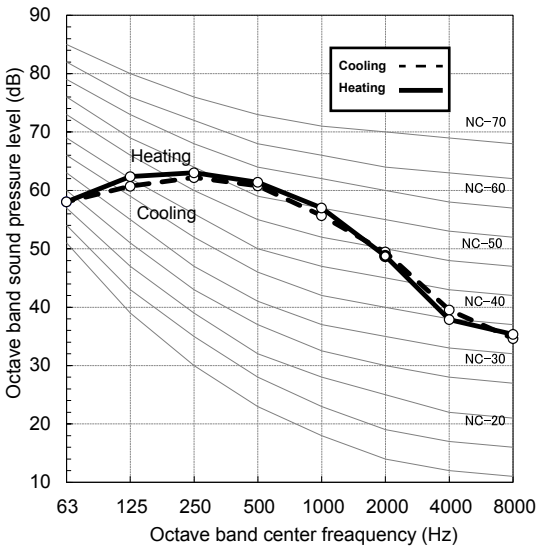
MMY-MAP1806FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	61.0	62.0



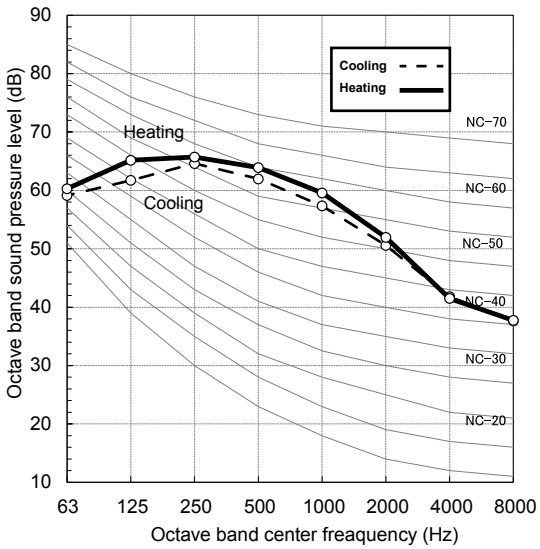
MMY-MAP2006FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	61.0	62.0



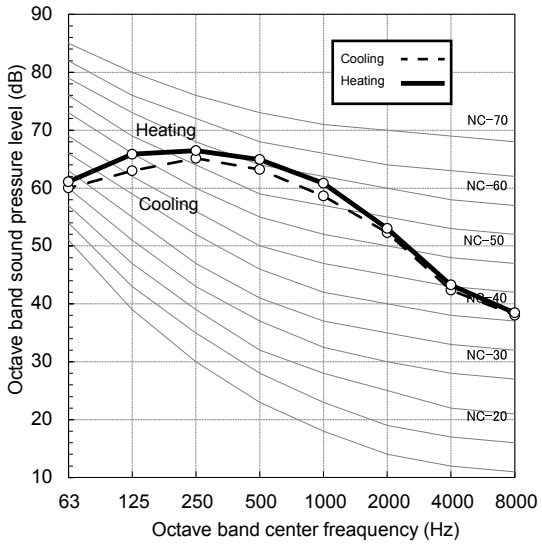
MMY-AP2206FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	62.5	64.5



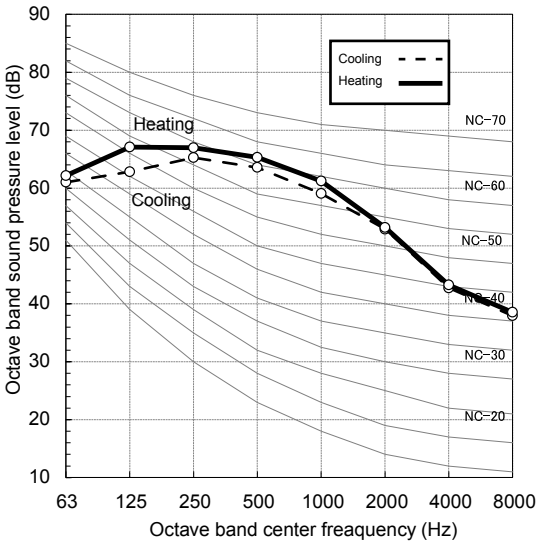
MMY-AP2416FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.0	66.0



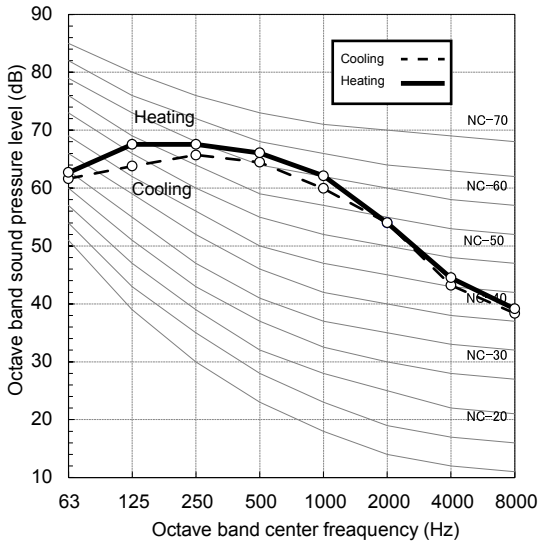
MMY-AP2616FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.5	66.5



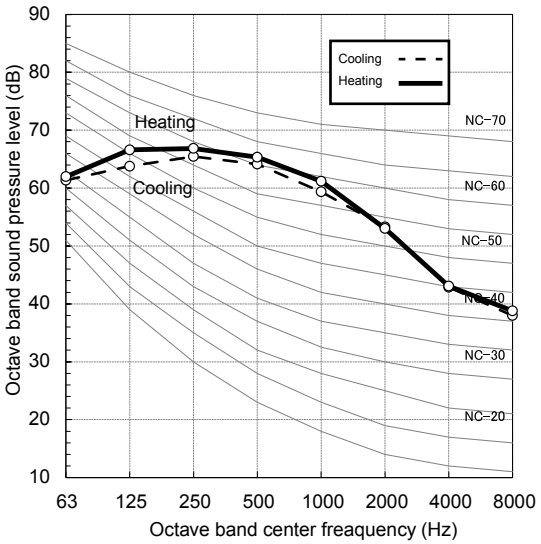
MMY-AP2816FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	65.0	67.0



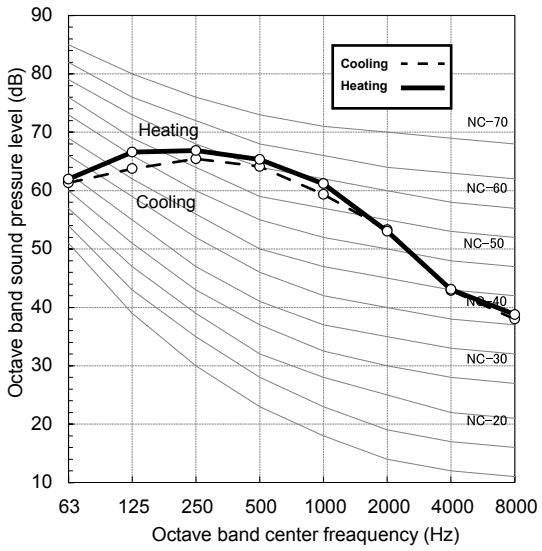
MMY-AP3016FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.5	66.5



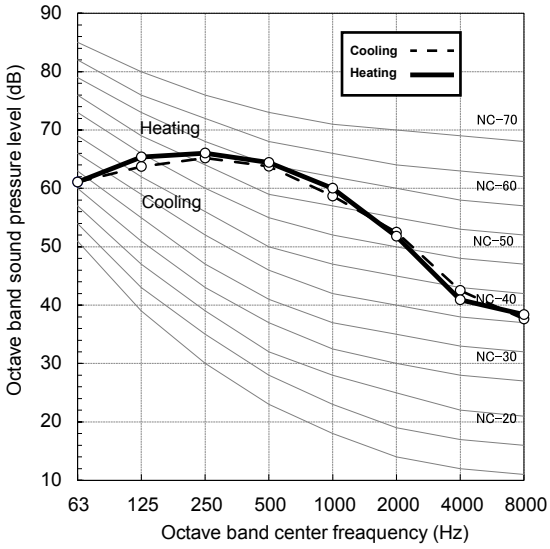
MMY-AP3216FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.5	66.5



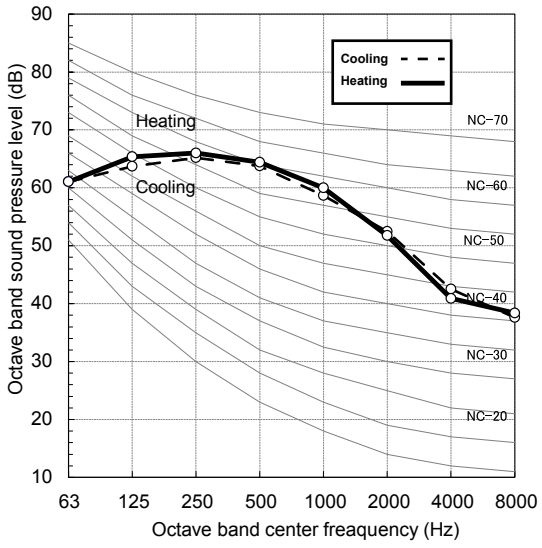
MMY-AP3416FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.0	65.0



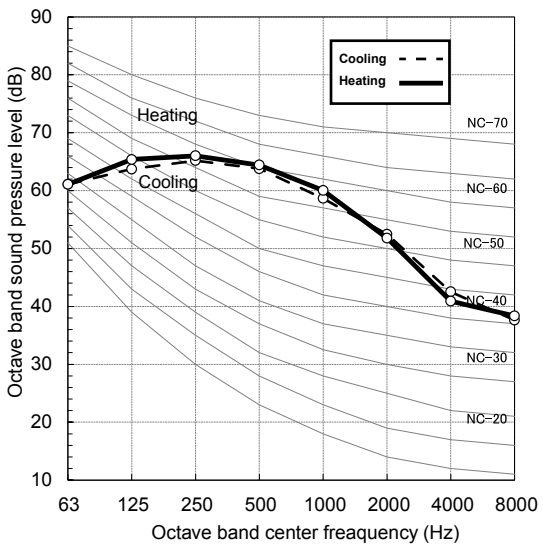
MMY-AP3616FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.0	65.0



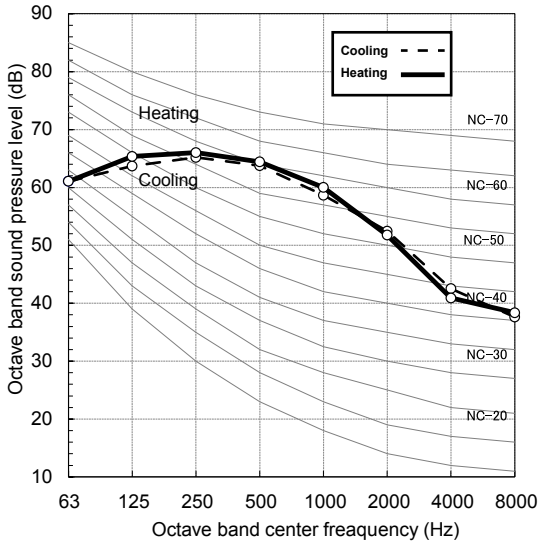
MMY-AP3816FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.0	65.0



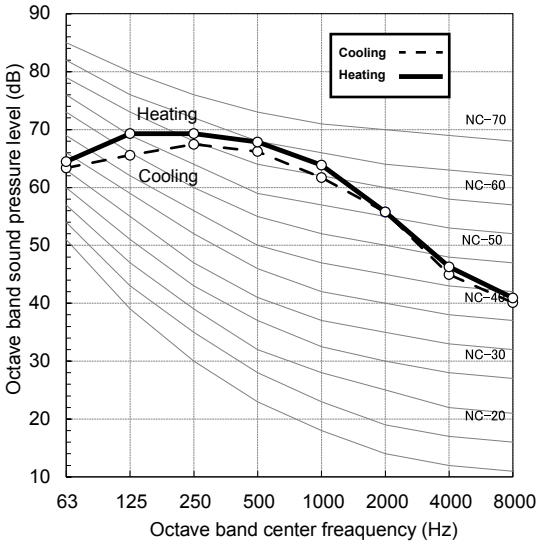
MMY-AP4016FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	64.0	65.0



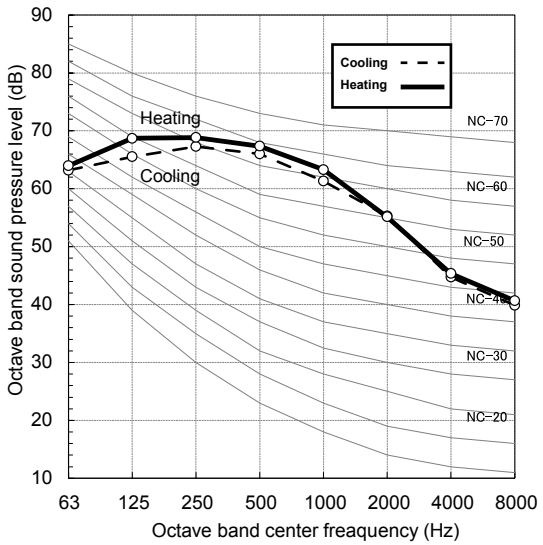
MMY-AP4216FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	67.0	69.0



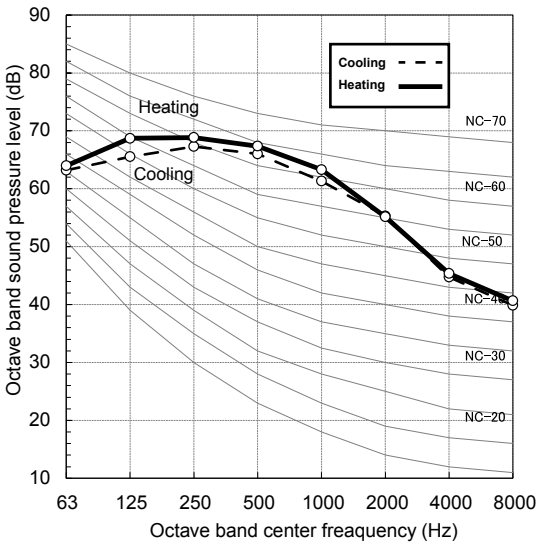
MMY-AP4416FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.5	68.5



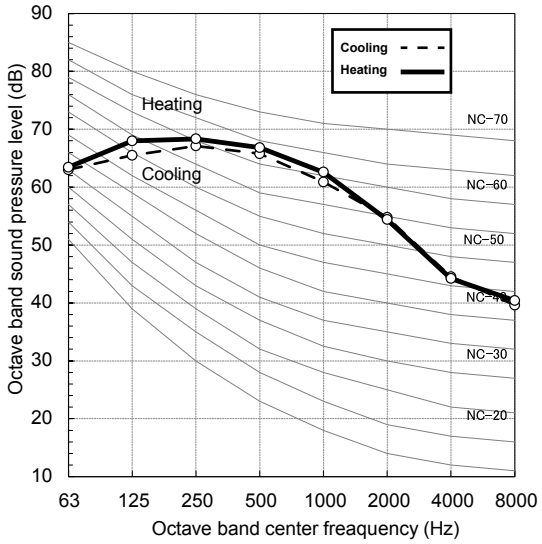
MMY-AP4616FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.5	68.5



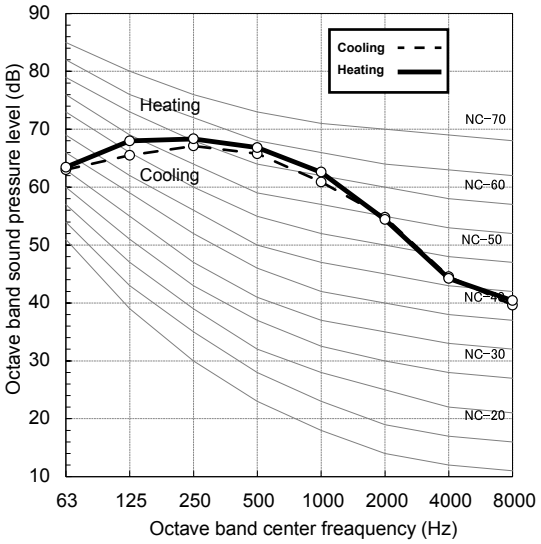
MMY-AP4816FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.5	67.5



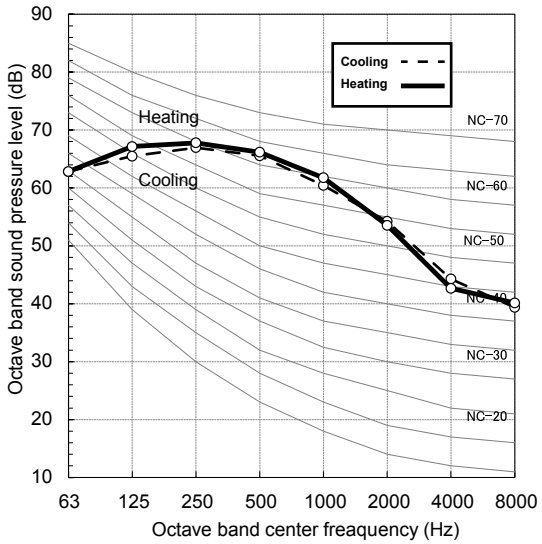
MMY-AP5016FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.5	67.5



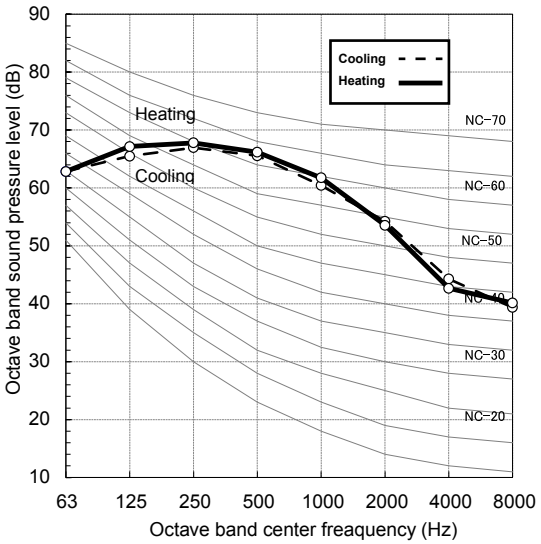
MMY-AP5216FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.0	67.0



MMY-AP5416FT8P-E

Sound pressure Level (dB(A))	Cooling	Heating
	66.0	67.0



5-12. FS unit (Flow Selection unit)

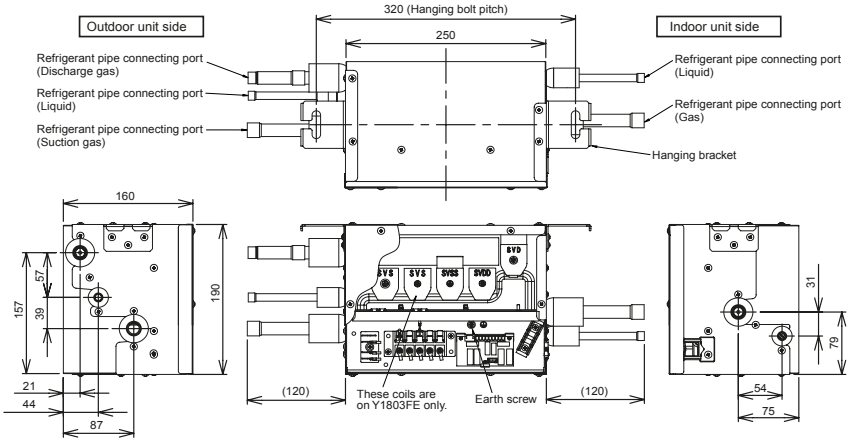
Specifications (Single)

Model Name		RBM-Y1123FE	RBM-Y1803FE	RBM-Y2803FE
Power supply		220/240 V 1 phase 50 Hz		
Connectable indoor unit capacity (kW/h)		Below 38	38 to below 18.0	18.0 to 96 or less
Connectable indoor units		5	8	8
Dimension	Height (mm)	190	190	200
	Width (mm)	248	248	400
	Depth (mm)	160	160	200
Total Weight (Kg)		5	6	9
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
	Suction gas side (mm)	Ø15.9	Ø15.9	Ø22.2
Connection		Blaze connection		

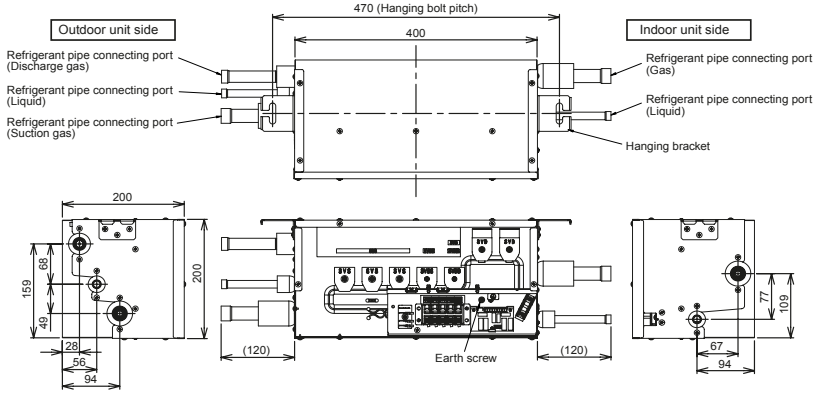
External view (Single)

RBM-Y1123FE, RBM-Y1803FE

(Unit: mm)

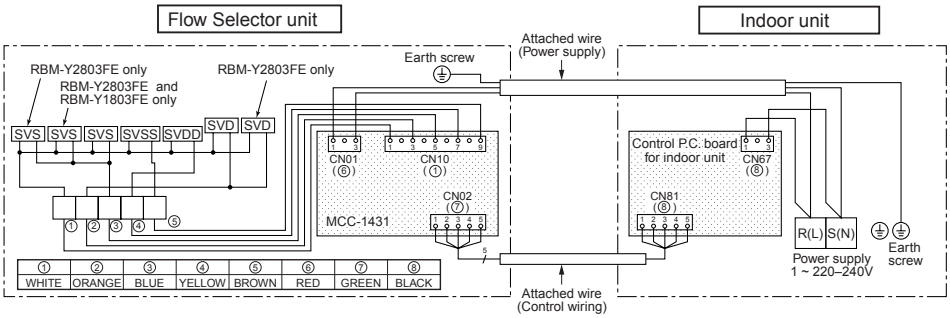


RBM-Y2803FE

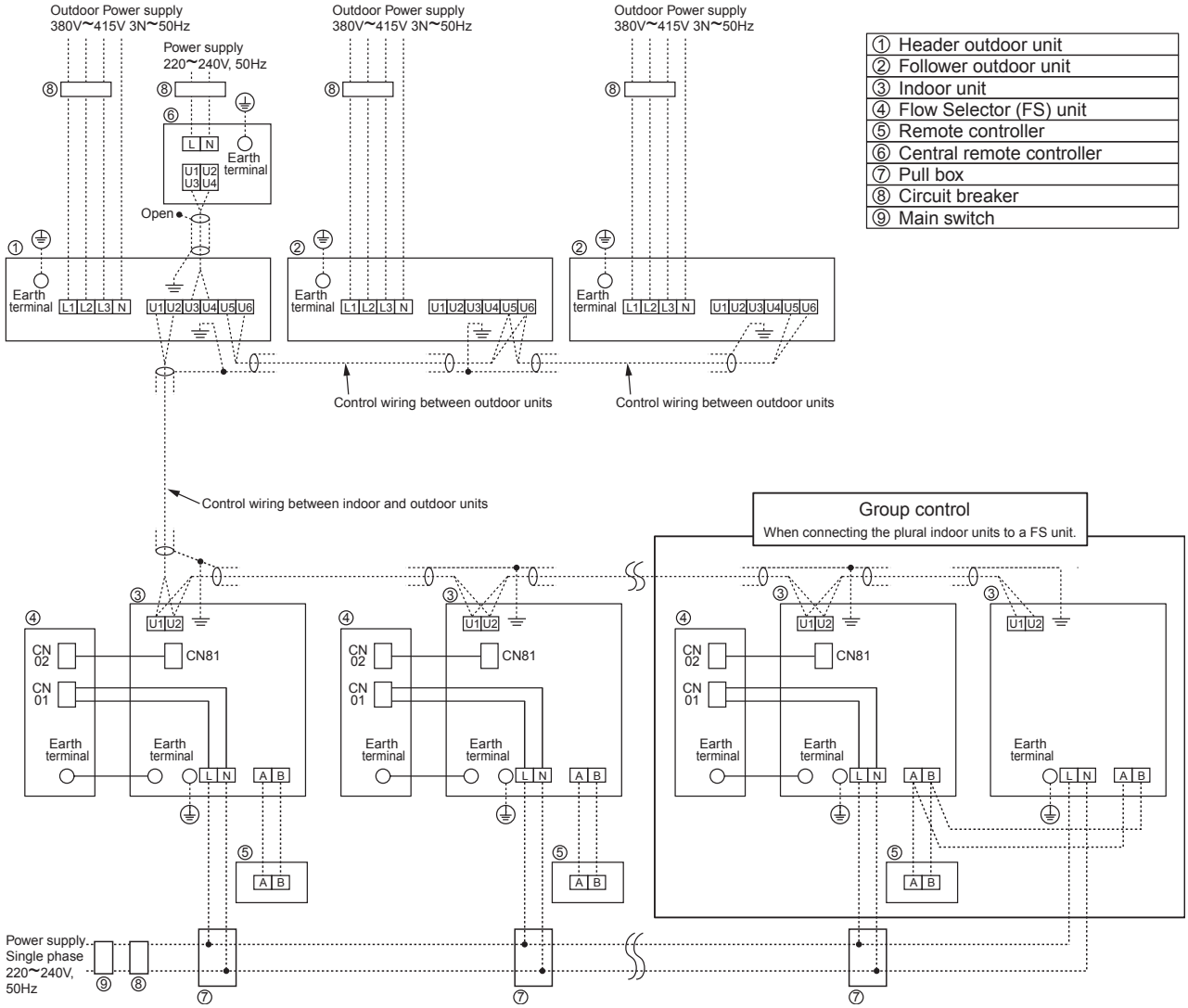


Wiring Diagram (Single)

RBM-Y1123FE, RBM-Y1803FE / RBM-Y2803FE



System wiring diagram (Single)



NOTE :

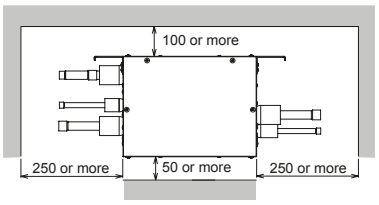
Control wire and power wire between FS unit and indoor unit are the accessory parts of FS unit. (Wire length : 6m)
If the length between indoor and FS unit exceeds 5m, connect by using the connection cable kit sold separately (RBC-CBK15FE).

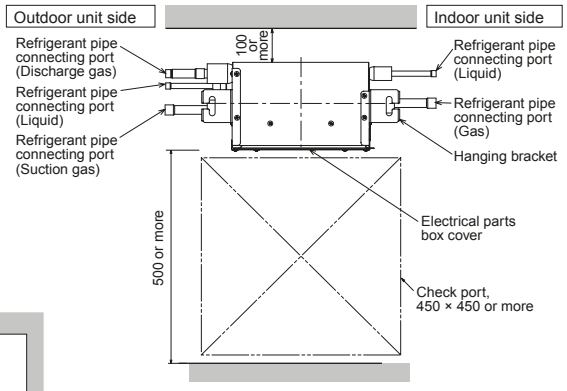
Installation space (Single)

(Unit : mm)

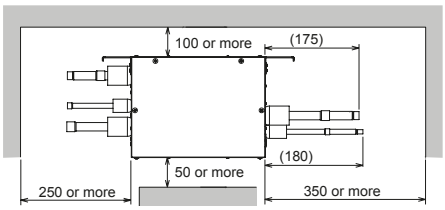
RBM-Y1123FE, RBM-Y1803FE

<RBM-Y1123FE, RBM-Y1803FE>



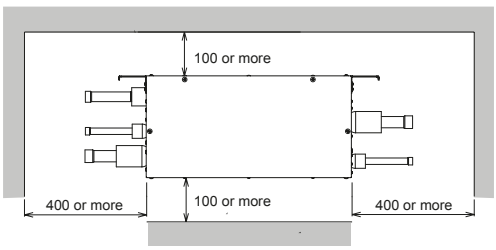


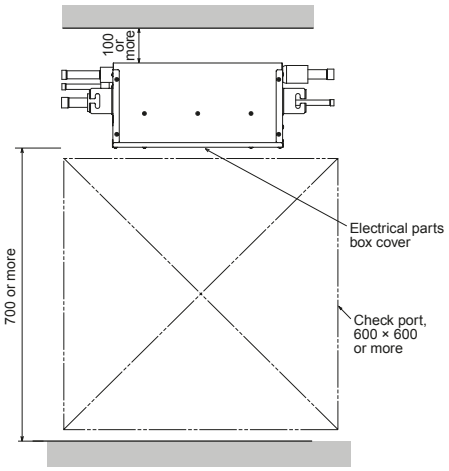
<RBM-Y1123FE (When attached pipes are used)>



RBM-Y2803FE

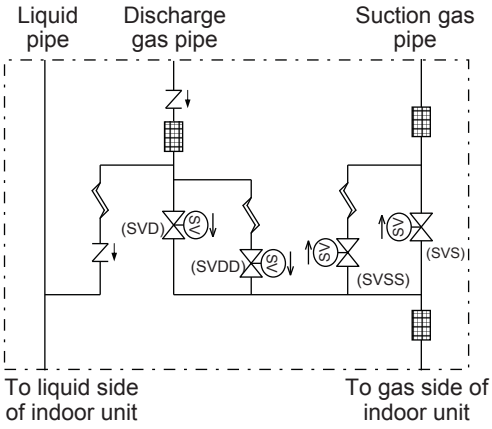
<RBM-Y2803FE >



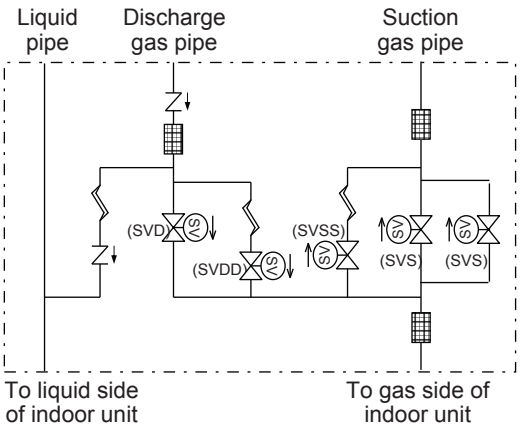


Refrigeration cycle diagram (Single)

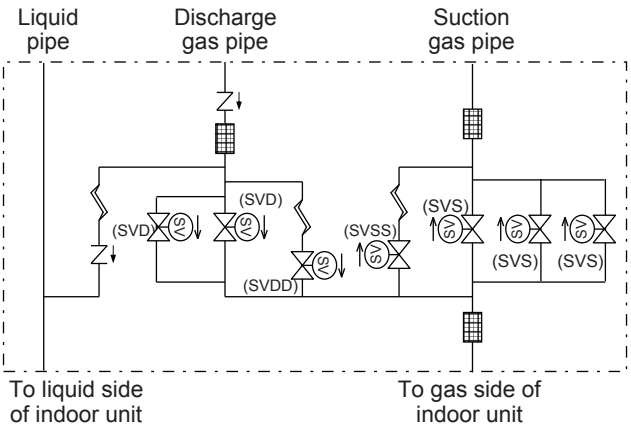
Model RBM-Y1123FE



Model RBM-Y1803FE



Model RBM-Y2803FE



Symbol				
	Solenoid Valve	Capillary Tube	Check Valve	Strainer

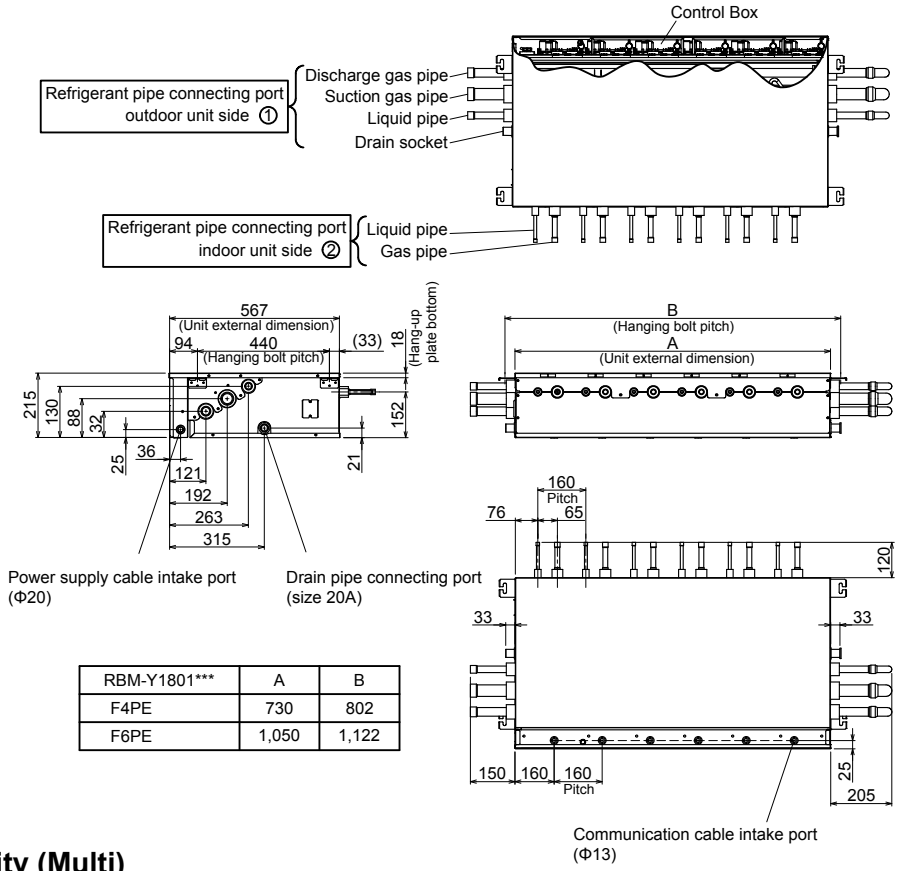
Specifications (Multi)

Model Name		RBM-Y1801F4PE	RBM-Y1801F6PE
Power supply		220-240V 1 phase 50 Hz	
Connectable indoor unit capacity (kW/h)		Below 18.0	Below 18.0
Dimension	Height (mm)	215	215
	Width (mm)	730	1,050
	Depth (mm)	567	567
Total Weight (Kg)		38	53
Connecting port dia. (Indoor unit side)	Liquid side (mm)	Ø9.5	Ø9.5
	Gas side (mm)	Ø15.9	Ø15.9
Connecting port dia. (Outdoor unit side)	Liquid side (mm)	Ø22.2	Ø22.2
	Discharge gas side (mm)	Ø28.6	Ø28.6
	Suction gas side (mm)	Ø38.1	Ø38.1
Connection		Blaze connection	

External view (Multi)

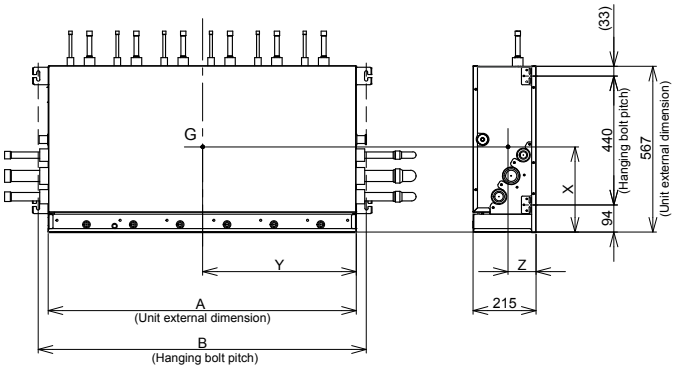
RBM-Y1801F4PE, RBM-Y801F6PE

(unit : mm)



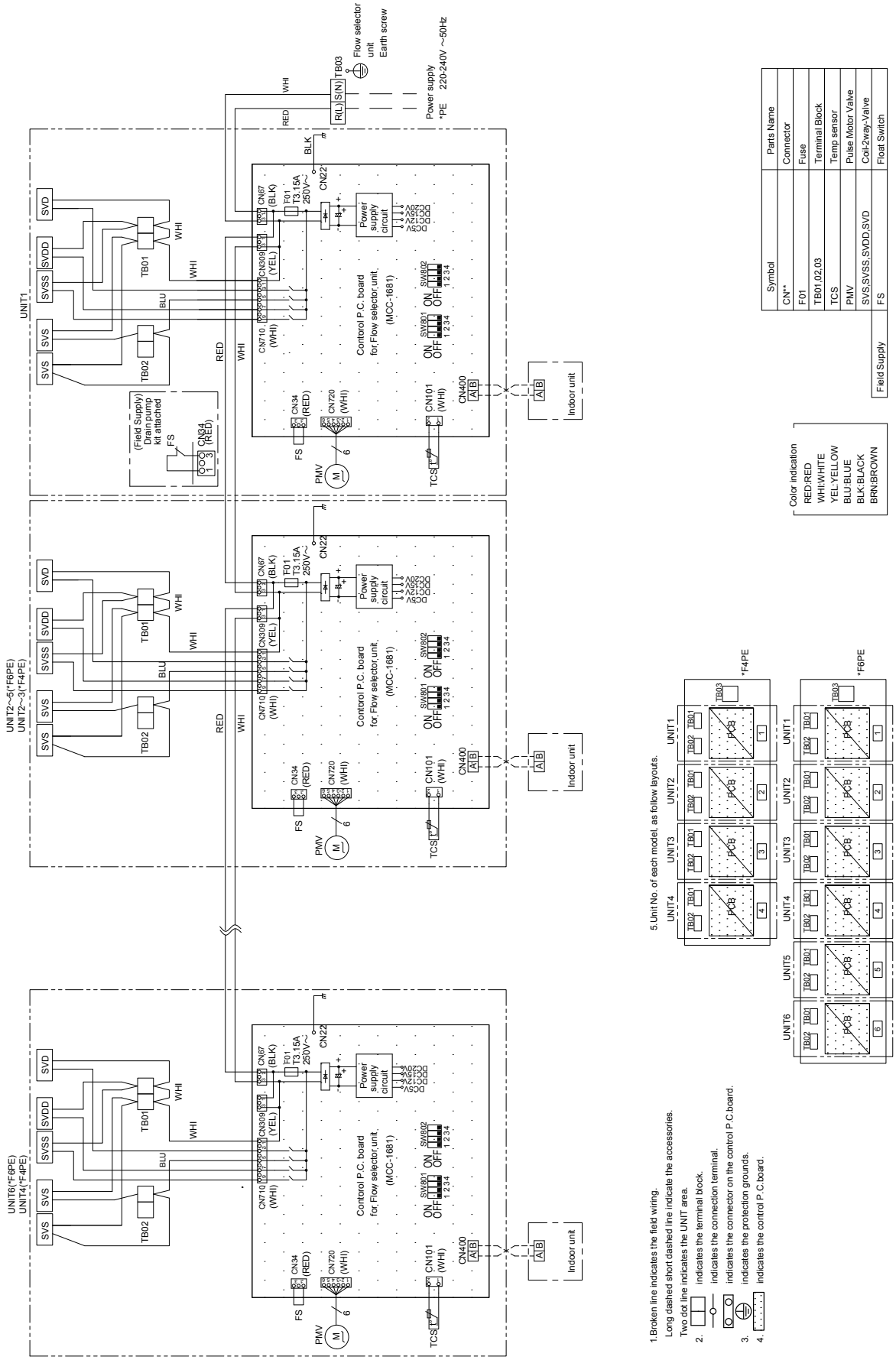
RBM-Y1801***	A	B
F4PE	730	802
F6PE	1,050	1,122

Center of graity (Multi)

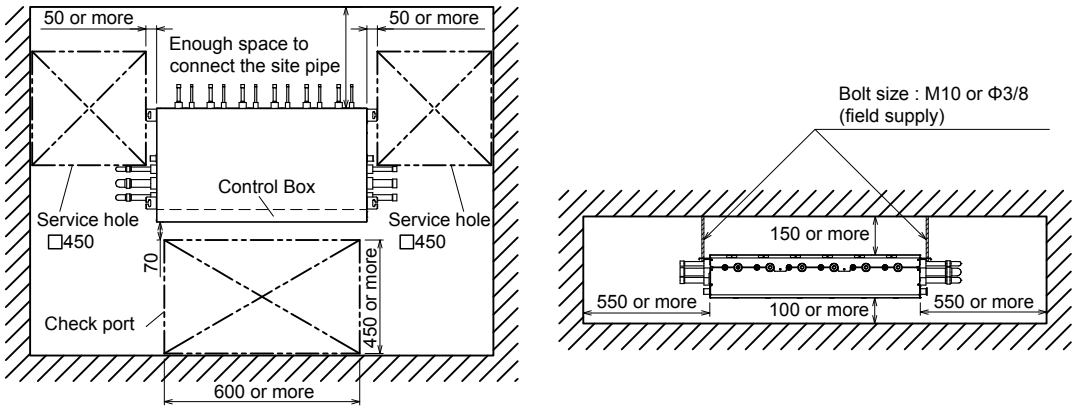


RBM-Y1801***	A (mm)	B (mm)	X (mm)	Y (mm)	Z (mm)	Weight (kg)
F4PE/F4PE2	730	802	293	365	96	38
F6PE/F6PE2	1,050	1,122	293	525	96	53

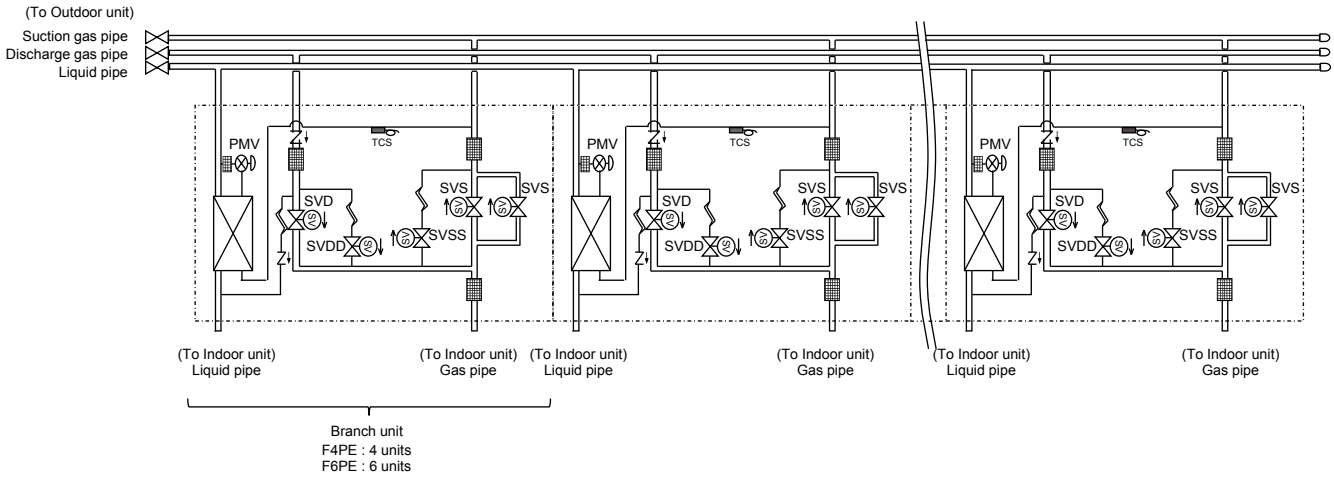
System wiring diagram (Multi)



Installation space (Multi)



Refrigeration cycle diagram (Multi)



Symbol	Solenoid Valve	Capillary Tube	Check Valve	Strainer	Stop

SHRM-e Engineering Data Book

Model name:

MMY-MAP_6FT8P-E

May, 2016 Full version