TOSHIBA

Super-MMS Engineering Data Book

Super Modular Multi System

1 Foreword

This engineering data book provides several useful data,charts and drawings to clarify the best performance of Toshiba Super Modular Multi System for various field application.

We hope this information will assist you in deeper understanding of the system and wider application opportunities.

Along with use of this data book, following related references are recommended as required.

Design manual : File No.A03-008
Installation manual : File No.A03-012
Service manual : File No.A03-009

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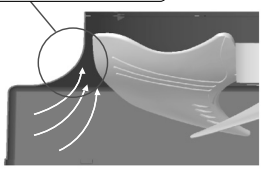
Introduction

World's Best Technology for Energy Saving System

Toshiba attains the pinnacle of world technology in all aspects of efficiency, durability, and comfort.
The advanced innovation of Toshiba will change your mind about large air conditioning systems.

High performance new bell mouth (Smooth bell mouth)

Enlarged suction R



Enlarged suction R allows smoother flow.

High efficiency DC fan motor

High output/ high efficiency DC motor

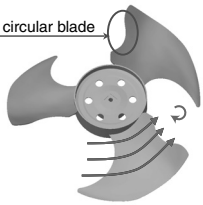


+ Output 600W
+ Sine wave drive



New large diameter propeller fan (Flash wing fan)

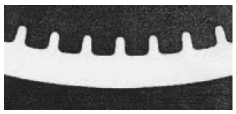
Reversed circular blade



Enlarged fan diameter
ϕ630→ϕ710

The reversed circular form reduces the interference of the flow between the blades, and the backward vortex.

High efficiency heat transfer pipe R410A



Configuration of heat transfer pipe

AI dual inverter system

High speed calculation vector control inverter

High efficiency DC twin rotary compressor

World's first core technology: each module (basic outdoor unit) is installed with two (dual) DC twin rotary compressors that work effectively with high efficiency refrigerant R410A. The system operates in the optimum pattern for both energy saving and reliability.

-Installation Work:

Less Piping Material and Higher Efficiency



Smaller piping diameter than ever.

Thanks to all inverter type compressor, no need to care about configuration of outdoor unit.

Improved reliability with perfect module casing



Every basic outdoor unit (1 module) for combined use is of the same size with the same basic installation work, making the installation simple. Can be installed as they come. The compact size to go into an ordinary elevator.

* A combination recommended for use as the central unit available.

*As of March 2004, * All our compressors are inverter type (Only at Toshiba)

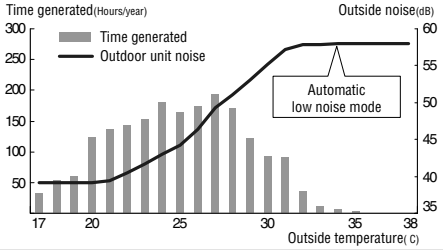
Cost Saving of Piping Material

Less piping work

Efficient Installation Work

Automatic low-noise mode that only all inverter type can realize

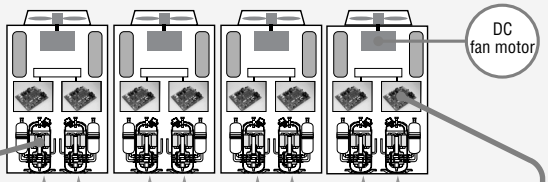
From the weather data of Japan Building Mechanical and Electrical Engineers as of 2000
Tokyo (8:00 21:00) remote control temperature setting at 27 C



Numbers used are expected numbers.

High efficiency DC twin rotary compressor

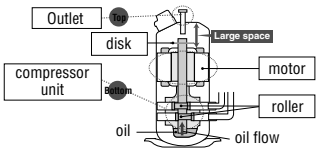
DC twin rotary compressors most congenial with R410A are used for all the outdoor units. (Conversion to all inverter type)



DC twin rotary compressor installed on all the outdoor units for combined use!(Conversion to all inverter type)

Active oil control

Oil control is the key to the reliability.



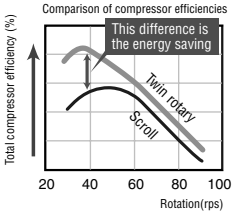
Compression structure by the rotation of the rollers inside the fixed cylinder allows the easy supply of the oil to the swaying surface. The compressing rollers move in the same direction as the rotary shaft. This creates a force in the direction of compression even at high compression. Thus high efficiency and reliability are attained.

Weight (Compared with the conventional unit)	◎	67%
Volume (Compared with the conventional unit)	◎	61%
Congenial with high pressure refrigerant R410A	◎	Force on the vertical shaft (roller) is small.
Range of rotation	◎	15-120rps
Compressor efficiency	◎	See diagram on the right
Oil discharge (ratio)	◎	1/40 (of the conventional unit)

High-speed Calculation Vector Control Inverter



Comparison of compressor efficiencies



COP

	Super-MMS (410A) *1
10HP System	3.80
20HP System	3.55

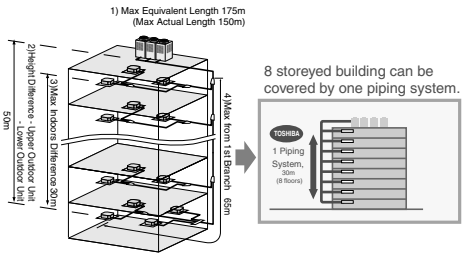
Leading the world with high efficiency and high COP in both 1:1 system and VRF system.



-Design Work:

Flexible to meet sophisticated condition of buildings or various requirements of customers

The longest piping in the industry enables a flexible floor designing.



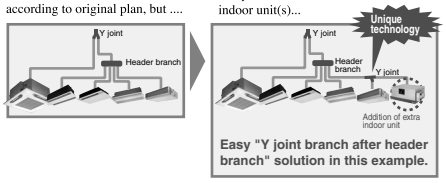
	1)		2)		3)	4)		
	Max Equivalent Length	Max Actual Length	Height Difference: Upper Outdoor Unit	Height Difference: Lower Outdoor Unit	Max Indoors Difference	Max from 1st Branch	Total Extension	Max Connectable Indoor Units
Super MMS	175m	150m	50m	40m	30m	65m	300m	48units

Super MMS enable flexible branching.

You may change branching at installation sites.

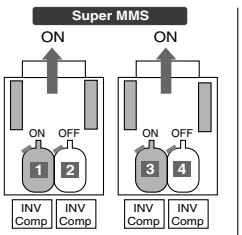
"Header branch after Y joint" according to original plan, but ....

Super MMS can quickly satisfy such a requirement as addition of extra indoor unit(s)...



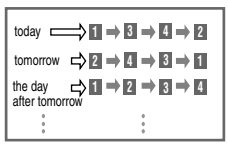
Therefore, all the compressor units can operate equally.

e.g. in case of a workload of 2 compressor units;



As both heat exchangers of 2 outdoor units are usable, higher energy-saving (higher efficiency) can be achieved.

The sequence of the first compressors to start up changes whenever switching on.



Master/Servant	No Need
Part load COP	Higher COP
Compressor start	Equal start chance

Through avoiding concentration of the load at the specific unit, prevention of failure and improvement of reliability are realized.

High level, Energy saving VRF System

Super MMS will offer the best solution to requirements of customers as well as consideration of ecology, with the unique technologies and advantages.

4

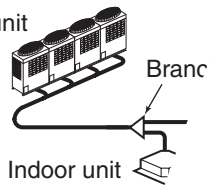
System overview

4 System overvi

1. OUTLINE OF TOSH
(Super Modular M

◆ **Shortest route design by**

Line branching



Header branching



Line + Heade

Outdoor uni

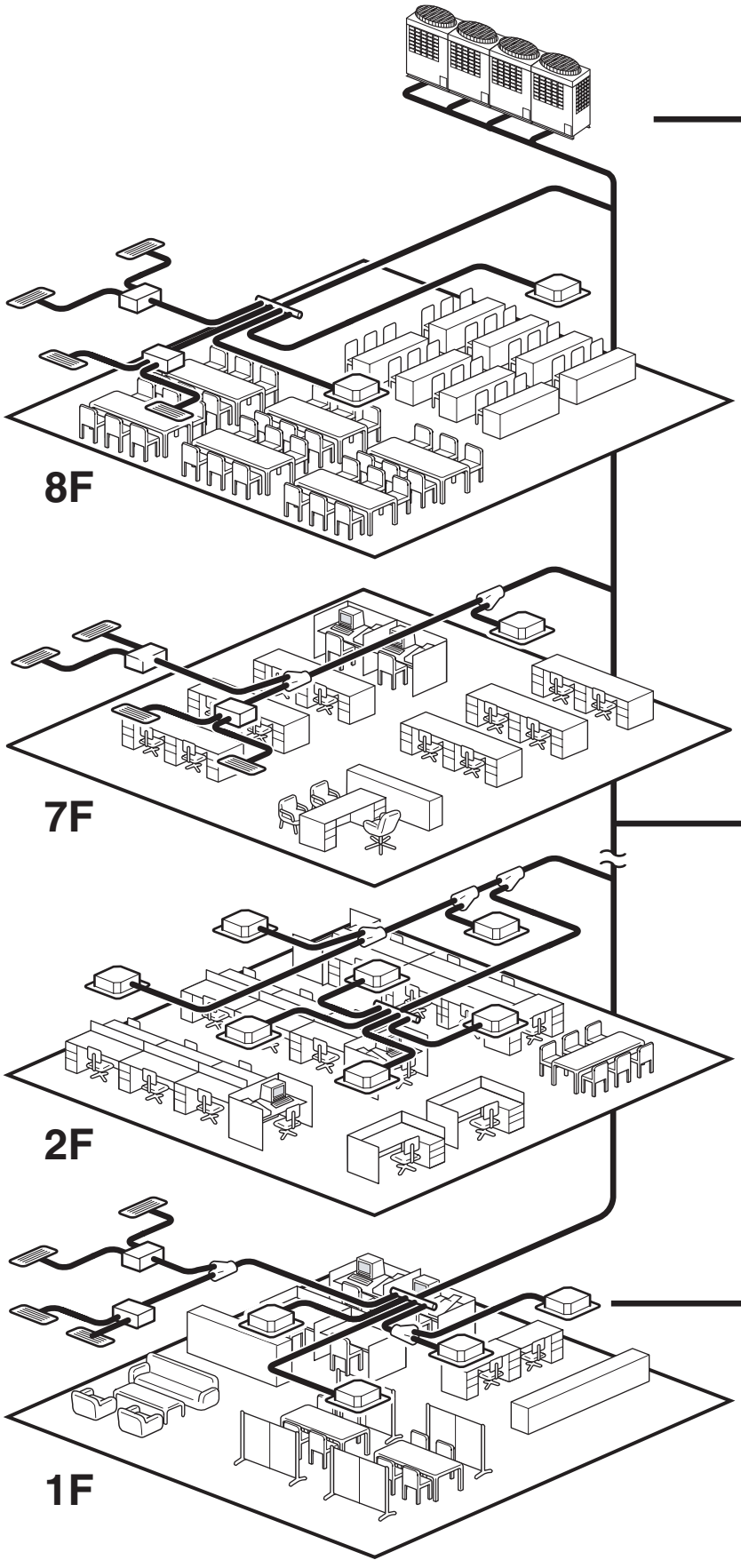
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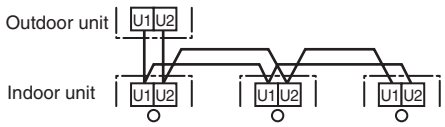
Hea

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Non-polarized control wiring between outdoor and indoor units

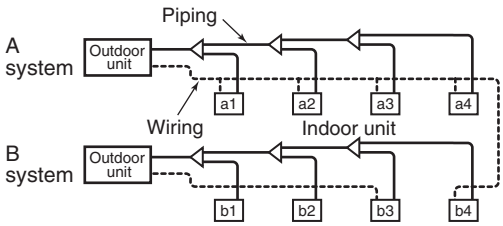


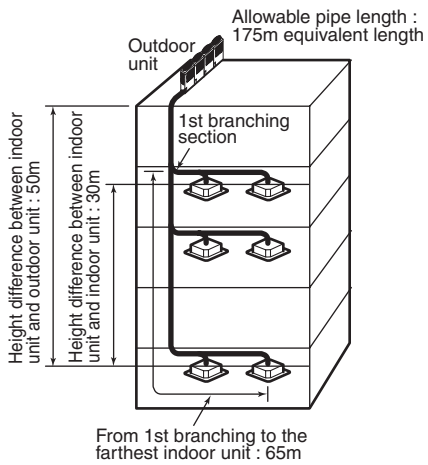
- Wiring diagnosis system

Use the switches on the micro processor P.C. board of the outdoor unit.

Detects wiring to the indoor unit a4 which should not be in system A.

b4 is missing in system B.





◆ Compact design

The design of the modular TOSHIBA Super MMS outdoor unit allows for easy unit maneuvering into any standard lift.
Its compactness also allows it to be easily installed in limited spaces.

◆ Largest system capacity

TOSHIBA Super MMS can be combined up to 48 HP (135kW) as one refrigerant system.

◆ Energy saving

No. 1 COP in VRF industry. Compared with the conventional chiller fan coil system, a large energy saving can be realized.

◆ Advanced bus communication system

Wiring between indoor and outdoor unit is a simple 2 wire system.
Communication address is also automatically configured.
A default test mode operation is available.

◆ Self diagnostics system

Comprehensive troubleshooting code allows for timely identification of problems arising.

◆ High lift design

Equivalent pipe length of 175m and vertical lift of 50m is made possible with TOSHIBA Super MMS.
Vertical lift between indoor units of 30m is the highest in the industry.
This allows for greater flexibility in the location of the system.

◆ Multiplied indoor units

Indoor units with different capacities and configurations can be combined up to 135% of the outdoor unit capacity.
A maximum of 48 indoor units can be combined with the 30 – 48 HP outdoor units.

◆ Intelligent control

TOSHIBA Super MMS intelligent controls and modulating valves deliver the required capacity, according to the load variation from 50% to 100%.
The intelligent controls and modulating valves limit or increase the cooling capacity dynamically so humidity and temperature are kept in the comfort zone.

◆ Conforms to building control law

IAQ (Indoor Air Quality) is also achieved by combining various accessories required by the Building Control Law.

◆ Wide control applications

Artificial Intelligence Network system
- Central control and monitoring system available
- Weekly schedule operation through weekly timer

Integration with Building Management System (BMS) is available.

2. SUMMARY OF SYSTEM EQUIPMENTS

Equipments

1. Outdoor units

Corresponding HP			Inverter unit					Appearance
			5 HP	6 HP	8 HP	10 HP	12 HP	
Model name	Heat pump	MMY-	MAP0501HT8	MAP0601HT8	MAP0801HT8	MAP1001H8	MAP1201HT8	
	Heat pump	MMY-	MAP0501HT7	MAP0601HT7	MAP0801HT7	MAP1001HT7	MAP1201HT7	
	Cooling only	MMY-	MAP0501T8	MAP0601T8	MAP0801T8	MAP1001T8	MAP1201T8	
Cooling capacity (kW)			14.0	16.0	22.4	28.0	33.5	
Heating capacity (kW)			16.0	18.0	25.0	31.5	37.5	

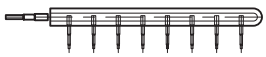
2. Outdoor units (Combination of outdoor units)

Corresponding HP		5 HP	6 HP	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP
Combined Model	MMY-	MAP0501HT8	MAP0601HT8	MAP0801HT8	MAP1001HT8	MAP1201HT8	AP1401HT8	AP1601HT8	AP1801HT8	AP2001HT8	AP2201HT8
	MMY-	MAP0501HT7	MAP0601HT7	MAP0801HT7	MAP1001HT7	MAP1201HT7	AP1401HT7	AP1601HT7	AP1801HT7	AP2001HT7	AP2201HT7
	MMY-	MAP0501T8	MAP0601T8	MAP0801T8	MAP1001T8	MAP1201T8	AP1401T8	AP1601T8	AP1801T8	AP2001T8	AP2201T8
Cooling capacity (kW)		14.0	16.0	22.4	28.0	33.5	38.4	45.0	50.4	56.0	61.5
Heating capacity (kW)		16.0	18.0	25.0	31.5	37.5	43.0	50.0	56.5	63.0	69.0
Combined outdoor units		5 HP	6 HP	8 HP	10 HP	12 HP	8 HP	8 HP	10 HP	10 HP	8 HP
		—	—	—	—	—	6 HP	8 HP	8 HP	10 HP	8 HP
		—	—	—	—	—	—	—	—	—	6 HP
		—	—	—	—	—	—	—	—	—	—
No. of connectable indoor units		8	10	13	16	20	23	27	30	33	37

Corresponding HP		22 HP	24 HP	24 HP	26 HP	28 HP	30 HP	32 HP	32 HP	34 HP	34 HP
Combined Model	MMY-	AP2211HT8	AP2401HT8	AP2411HT8	AP2601HT8	AP2801HT8	AP3001HT8	AP3201HT8	AP3211HT8	AP3401HT8	AP3411HT8
	MMY-	AP2211HT7	AP2401HT7	AP2411HT7	AP2601HT7	AP2801HT7	AP3001HT7	AP3201HT7	AP3211HT7	AP3401HT7	AP3411HT7
	MMY-	AP2211T8	AP2401T8	AP2411T8	AP2601T8	AP2801T8	AP3001T8	AP3201T8	AP3211T8	AP3401T8	AP3411T8
Cooling capacity (kW)		61.5	68.0	68.0	73.0	78.5	84.0	90.0	90.0	96.0	96.0
Heating capacity (kW)		69.0	76.5	76.5	81.5	88.0	95.0	100.0	100.0	108.0	108.0
Combined outdoor units		12 HP	8 HP	12 HP	10 HP	10 HP	10 HP	8 HP	12 HP	10 HP	12 HP
		10 HP	8 HP	12 HP	8 HP	10 HP	10 HP	8 HP	10 HP	8 HP	12 HP
		—	8 HP	—	8 HP	8 HP	10 HP	8 HP	10 HP	8 HP	10 HP
		—	—	—	—	—	—	8 HP	—	8 HP	—
No. of connectable indoor units		37	40	40	43	47	48	48	48	48	48

Corresponding HP		36 HP	36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP
Combined Model	MMY-	AP3601HT8	AP3611HT8	AP3801HT8	AP4001HT8	AP4201HT8	AP4401HT8	AP4601HT8	AP4801HT8
	MMY-	AP3601HT7	AP3611HT7	AP3801HT7	AP4001HT7	AP4201HT7	AP4401HT7	AP4601HT7	AP4801HT7
	MMY-	AP3601T8	AP3611T8	AP3801T8	AP4001T8	AP4201T8	AP4401T8	AP4601T8	AP4801T8
Cooling capacity (kW)		101.0	101.0	106.5	112.0	118.0	123.5	130.0	135.0
Heating capacity (kW)		113.0	113.0	119.5	126.5	132.0	138.0	145.0	150.0
Combined outdoor units		10 HP	12 HP	10 HP	10 HP	12 HP	12 HP	12 HP	12 HP
		10 HP	12 HP	10 HP	10 HP	10 HP	12 HP	12 HP	12 HP
		8 HP	12 HP	10 HP	10 HP	10 HP	10 HP	12 HP	12 HP
		8 HP	—	8 HP	10 HP	10 HP	10 HP	10 HP	12 HP
No. of connectable indoor units		48	48	48	48	48	48	48	48

3. Branching joints and headers

	Model name	Usage		Appearance
Y-shape branching joint (*3)	RBM-BY53E	Indoor unit capacity code (*1) : Total below 6.4		
	RBM-BY103E	Indoor unit capacity code (*1) : Total 6.4 or more and below 14.2	(*2)	
	RBM-BY203E	Indoor unit capacity code (*1) : Total 14.2 or more and below 25.2	(*2)	
	RBM-BY303E	Indoor unit capacity code (*1) : Total 25.2 or more	(*2)	
4-branching header (*4)	RBM-HY1043E	Indoor unit capacity code (*1) : Total below 14.2	Max.4 branches	
	RBM-HY2043E	Indoor unit capacity code (*1) : Total 14.2 or more and below 25.2		
8-branching header (*4) (*5)	RBM-HY1083E	Indoor unit capacity code (*1) : Total below 14.2	Max.8 branches	
	RBM-HY2083E	Indoor unit capacity code (*1) : Total 14.2 or more and below 25.2		
T-shape branching joint (For connection of outdoor units)	RBM-BT13E	1 set of 3 types of T-shape joint pipes as described below: The required quantity is arranged and they are combined at the site.		

Connection piping	Corresponded dia. (mm)	Q'ty
Balance pipe	Ø9.5	1
Piping at liquid side	Ø9.5 to Ø22.2	1
Piping at gas side	Ø15.9 to Ø41.3	1

*1 "Capacity code" can be obtained. (Capacity code is not actual capacity)
*2 If total capacity code value of indoor unit exceeds that of outdoor unit, apply capacity code of outdoor unit.
*3 When using Y-shape branching joint for 1st branching, select according to capacity code of outdoor unit.
*4 Max. 6.0 capacity code in total can be connected.
*5 If capacity code of outdoor unit is 26 and more, it is not used for 1st branching.
*6 Model names for outdoor and indoor units described in this guide are shortened because of the space constraint.

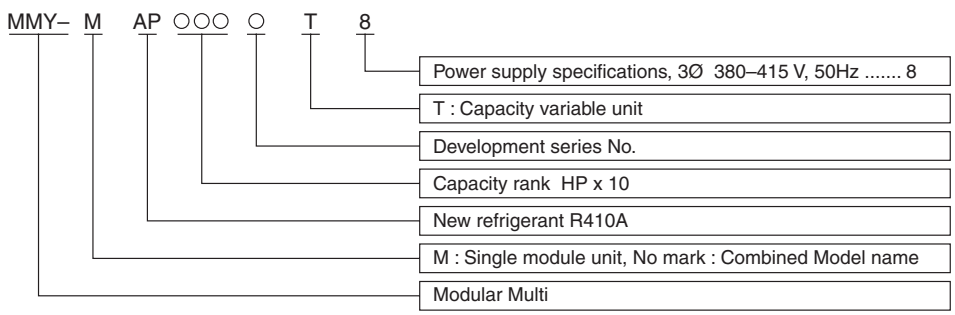
Cooling Only model

50Hz

Super Modular Multi System Outdoor Unit : List of Product and Combined Model Name

HP (Capacity code)	Model name MMY-	No. of combined units	Inverter 5HP MMY-	Used Q'ty	Inverter 6HP MMY-	Used Q'ty	Inverter 8HP MMY-	Used Q'ty	Inverter 10HP MMY-	Used Q'ty	Inverter 12HP MMY-	Used Q'ty
5HP (5)	**MAP0501T8**	1	**MAP0501T8**	1								
6HP (6)	**MAP0601T8**	1			**MAP0601T8**	1						
8HP (8)	**MAP0801T8**	1					**MAP0801T8**	1				
10HP (10)	**MAP1001T8**	1							**MAP1001T8**	1		
12HP (12)	**MAP1201T8**	1									**MAP1201T8**	1
14HP (14)	**AP1401T8**	2			**MAP0601T8**	1	**MAP0801T8**	1				
16HP (16)	**AP1601T8**	2					**MAP0801T8**	2				
18HP (18)	**AP1801T8**	2					**MAP0801T8**	1	**MAP1001T8**	1		
20HP (20)	**AP2001T8**	2							**MAP1001T8**	2		
22HP (22)	**AP2201T8**	3			**MAP0601T8**	1	**MAP0801T8**	2				
22HP (22)	**AP2211T8**	2							**MAP1001T8**	1	**MAP1201T8**	1
24HP (24)	**AP2401T8**	3					**MAP0801T8**	3				
24HP (24)	**AP2411T8**	2									**MAP1201T8**	2
26HP (26)	**AP2601T8**	3					**MAP0801T8**	2	**MAP1001T8**	1		
28HP (28)	**AP2801T8**	3					**MAP0801T8**	1	**MAP1001T8**	2		
30HP (30)	**AP3001T8**	3							**MAP1001T8**	3		
32HP (32)	**AP3201T8**	4					**MAP0801T8**	4				
32HP (32)	**AP3211T8**	3							**MAP1001T8**	2	**MAP1201T8**	1
34HP (34)	**AP3401T8**	4					**MAP0801T8**	3	**MAP1001T8**	1		
34HP (34)	**AP3411T8**	3							**MAP1001T8**	1	**MAP1201T8**	2
36HP (36)	**AP3601T8**	4					**MAP0801T8**	2	**MAP1001T8**	2		
36HP (36)	**AP3611T8**	3									**MAP1201T8**	3
38HP (38)	**AP3801T8**	4					**MAP0801T8**	1	**MAP1001T8**	3		
40HP (40)	**AP4001T8**	4							**MAP1001T8**	4		
42HP (42)	**AP4201T8**	4							**MAP1001T8**	3	**MAP1201T8**	1
44HP (44)	**AP4401T8**	4							**MAP1001T8**	2	**MAP1201T8**	2
46HP (46)	**AP4601T8**	4							**MAP1001T8**	1	**MAP1201T8**	3
48HP (46)	**AP4801T8**	4									**MAP1201T8**	4

1. Allocation standard of model name



2. Range of combined capacity

No. of combined units: 1 to 4 units
Capacity of combined units : 14 HP (140 type) to 48 HP (480 type)

3. Rated conditions (Rated mode : Condition)

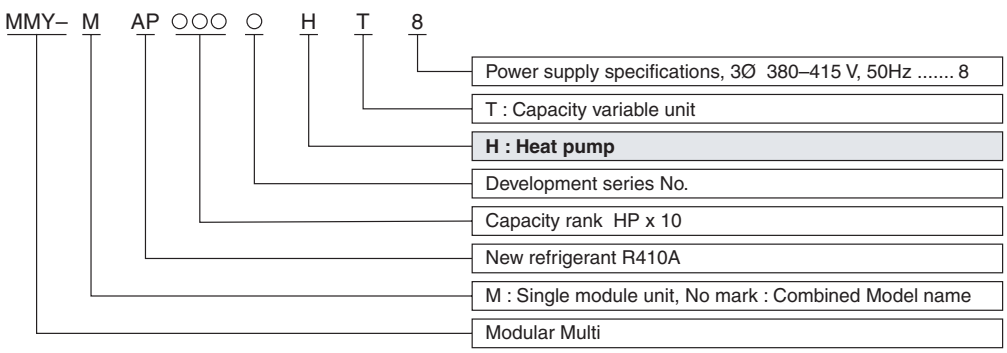
Cooling : Indoor air temperature 27˚C DB/19˚C WB, Outdoor air temperature 35˚C DB

Heat Pump model

50Hz

HP (Capacity code)	Model name MMY-	No. of combined units	Inverter 5 HP MMY-	Used Q'ty	Inverter 6 HP MMY-	Used Q'ty	Inverter 8 HP MMY-	Used Q'ty	Inverter 10 HP MMY-	Used Q'ty	Inverter 12 HP MMY-	Used Q'ty
5HP (5)	**MAP0501HT8**	1	**MAP0501HT8**	1								
6HP (6)	**MAP0601HT8**	1			**MAP0601HT8**	1						
8HP (8)	**MAP0801HT8**	1					**MAP0801HT8**	1				
10HP (10)	**MAP1001HT8**	1							**MAP1001HT8**	1		
12HP (12)	**MAP1201HT8**	1									**MAP1201HT8**	1
14HP (14)	**AP1401HT8**	2			**MAP0601HT8**	1	**MAP0801HT8**	1				
16HP (16)	**AP1601HT8**	2					**MAP0801HT8**	2				
18HP (18)	**AP1801HT8**	2					**MAP0801HT8**	1	**MAP1001HT8**	1		
20HP (20)	**AP2001HT8**	2							**MAP1001HT8**	2		
22HP (22)	**AP2201HT8**	3			**MAP0601HT8**	1	**MAP0801HT8**	2				
22HP (22)	**AP2211HT8**	2							**MAP1001HT8**	1	**MAP1201HT8**	1
24HP (24)	**AP2401HT8**	3					**MAP0801HT8**	3				
24HP (24)	**AP2411HT8**	2									**MAP1201HT8**	2
26HP (26)	**AP2601HT8**	3					**MAP0801HT8**	2	**MAP1001HT8**	1		
28HP (28)	**AP2801HT8**	3					**MAP0801HT8**	1	**MAP1001HT8**	2		
30HP (30)	**AP3001HT8**	3							**MAP1001HT8**	3		
32HP (32)	**AP3201HT8**	4					**MAP0801HT8**	4				
32HP (32)	**AP3211HT8**	3							**MAP1001HT8**	2	**MAP1201HT8**	1
34HP (34)	**AP3401HT8**	4					**MAP0801HT8**	3	**MAP1001HT8**	1		
34HP (34)	**AP3411HT8**	3							**MAP1001HT8**	1	**MAP1201HT8**	2
36HP (36)	**AP3601HT8**	4					**MAP0801HT8**	2	**MAP1001HT8**	2		
36HP (36)	**AP3611HT8**	3									**MAP1201HT8**	3
38HP (38)	**AP3801HT8**	4					**MAP0801HT8**	1	**MAP1001HT8**	3		
40HP (40)	**AP4001HT8**	4							**MAP1001HT8**	4		
42HP (42)	**AP4201HT8**	4							**MAP1001HT8**	3	**MAP1201HT8**	1
44HP (44)	**AP4401HT8**	4							**MAP1001HT8**	2	**MAP1201HT8**	2
46HP (46)	**AP4601HT8**	4							**MAP1001HT8**	1	**MAP1201HT8**	3
48HP (46)	**AP4801HT8**	4									**MAP1201HT8**	4

1. Allocation standard of model name



2. Range of combined capacity

No. of combined units: 1 to 4 units
Capacity of combined units : 14 HP (140 type) to 48 HP (480 type)

3. Rated conditions (Rated mode : Condition)

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

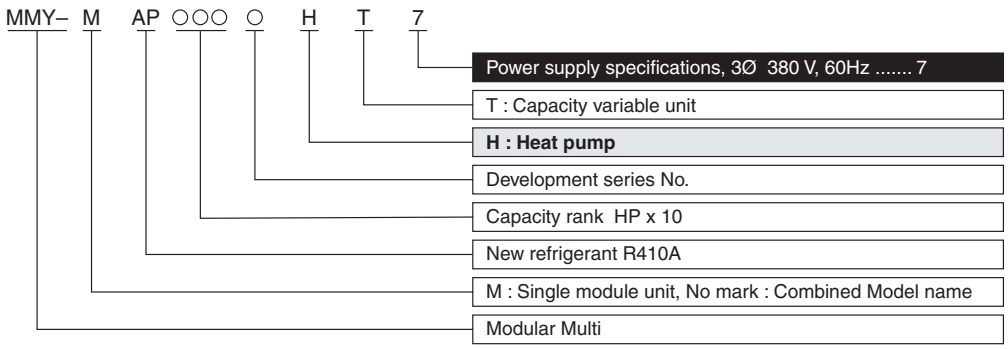
Heat Pump model

60Hz

Super Modular Multi System Outdoor Unit : List of Product and Combined Model Name

HP (Capacity code)	Model name MMY-	No. of combined units	Inverter 5 HP MMY-	Used Q'ty	Inverter 6 HP MMY-	Used Q'ty	Inverter 8 HP MMY-	Used Q'ty	Inverter 10 HP MMY-	Used Q'ty	Inverter 12 HP MMY-	Used Q'ty
5HP (5)	**MAP0501HT7**	1	**MAP0501HT7**	1								
6HP (6)	**MAP0601HT7**	1			**MAP0601HT7**	1						
8HP (8)	**MAP0801HT7**	1					**MAP0801HT7**	1				
10HP (10)	**MAP1001HT7**	1							**MAP1001HT7**	1		
12HP (12)	**MAP1201HT7**	1									**MAP1201HT7**	1
14HP (14)	**AP1401HT7**	2			**MAP0601HT7**	1	**MAP0801HT7**	1				
16HP (16)	**AP1601HT7**	2					**MAP0801HT7**	2				
18HP (18)	**AP1801HT7**	2					**MAP0801HT7**	1	**MAP1001HT7**	1		
20HP (20)	**AP2001HT7**	2							**MAP1001HT7**	2		
22HP (22)	**AP2201HT7**	3			**MAP0601HT7**	1	**MAP0801HT7**	2				
22HP (22)	**AP2211HT7**	2							**MAP1001HT7**	1	**MAP1201HT7**	1
24HP (24)	**AP2401HT7**	3					**MAP0801HT7**	3				
24HP (24)	**AP2411HT7**	2									**MAP1201HT7**	2
26HP (26)	**AP2601HT7**	3					**MAP0801HT7**	2	**MAP1001HT7**	1		
28HP (28)	**AP2801HT7**	3					**MAP0801HT7**	1	**MAP1001HT7**	2		
30HP (30)	**AP3001HT7**	3							**MAP1001HT7**	3		
32HP (32)	**AP3201HT7**	4					**MAP0801HT7**	4				
32HP (32)	**AP3211HT7**	3							**MAP1001HT7**	2	**MAP1201HT7**	1
34HP (34)	**AP3401HT7**	4					**MAP0801HT7**	3	**MAP1001HT7**	1		
34HP (34)	**AP3411HT7**	3							**MAP1001HT7**	1	**MAP1201HT7**	2
36HP (36)	**AP3601HT7**	4					**MAP0801HT7**	2	**MAP1001HT7**	2		
36HP (36)	**AP3611HT7**	3									**MAP1201HT7**	3
38HP (38)	**AP3801HT7**	4					**MAP0801HT7**	1	**MAP1001HT7**	3		
40HP (40)	**AP4001HT7**	4							**MAP1001HT7**	4		
42HP (42)	**AP4201HT7**	4							**MAP1001HT7**	3	**MAP1201HT7**	1
44HP (44)	**AP4401HT7**	4							**MAP1001HT7**	2	**MAP1201HT7**	2
46HP (46)	**AP4601HT7**	4							**MAP1001HT7**	1	**MAP1201HT7**	3
48HP (46)	**AP4801HT7**	4									**MAP1201HT7**	4

1. Allocation standard of model name



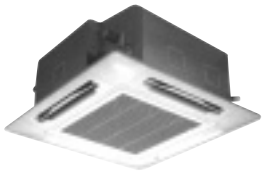
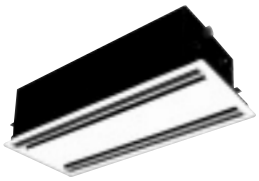
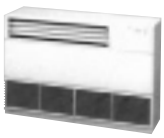
2. Range of combined capacity

No. of combined units: 1 to 4 units
Capacity of combined units : 14 HP (140 type) to 48 HP (480 type)

3. Rated conditions (Rated mode : Condition)

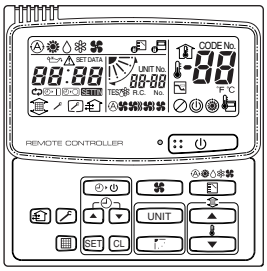
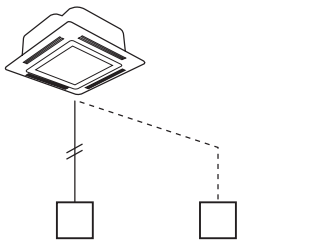
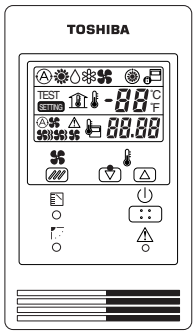
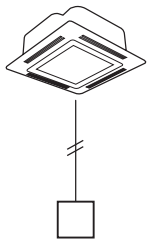
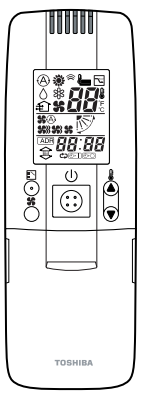
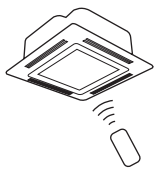
Cooling : Indoor air temperature 27°C DB/19°C WB, Outdoor air temperature 35°C DB
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

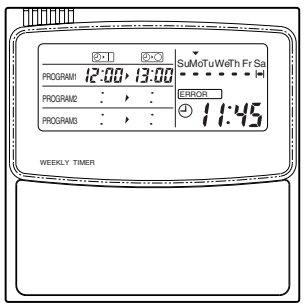
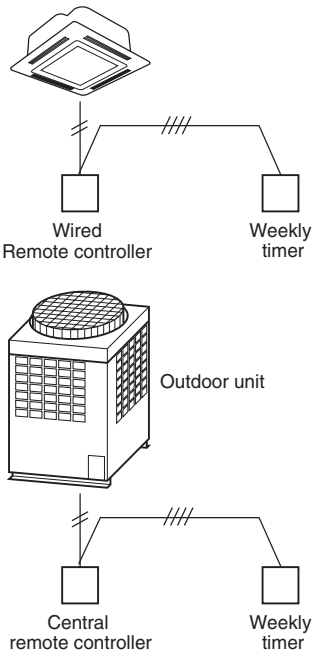
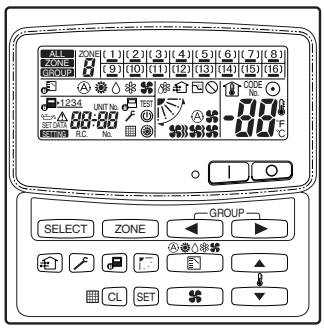
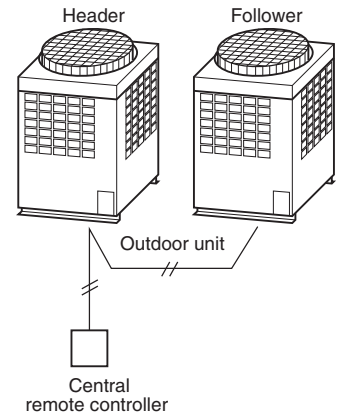
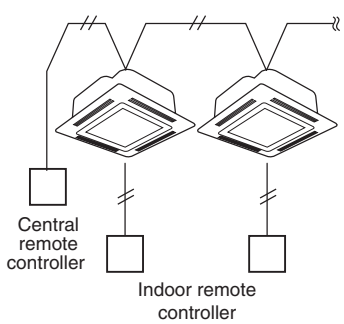
4. Indoor unit

Type	Appearance	Model name	Capacity rank	Capacity code	Cooling capacity (kW)	Heating capacity (kW)
4-way Air Discharge Cassette Type		**MMU-AP0091H**	009 type	1	2.8	3.2
		MMU-AP0121H	012 type	1.25	3.6	4.0
		MMU-AP0151H	015 type	1.7	4.5	5.0
		MMU-AP0181H	018 type	2	5.6	6.3
		MMU-AP0241H	024 type	2.5	7.1	8.0
		MMU-AP0271H	027 type	3	8.0	9.0
		MMU-AP0301H	030 type	3.2	9.0	10.0
		MMU-AP0361H	036 type	4	11.2	12.5
		MMU-AP0481H	048 type	5	14.0	16.0
		MMU-AP0561H	056 type	6	16.0	18.0
2-way Air Discharge Cassette Type		**MMU-AP0071WH**	007 type	0.8	2.2	2.5
		MMU-AP0091WH	009 type	1	2.8	3.2
		MMU-AP0121WH	012 type	1.25	3.6	4.0
		MMU-AP0151WH	015 type	1.7	4.5	5.0
		MMU-AP0181WH	018 type	2	5.6	6.3
		MMU-AP0241WH	024 type	2.5	7.1	8.0
		MMU-AP0271WH	027 type	3	8.0	9.0
		MMU-AP0301WH	030 type	3.2	9.0	10.0
		MMU-AP0481WH(*)	048 type	5	14.0	16.0
1-way Air Discharge Cassette Type		**MMU-AP0071YH**	007 type	0.8	2.2	2.5
		MMU-AP0091YH	009 type	1	2.8	3.2
		MMU-AP0121YH	012 type	1.25	3.6	4.0
		MMU-AP0151SH	015 type	1.7	4.5	5.0
		MMU-AP0181SH	018 type	2	5.6	6.3
		MMU-AP0241SH	024 type	2.5	7.1	8.0
Concealed Duct Standard Type		**MMD-AP0071BH**	007 type	0.8	2.2	2.5
		MMD-AP0091BH	009 type	1	2.8	3.2
		MMD-AP0121BH	012 type	1.25	3.6	4.0
		MMD-AP0151BH	015 type	1.7	4.5	5.0
		MMD-AP0181BH	018 type	2	5.6	6.3
		MMD-AP0241BH	024 type	2.5	7.1	8.0
		MMD-AP0271BH	027 type	3	8.0	9.0
		MMD-AP0301BH	030 type	3.2	9.0	10.0
		MMD-AP0361BH	036 type	4	11.2	12.5
		MMD-AP0481BH	048 type	5	14.0	16.0
		MMD-AP0561BH	056 type	6	16.0	18.0
Concealed Duct High Static Pressure Type		**MMD-AP0181H**	018 type	2	5.6	6.3
		MMD-AP0241H	024 type	2.5	7.1	8.0
		MMD-AP0271H	027 type	3	8.0	9.0
		MMD-AP0361H	036 type	4	11.2	12.5
		MMD-AP0481H	048 type	5	14.0	16.0
		MMD-AP0721H	072 type	8	22.4	25.0
		MMD-AP0961H	096 type	10	28.0	31.5
Under Ceiling Type		**MMC-AP0151H**	015 type	1.7	4.5	5.0
		MMC-AP0181H	018 type	2	5.6	6.3
		MMC-AP0241H	024 type	2.5	7.1	8.0
		MMC-AP0271H	027 type	3	8.0	9.0
		MMC-AP0361H	036 type	4	11.2	12.5
		MMC-AP0481H	048 type	5	14.0	16.0
High Wall Type		**MMK-AP0071H**	007 type	0.8	2.2	2.5
		MMK-AP0091H	009 type	1	2.8	3.2
		MMK-AP0121H	012 type	1.25	3.6	4.0
		MMK-AP0151H	015 type	1.7	4.5	5.0
		MMK-AP0181H	018 type	2	5.6	6.3
		MMK-AP0241H	024 type	2.5	7.1	8.0
Floor Standing Cabinet Type		**MML-AP0071H**	007 type	0.8	2.2	2.5
		MML-AP0091H	009 type	1	2.8	3.2
		MML-AP0121H	012 type	1.25	3.6	4.0
		MML-AP0151H	015 type	1.7	4.5	5.0
		MML-AP0181H	018 type	2	5.6	6.3
		MML-AP0241H	024 type	2.5	7.1	8.0
Floor Standing Concealed Type		**MML-AP0071BH**	007 type	0.8	2.2	2.5
		MML-AP0091BH	009 type	1	2.8	3.2
		MML-AP0121BH	012 type	1.25	3.6	4.0
		MML-AP0151BH	015 type	1.7	4.5	5.0
		MML-AP0181BH	018 type	2	5.6	6.3
		MML-AP0241BH	024 type	2.5	7.1	8.0
Floor Standing Type		**MMF-AP0151H**	015 type	1.7	4.5	5.0
		MMF-AP0181H	018 type	2	5.6	6.3
		MMF-AP0241H	024 type	2.5	7.1	8.0
		MMF-AP0271H	027 type	3	8.0	9.0
		MMF-AP0361H	036 type	4	11.2	12.5
		MMF-AP0481H	048 type	5	14.0	16.0
		MMF-AP0561H	056 type	6	16.0	18.0

* China only

5. Remote controller

Name	Model name	Appearance	Application	Function
Wired remote controller	RBC-AMT21E		**Connected to indoor unit**  Wired remote controller Wired remote controller (In case of control by 2 remote controllers)	• Start / Stop • Changing mode • Temperature setting • Air flow changing • Timer function ① Either “ON” time or “OFF” time or “CYCLIC” can be set how many 30 min. later ON or OFF is operated. ② Combined with the weekly timer, weekly schedule operation can be operated. • Filter sign Displays automatically maintenance time of indoor filter. Filter sign flashes. • Self-diagnosis function Pressing “CHECK” button displays cause of trouble on the check code. • Control by 2 remote controllers is available. Two remote controllers can be connected to one indoor unit. The indoor unit can be separately operated from the isolated places.
Simple remote controller	RBC-AS21E		**Connected to indoor unit**  Simple remote controller	• Start / Stop • Temperature setting • Air flow changing • Check code display
Wireless remote controller kit	TCB-AX21U (W)-E RBC-AX22CE TCB-AX21E		**Connected to indoor unit** 	• Start / Stop • Changing mode • Temperature setting • Air flow changing • Timer function Either “ON” time or “OFF” time or “CYCLIC” can be set how many 30 min. later ON or OFF is operated. • Control by 2 remote controllers is available. Two wireless remote controllers can operate one indoor unit. The indoor unit can be separately operated from the isolated places. • Check code display TCB-AX21U(W)-E (for 4-way airdischarge cassette) RBC-AX22CE (for under ceiling) TCB-AX21-E (for others except concealed duct high static pressure)

Name	Model name	Appearance	Application	Performance
Weekly timer	RBC-EXW21E		**Connected to central remote controller, wired remote controller** 	• Weekly schedule operation ① Setting different start / stop time for each day of the week ② ON / OFF can be easily set 3 times a day.  ③ "CHECK" "PROGRAM" "DAY" button make setting copy easy. ④ Two patterns of schedule for a week can be specified. (Summer schedule and winter schedule, etc.) ⑤ "CANCEL" "DAY" button make holiday setting easy. ⑥ If power supply fails, the setting contents are stored in memory for 100 hours.
Central remote controller	TCB-SC642TLE		**Connected to outdoor unit, indoor unit**  	• Individual control up to 64 indoor units • Individual control for max. 64 indoor units divided 1 to 4 zone. (Up to 16 indoor units for each zone) • Up to 16 outdoor header units are connectable. • 4 Type central control setting to inhibit individual operation by remote controller can be selected • Setting for one of 1 to 4 zone is available. • Usable with other central control devices (Up to 10 central control devices in one control circuit) • Two control mode selectivity (Central controller mode Remote controller mode) • Setting of simultaneous ON/OFF 3 times for each day of the week combined with weekly timer.

5

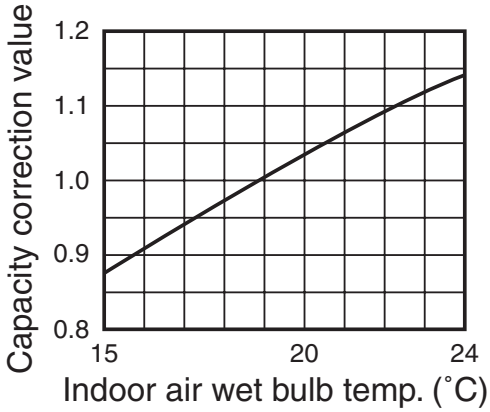
Capacity compensation chart

5 Capacity compensation chart

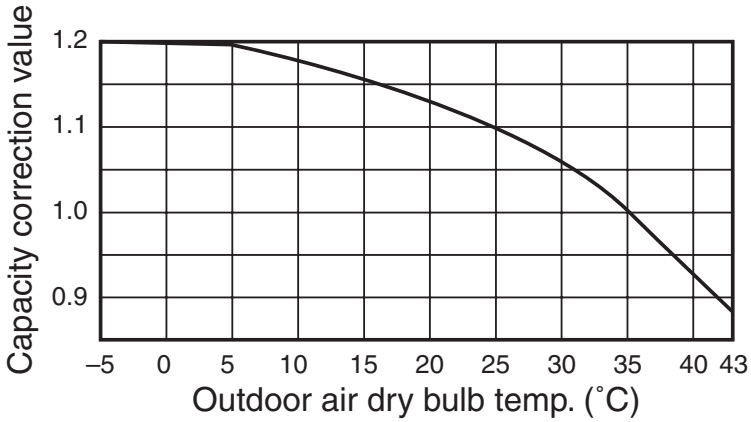
3. Cooling/heating capacity characteristics

1. Cooling capacity calculation method :
Required cooling capacity = Cooling capacity x Factor (①, ②, ③, ④, ⑤*1) kW

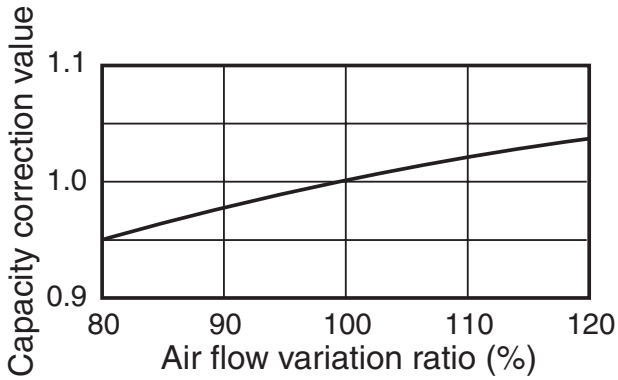
①Indoor air wet bulb temperature vs. capacity correction value



②Outdoor air dry bulb temperature vs.capacity correction value

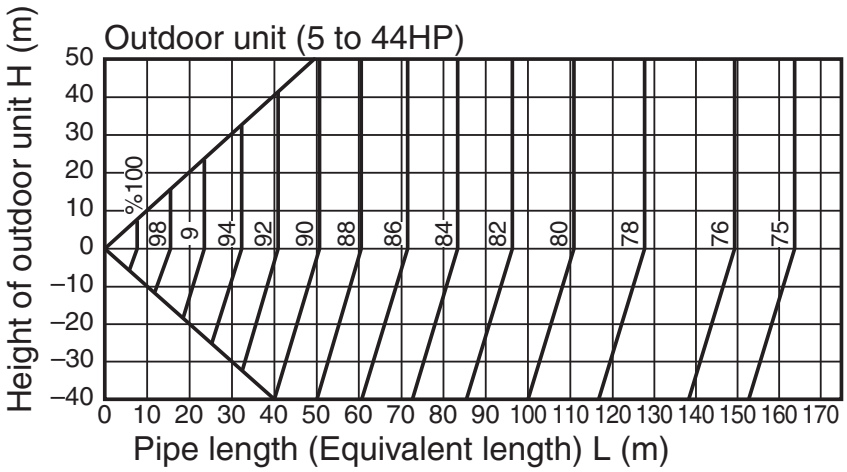


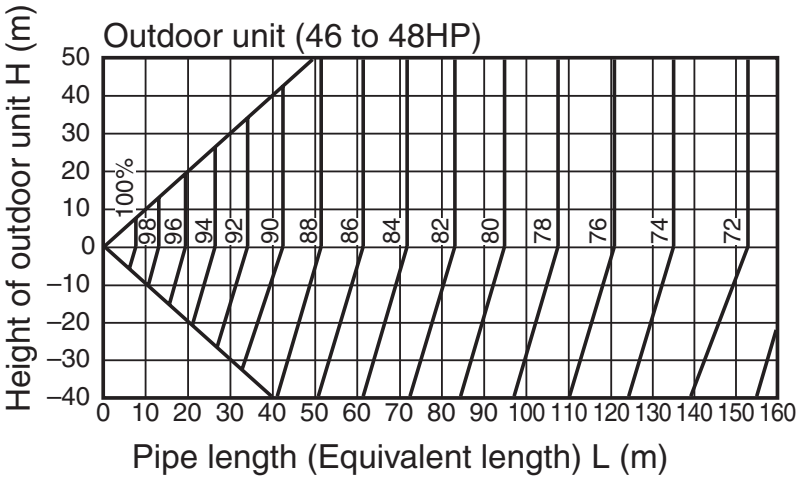
③Air flow variation ratio of indoor unit vs. capacity correction (For concealed duct type only)

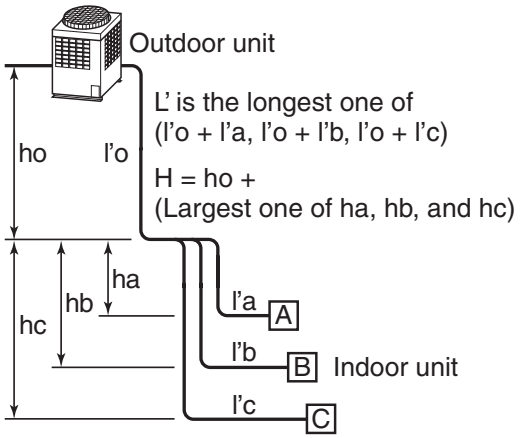


*1 : Coefficient to use for correction of outdoor unit capacity when total capacity of the indoor units are not equal to the outdoor unit capacity.

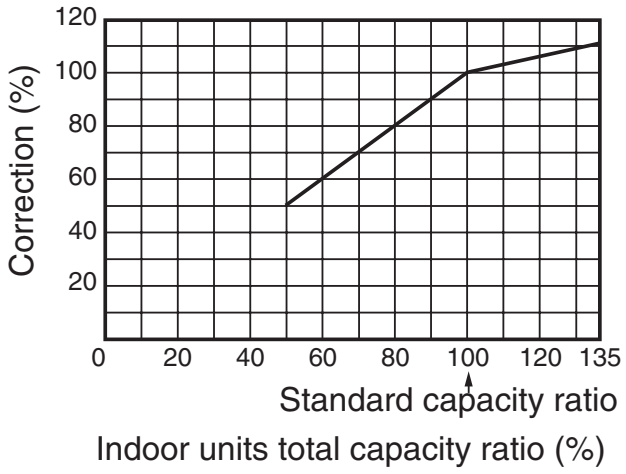
Connecting pipe length and lift difference between indoor and outdoor units vs. capacity correction value







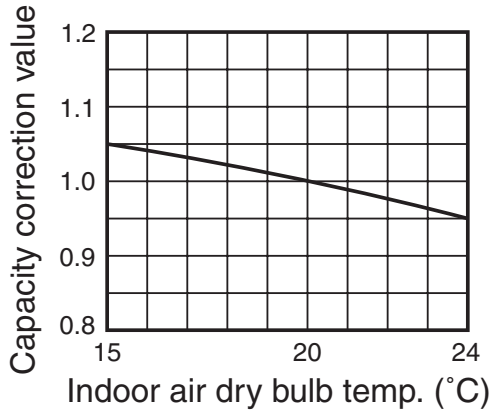
Correction of outdoor unit diversity



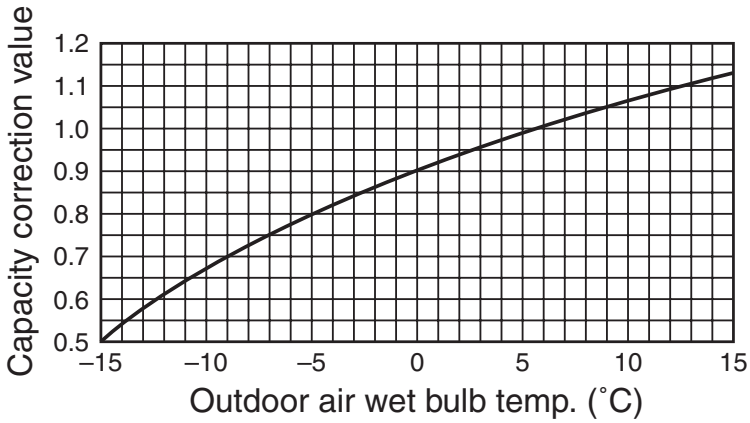
*1 : Coefficient to use for correction of outdoor unit capacity when total capacity of the indoor units are not equal to the outdoor unit capacity.

2. Heating capacity calculation method :
Required heating capacity = Heating capacity x Factor (①,②,③,④,⑤*1,⑥*2) kW

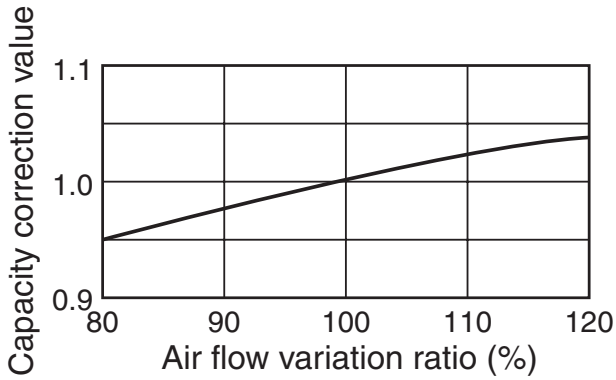
① Indoor air dry bulb temperature vs. capacity correction value



② Outdoor air wet bulb temperature vs. capacity correction value



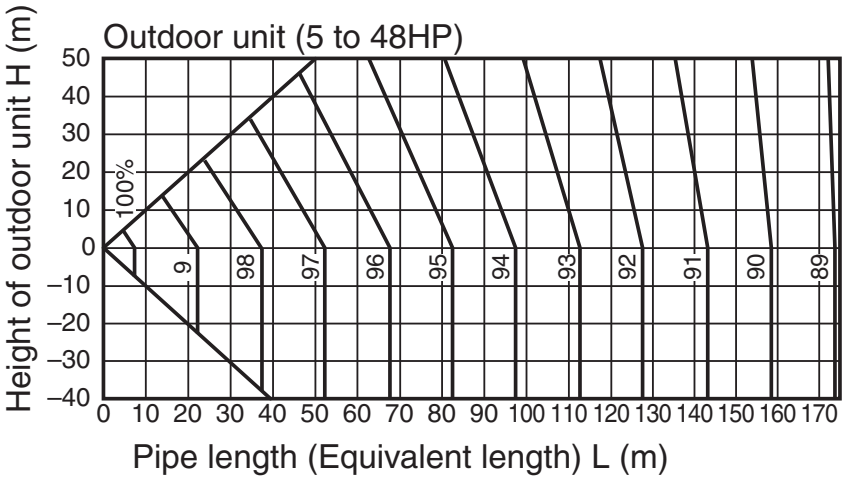
③ Air flow variation ratio of indoor unit vs. capacity correction (For concealed duct type only)

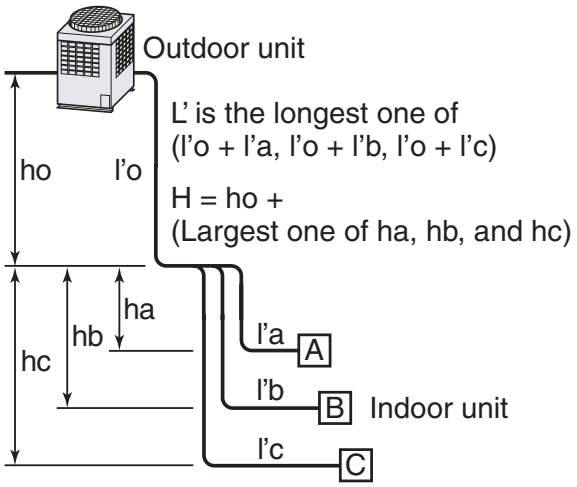


*1 : Coefficient to use for correction of outdoor unit capacity when total capacity of the indoor units are not equal to the outdoor unit capacity.

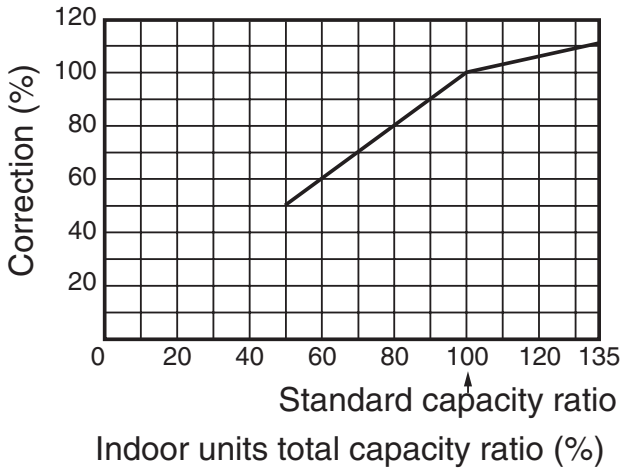
*2 : Refer to item 3

④ Connecting pipe length and lift difference between indoor and outdoor units vs. capacity correction value





⑤ Correction of outdoor unit diversity



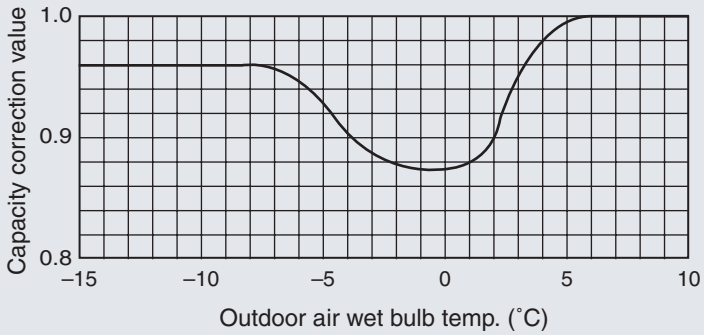
*1 : Coefficient to use for correction of outdoor unit capacity when total capacity of the indoor units are not equal to the outdoor unit capacity.

3. Capacity correction in case of frost on the outdoor heat exchanger in heating

Correct the heating capacity when frost was found on the outdoor heat exchanger.

Heating capacity = Capacity after correction of outdoor unit ◊ Correction value of capacity resulted from frost
(Capacity after correction of outdoor unit : Heating capacity calculated in the above item 2.)

⑥ Capacity correction in case of frost on the outdoor heat exchanger

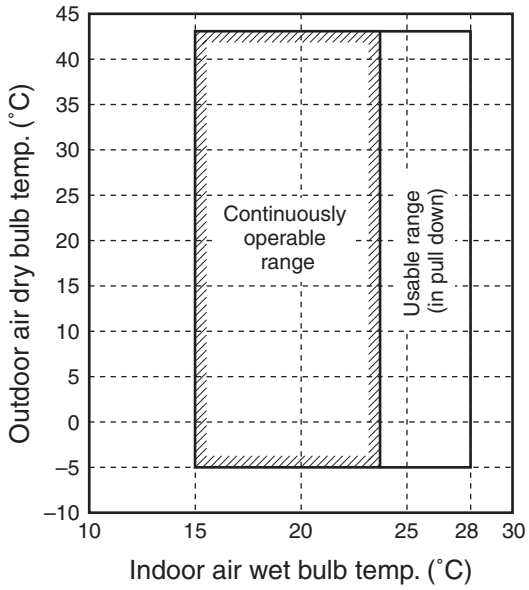


4. Capacity calculation for each indoor unit

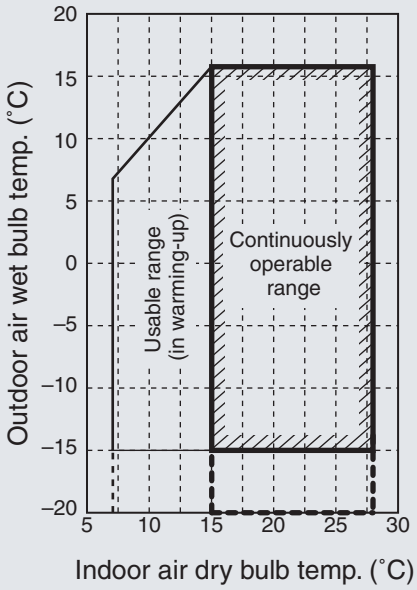
Capacity for each indoor unit
= Capacity after correction of outdoor unit ◊ $\frac{\text{Required standard capacity of indoor unit}}{\text{Total value of standard indoor unit capacity}}$

5. Operating temperature range

In cooling time



In heating time



* The unit can be operated even if outdoor temperature gets down to –20°, however, note that the warranty covers only up to –15°C because operation beyond that temperature is out of specification.
* When outdoor air temperature falls to under –15C, it may cause shortening the product lifetime.

6. Rated conditions

Cooling : Indoor air temperature 27°C DB/19.0°C WB, Outdoor air temperature 35°C DB

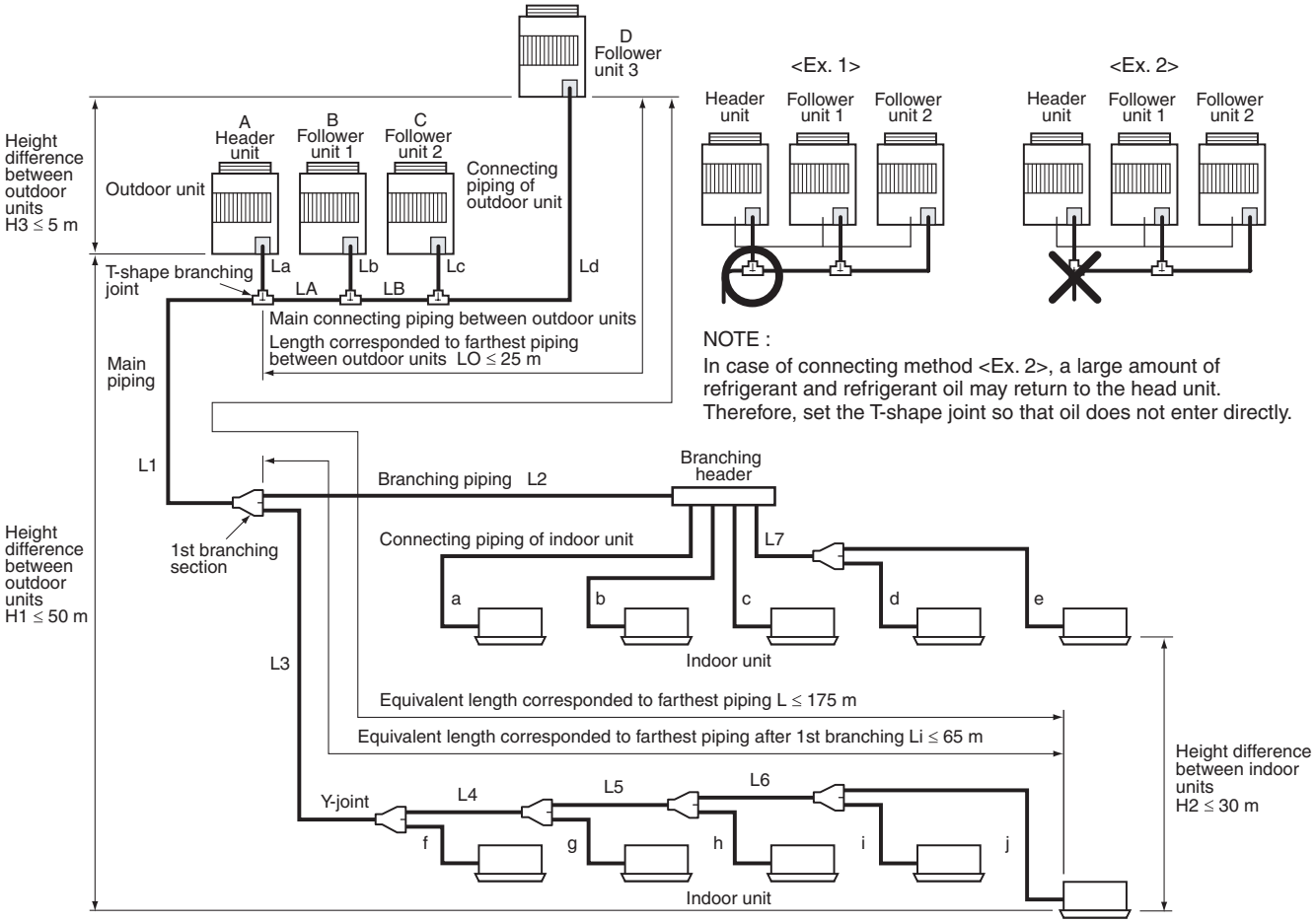
Heating : Indoor air temperature 20°C DB, Outdoor air temperature 7°C DB/6°C WB

6

Piping requirements

6 Piping requirements

1. Allowable length/height difference of refrigerant piping



NOTE :
In case of connecting method <Ex. 2>, a large amount of refrigerant and refrigerant oil may return to the head unit. Therefore, set the T-shape joint so that oil does not enter directly.

System restrictions

Max. No. of combined outdoor units		4 units
Max. capacity of combined outdoor units		48 HP
Max. No. of connected indoor units		48 units
Max. capacity of combined indoor units	$H_2 \leq 15$	135%
	$H_2 > 15$	105%

Note 1) Combination of outdoor units : Header unit (1 unit) + Follower units (0 to 3 units). Header unit is the outdoor unit nearest to the connected indoor units.

Note 2) Install the outdoor units in order of capacity. (Header unit ≥ Follower unit 1 ≥ Follower unit 2 ≥ Follower unit 3)

Note 3) Refer to outdoor unit combination table.

Note 4) Piping to indoor units shall be perpendicular to piping to the head outdoor unit as <Ex.1>. Do not connect piping to indoor units in the same direction of Head outdoor unit as <Ex.2>.

Allowable length and height difference of refrigerant piping

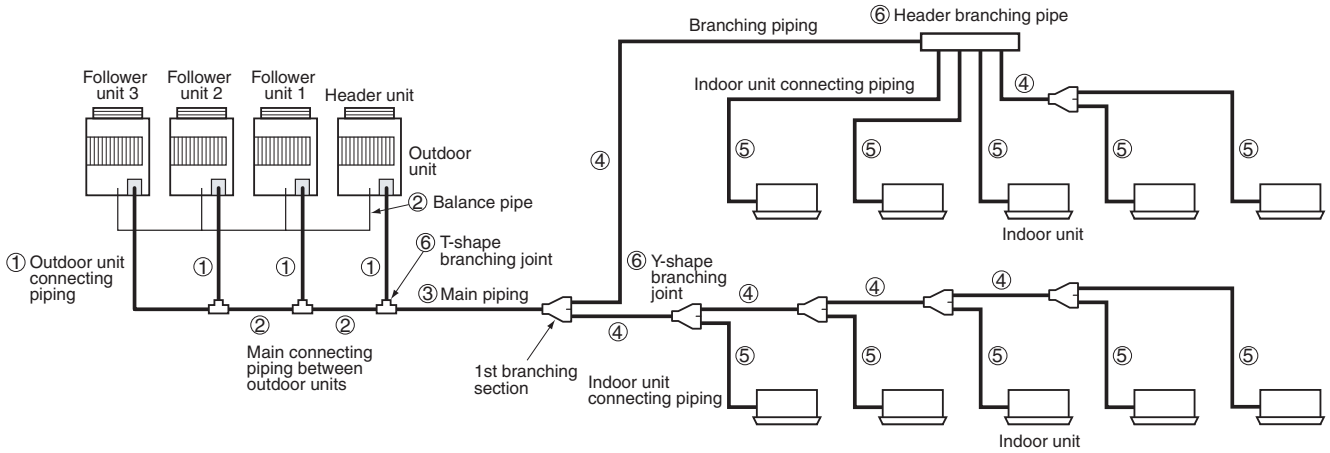
			Allowable value	Piping section
Piping length	Total extension of pipe (Liquid pipe, real length)		300 m	LA + LB + La + Lb + Lc + Ld + L1 + L2 + L3 + L4+ L5 + L6 + L7 + a + b + c + d + e + f + g + h + i + j
	Farthest piping length L (*)	Real length	150 m	LA + LB + Ld + L1 + L3 + L4 + L5 + L6 + j
		Equivalent length	175 m	
	Equivalent length of farthest piping from 1st branching Li (*)		65 m	L3 + L4 + L5 + L6 + j
	Equivalent length of farthest piping between outdoor units LO (*)		25 m	LA + LB + Ld, (LA + Lb, LA + LB + Lc)
	Max. equivalent length of main piping (***)		85 m	L1
	Max. equivalent length of outdoor unit connecting piping		10 m	Ld, (La, Lb, Lc)
	Max. real length of indoor unit connecting piping		30 m	a, b, c, d, e, f, g, h, i, j
Height difference	Height between indoor and outdoor units H1	Upper outdoor unit	50 m	—
		Lower outdoor unit	40 m (**)	—
	Height between indoor units H2		30 m	—
	Height between outdoor units H3		5 m	—

* (D) is outdoor unit farthest from 1st branching, and (j) is indoor unit farthest from 1st branching.

** If the height difference (H2) between indoor units exceeds 3m, set below 30m.

*** If the maximum capacity of combination of the outdoor units is 46 HP or more, the maximum equivalent length is restricted up to 70m.

2. Selection of refrigerant piping



6

① Pipe size of outdoor unit (Table 1)

Model name MMY-			Gas side	Liquid side
MAP0501T8	MAP0501HT8	MAP0501HT7	Ø15.9	Ø9.5
MAP0601T8	MAP0601HT8	MAP0601HT7	Ø19.1	Ø9.5
MAP0801T8	MAP0801HT8	MAP0801HT7	Ø22.2	Ø12.7
MAP1001T8	MAP1001HT8	MAP1001HT7	Ø22.2	Ø12.7
MAP1201T8	MAP1201HT8	MAP1201HT7	Ø28.6	Ø12.7

② Connecting pipe size between outdoor units (Table 2)

Total capacity code of outdoor units at downstream side	Gas side	Liquid side	Balance pipe
14 to below 22	Ø28.6	Ø15.9	Ø 9.5
22 to below 26	Ø34.9	Ø15.9	
26 to below 36	Ø34.9	Ø19.1	
36 or more	Ø41.3	Ø22.2	

③ Size of main pipe (Table 3)

Total capacity code of all outdoor units *1	Gas side	Liquid side
Below 6	Ø15.9	Ø9.5
6 to below 8	Ø19.1	Ø9.5
8 to below 12	Ø22.2	Ø12.7
12 to below 14	Ø28.6	Ø12.7
14 to below 22	Ø28.6	Ø15.9
22 to below 26	Ø34.9	Ø15.9
26 to below 36	Ø34.9	Ø19.1
36 to below 46	Ø41.3	Ø22.2
46 or more	Ø41.3 *5	Ø22.2

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

④ Pipe size between branching sections (Table 4)

Total capacity code of indoor units at downstream side *1	Gas side	Liquid side
2.8 or less	Ø12.7	Ø 9.5
2.8 to below 6.4	Ø15.9	Ø 9.5
6.4 to below 12.2	Ø22.2	Ø12.7
12.2 to below 20.2	Ø28.6	Ø15.9
20.2 to below 25.2	Ø34.9	Ø15.9
25.2 to below 35.2	Ø34.9	Ø19.1
35.2 or more	Ø41.3	Ø22.2

If the total capacity code value of indoor units exceeds that of outdoor units, apply the capacity code of outdoor units.

⑤ Piping of indoor unit (Table 5)

Capacity rank		Gas side	Liquid side
007 type to 012 type	Real length 15m or less	Ø 9.5	Ø 6.4
	Real length exceeds 15m	Ø12.7	Ø 6.4
015 type to 018 type		Ø12.7	Ø 6.4
024 type to 056 type		Ø15.9	Ø 9.5
072 type to 096 type		Ø22.2	Ø12.7

⑥ Selection of branching section (Table 6)

	Total capacity code of indoor unit *1		Model name
Y-shape branching joint *2	Below 6.4		RBM-BY53E
	6.4 to below 14.2		RBM-BY103E
	14.2 to below 25.2		RBM-BY203E
	25.2 or more		RBM-BY303E
* 3 Branching header	For 4 branching	Below 14.2	RBM-HY1043E
		14.2 to below 25.2	RBM-HY2043E
	For 8 branching	Below 14.2	RBM-HY1083E
		14.2 to below 25.2	RBM-HY2083E
T-shape branching joint (For connecting outdoor unit)	1 set of 3 types of T-shape joint pipes as described below: The required quantity is arranged and combined at the site. • Balance pipe (Corresponded difference Ø9.52) 1 • Piping at liquid side (Corresponded difference Ø9.5 to Ø22.1) 1 • Piping at gas side (Corresponded difference Ø15.9 to Ø41.3) 1		RBM-BT13E

⑦ Minimum wall thickness for R410A application (Table 7)

Soft	Half hard or hard	OD (Inch)	OD (mm)	Minimum wall thickness (mm)
OK	OK	1/4"	6.35	0.80
OK	OK	3/8"	9.52	0.80
OK	OK	1/2"	12.70	0.80
OK	OK	5/8"	15.88	1.00
NG*4	OK	3/4"	19.05	1.00
NG*4	OK	7/8"	22.20	1.00
NG*4	OK	1.1/8"	28.58	1.00
NG*4	OK	1.3/8"	34.92	1.10
NG*4	OK	1.5/8"	41.28	1.25

*1 Code is determined according to the capacity rank.
*2 When using Y-shape branching joint for 1st branching, select according to capacity code of outdoor unit.
*3 For 1 line after header branching, indoor units with a maximum of 6.0 capacity code in total can be connected.
*4 If the pipe size is Ø19.0 or more, use a hard type or half hand type for material of the pipe.
*5 The maximum equivalent length of the main pipe should be 70m or shorter.

3. Charging requirement with additional refrigerant

After the system has been vacuumed, replace the vacuum pump with a refrigerant cylinder and charge the system with additional refrigerant.

Calculating the amount of additional refrigerant required

HFC R410A

Refrigerant in the system when shipped from the factory

		5HP	6HP	8HP	10HP	12HP
Refrigerant amount charged in factory	Heat pump model	8.5kg	8.5kg	12.5kg	12.5kg	12.5kg
	Cooling only model	8.0kg	8.0kg	11.0kg	11.0kg	11.0kg

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

(Calculation)

Additional refrigerant charge amount is calculated from 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 1m **(Table 1)** + Compensation by system HP **(Table 2)**

Example : Additional charge amount R (kg) = (L1 x 0.025kg/m) + (L2 x 0.055kg/m) + (L3 x 0.105kg/m) + (3.0kg)
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)

Table 7-1

Pipe dia. at liquid side	Ø6.4	Ø9.5	Ø12.7	Ø15.9	Ø19.0	Ø22.2
Additional refrigerant amount/1m	0.025kg	0.055kg	0.105kg	0.160kg	0.250kg	0.350kg

Table 7-2

Combined horse power (HP)	Outdoor combination (HP)				Compensation by System HP (kg)
5	5				0.0
6	6				0.0
8	8				1.5
10	10				2.5
12	12				3.5
14	8	6			0.0
16	8	8			0.0
18	10	8			0.0
20	10	10			3.0
22	12	10			5.0
	8	8	6		0.0
24	12	12			7.0
	8	8	8		–4.0
26	10	8	8		–4.0

Combined horse power (HP)	Outdoor combination (HP)				Compensation by System HP (kg)
28	10	10	8		–2.0
30	10	10	10		0.0
32	12	10	10		1.0
	8	8	8	8	–6.0
34	12	12	10		3.0
	10	8	8	8	–6.0
36	12	12	12		4.0
	10	10	8	8	–6.0
38	10	10	10	8	–6.0
40	10	10	10	10	–5.0
42	12	10	10	10	–4.0
44	12	12	10	10	–2.0
46	12	12	12	10	0.0
48	12	12	12	12	2.0

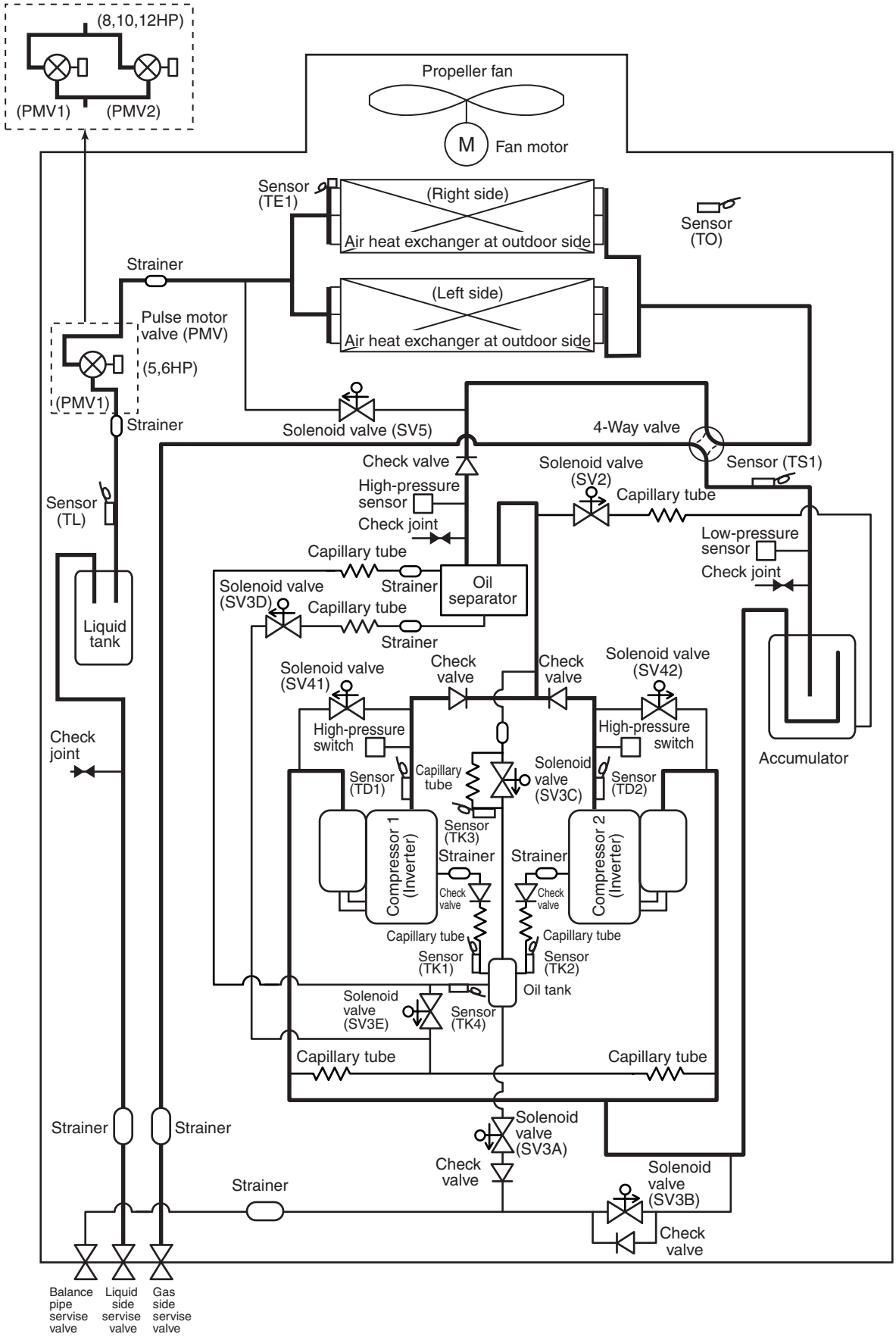
7

Refrigerant cycle diagram

7 Refrigerant cycle diagram

1. Inverter Unit (5, 6, 8, 10, 12HP)

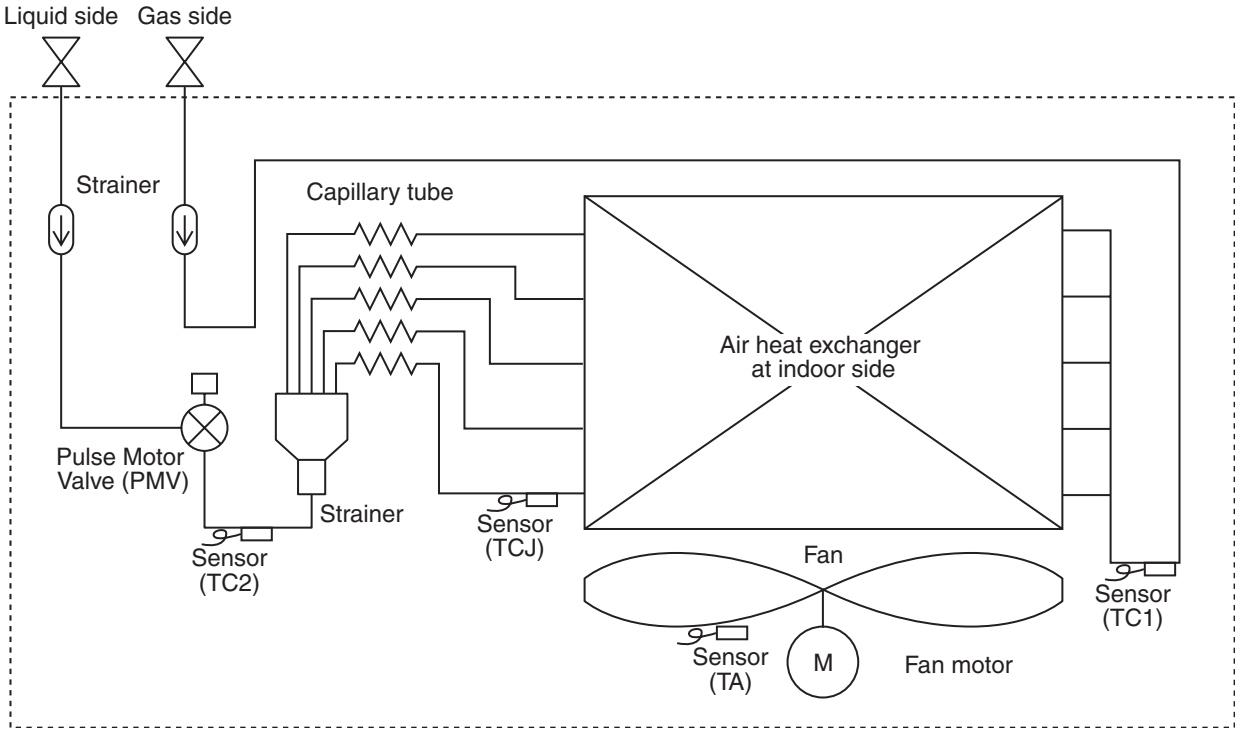
Model: MMY-MAP0501HT, MAP0601HT, MAP0801HT, MAP1001HT, MAP1201HT



2. Explanation of Functional Parts

Functional part name		Functional outline
Solenoid valve	1. SV3A	(Connector CN324: Red) 1) Collects oil in the oil tank during OFF time. 2) Supplies oil reserved in the oil tank during ON time.
	2. SV3B	(Connector CN313: Blue) 1) Returns oil supplied in the balance pipe to the compressor.
	3.SV3C	(Connector CN314: Black) 1) Pressurizes oil reserved in the oil tank during ON time.
	4. SV3D	(Connector CN323: White) 1) Reserves oil in the oil separator during OFF time, and supplies oil during ON time.
	5. SV3E	(Connector CN323: White) 1) Turns on during operation and balances oil between compressors.
	6. SV2	(Hot gas bypass) (Connector CN312: White) 1) Low pressure release function 2) High pressure release function 3) Gas balance function during stop time
	7. SV4 (n)	(Start compensation valve of compressor) (Connector CN311: Blue) 1) For gas balance start 2) High pressure release function 3) Low pressure release function
	8. SV5	(Connector CN310: White) (for Heating model only) 1) Preventive function for high-pressure rising in heating operation
4-way valve		(Connector CN317: Blue) 1) Cooling/heating exchange 2) Reverse defrost
Pulse motor valve	PMV1, 2	(Connector CN300, 301: White) 1) Super heat control function in heating operation 2) Liquid line shut-down function while follower unit stops 3) Under-cool adjustment function in cooling operation
Oil separator		1) Prevention for rapid decreasing of oil (Decreases oil flowing to the cycle) 2) Reserve function of surplus oil
Temp. sensor	1. TD1 TD2	(TD1: Connector, CN502: White, TD2: Connector, CN503: Pink) 1) Protection of compressor discharge temp. Used for release
	2. TS1	(Connector CN504: White) 1) Controls super heat in heating operation
	3 TE1	(Connector CN505: Green) 1) Controls defrost in heating operation 2) Controls outdoor fan in heating operation
	4. TK1, TK2, TK3, TK4	(TK1 Connector CN514: Black, TK2 Connector CN515: Green, TK3 Connector CN516: Red, TK4 Connector CN523: Yellow) 1) Judges oil level of the compressor
	5. TL	(Connector CN521: White) 1) Detects under cool in cooling operation
	6. TO	(Connector CN507: Yellow) 1) Detects outside temperature
Pressure sensor	1. High pressure sensor	(Connector CN501: Red) 1) Detects high pressure and controls compressor capacity 2) Detects high pressure in cooling operation, and controls the fan in low ambient cooling operation
	2. Low pressure sensor	(Connector CN500: White) 1) Detects low pressure in cooling operation and controls compressor capacity 2) Detects low pressure in heating operation, and controls the super heat
Heater	Compressor case heater	(Compressor 1 Connector CN316: White, Compressor 2 Connector CN315: Blue) 1) Prevents liquid accumulation to compressor
	Accumulator case heater	(Connector CN321: Red) 1) Prevents liquid accumulation to accumulator
Balance pipe		1) Oil balancing in each outdoor unit

3. Indoor Unit

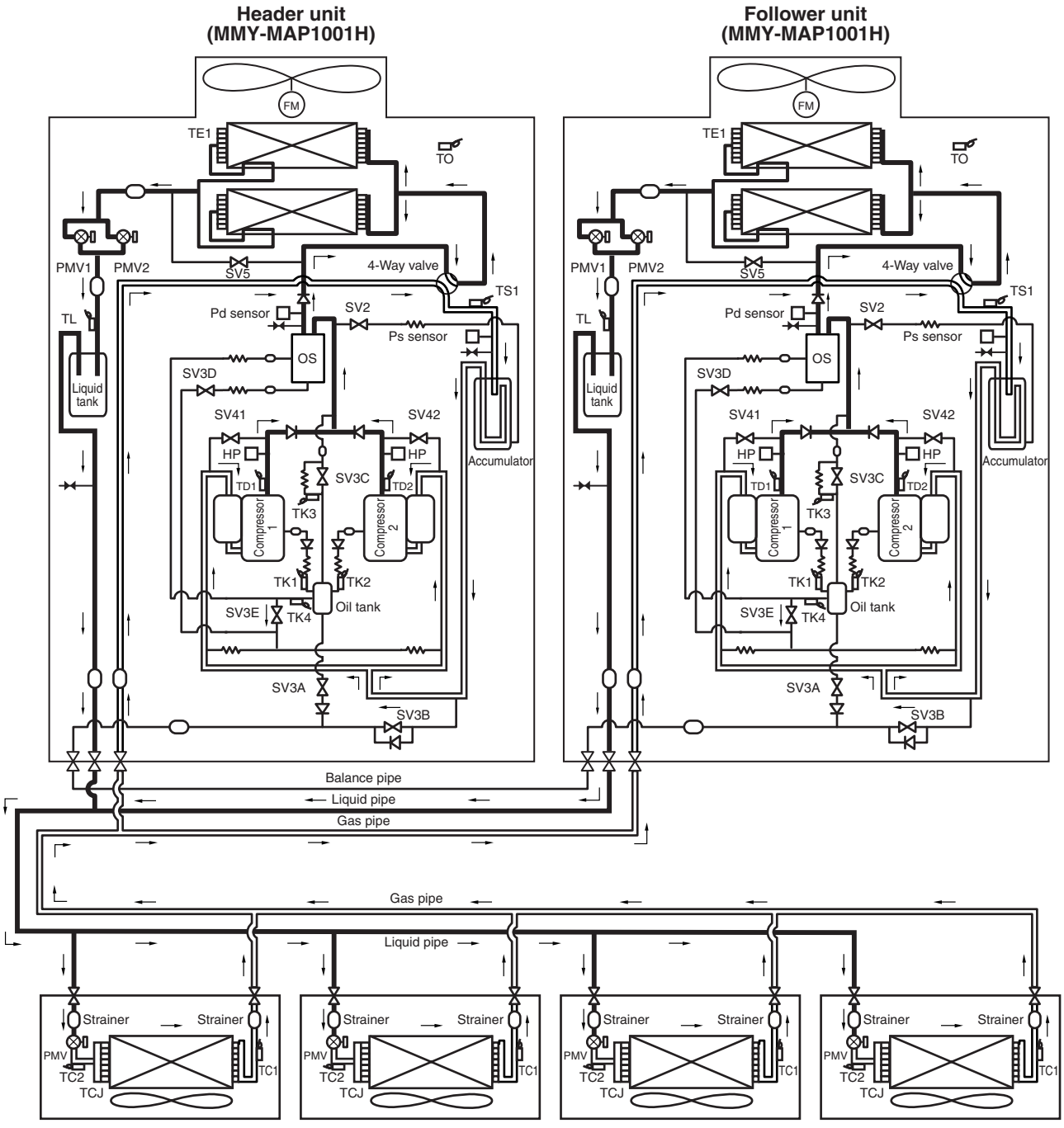


(NOTE) MMU-AP0071YH to AP0121YH type air conditioners have no TC2 sensor.

Functional part name		Functional outline
Pulse Motor Valve	PMV	(Connector CN082 (6P): Blue) 1) Controls super heat in cooling operation 2) Controls under cool in heating operation 3) Recovers refrigerant oil in cooling operation 4) Recovers refrigerant oil in heating operation
Temp. sensor	1. TA	(Connector CN104 (2P): Yellow) 1) Detects indoor suction temperature
	2. TC1	(Connector CN100 (3P): Brown) 1) Controls PMV super heat in cooling operation
	3.TC2	(Connector CN101 (2P): Black) 1) Controls PMV under cool in heating operation
	4. TCJ	(Connector CN102 (2P): Red) 1) Controls PMV super heat in cooling operation 2) [MMU-AP0071 to AP0121YH only] Controls PMV under cool in heating operation

COMBINED REFRIGERANT PIPES SYSTEMATIC DRAWING

1. Normal Operation (COOL Mode / DEFROST Mode)



High-pressure gas or condensate liquid refrigerant

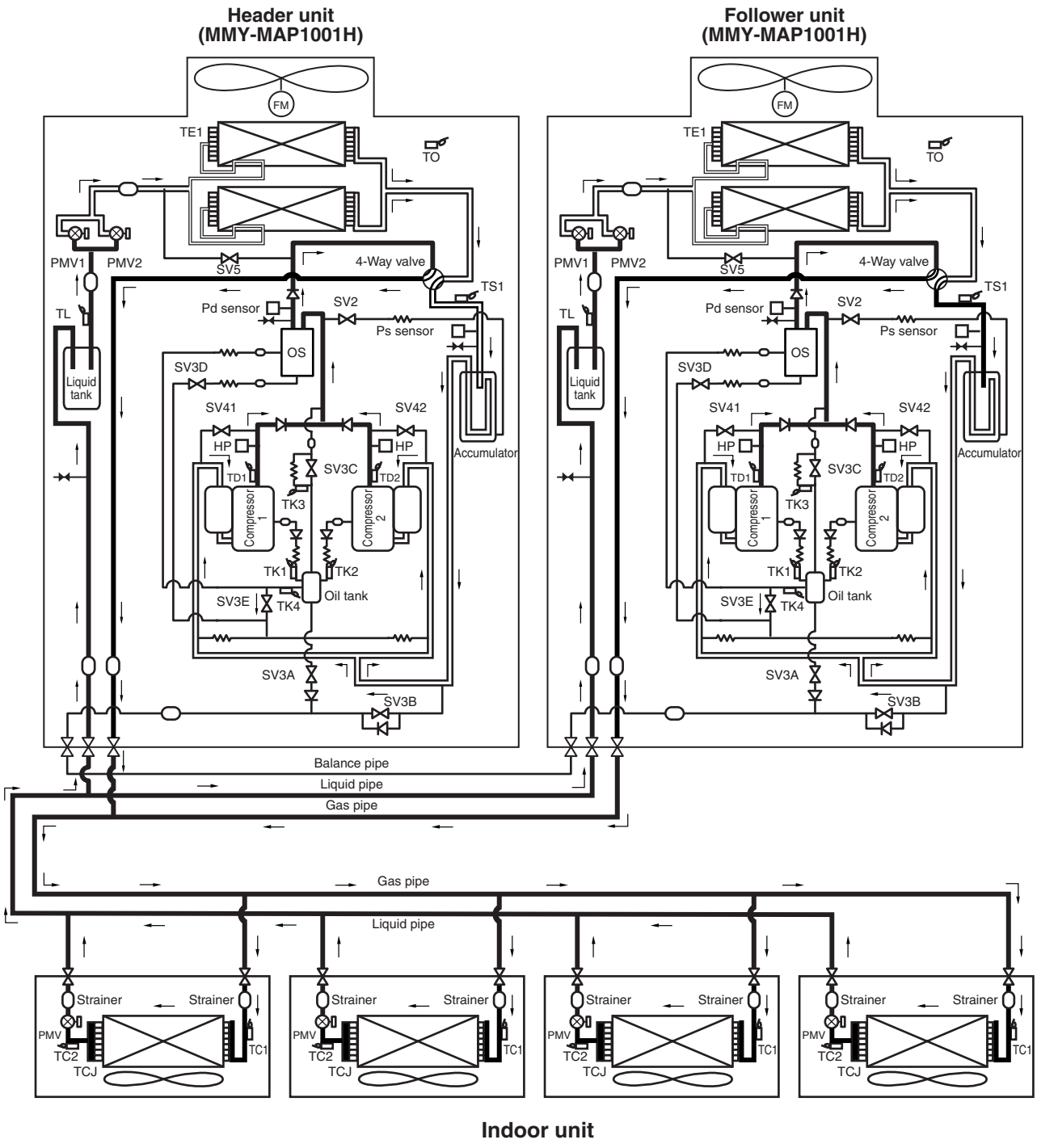
Evaporative gas refrigerant (Low-pressure gas)

NOTE

An outdoor unit which is connected with indoor/outdoor communication lines is the “Header unit”, and the other unit is called “Follower unit”.

(Example: 20HP system)

2. Normal Operation (HEAT Mode)

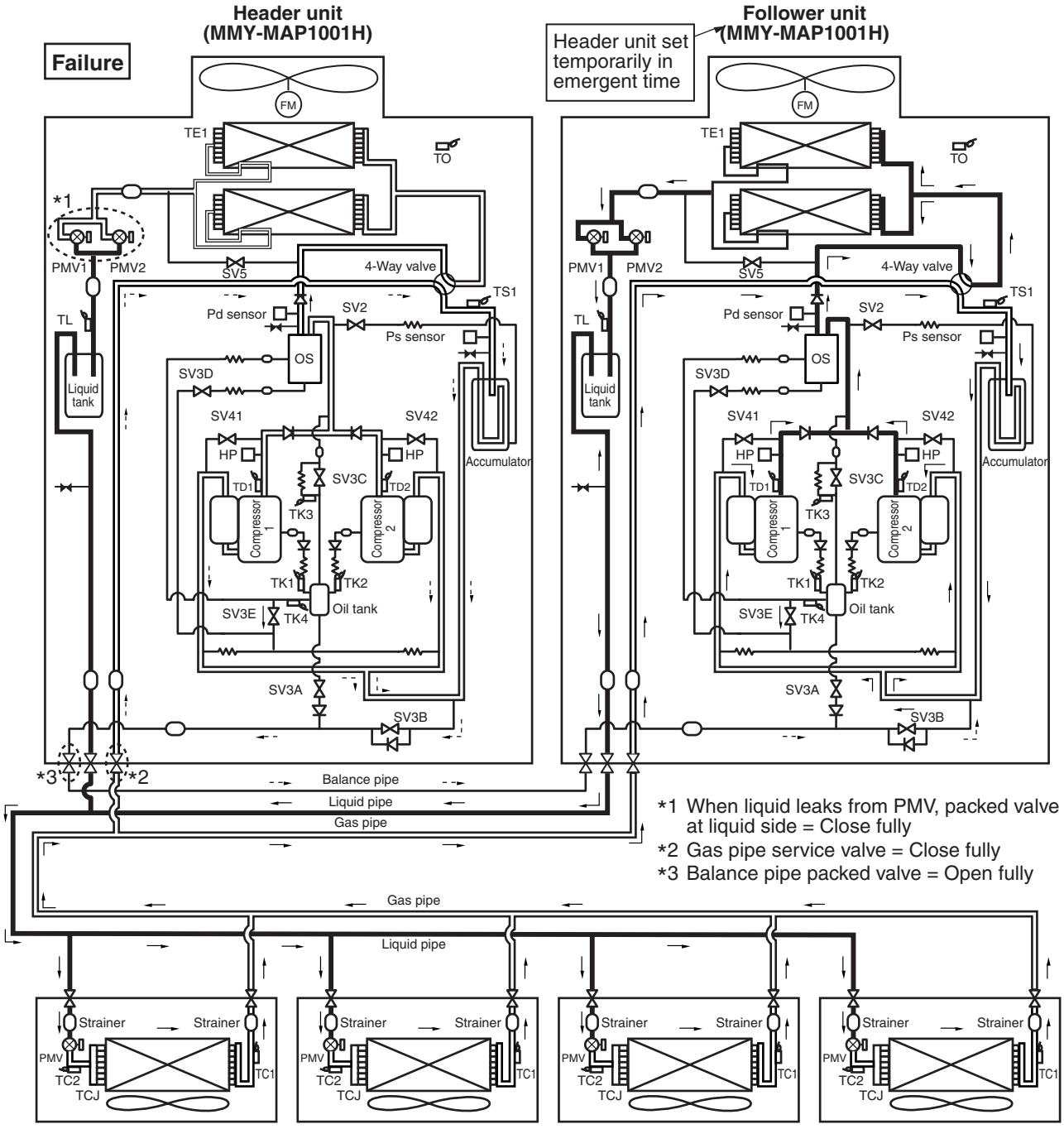


NOTE

An outdoor unit which is connected with indoor/outdoor communication lines is the “Header unit”, and the other unit is called “Follower unit”.

(Example: 20HP system)

3. Emergent Operation (Cooling Operation when Center Outdoor Backup)

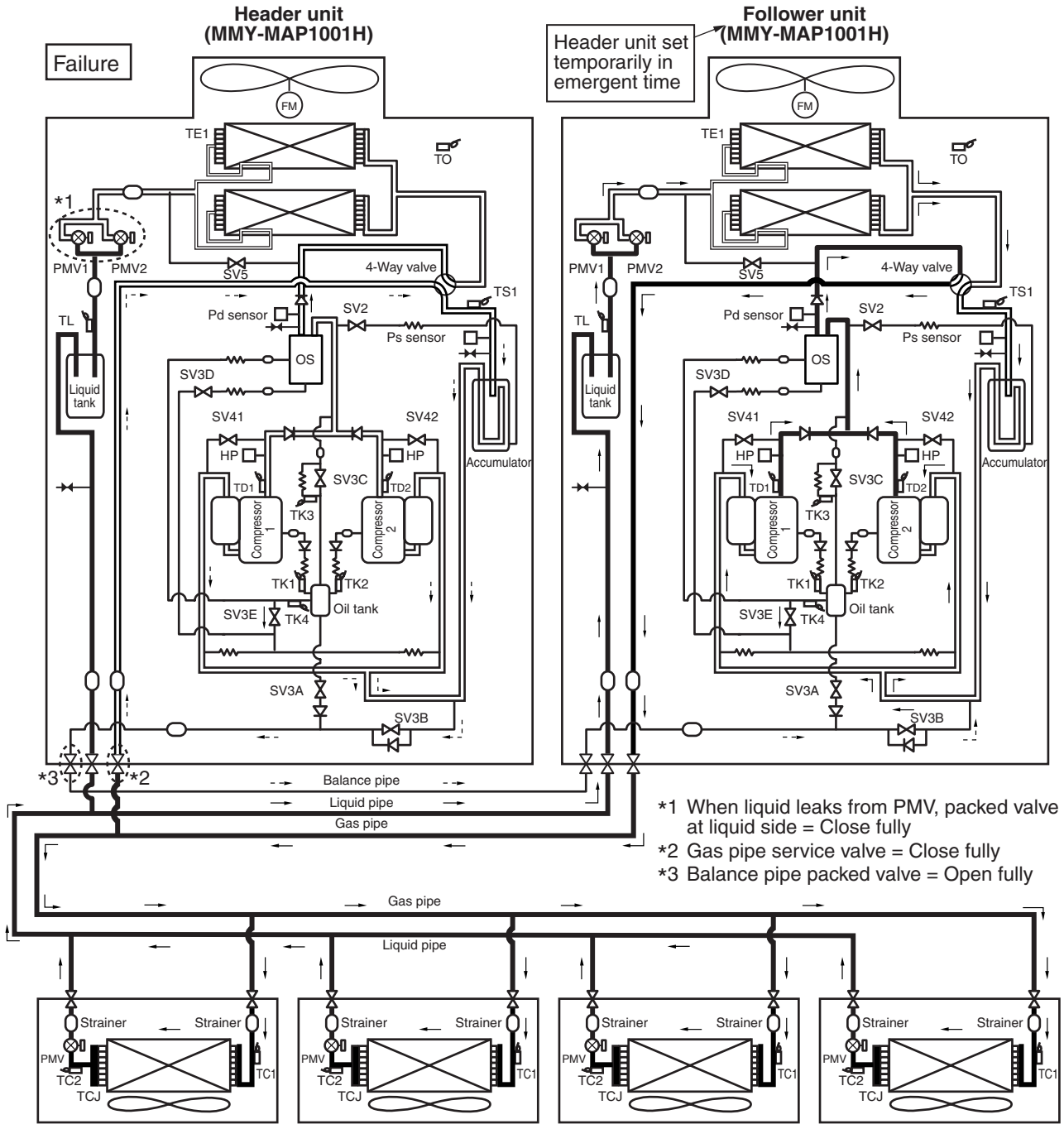


NOTE

An outdoor unit which is connected with indoor/outdoor communication lines is the “Header unit”, and the other unit is called “Follower unit”.

(Example: 20HP system)

4. Emergent Operation (Heating Operation when Center Outdoor Backup)

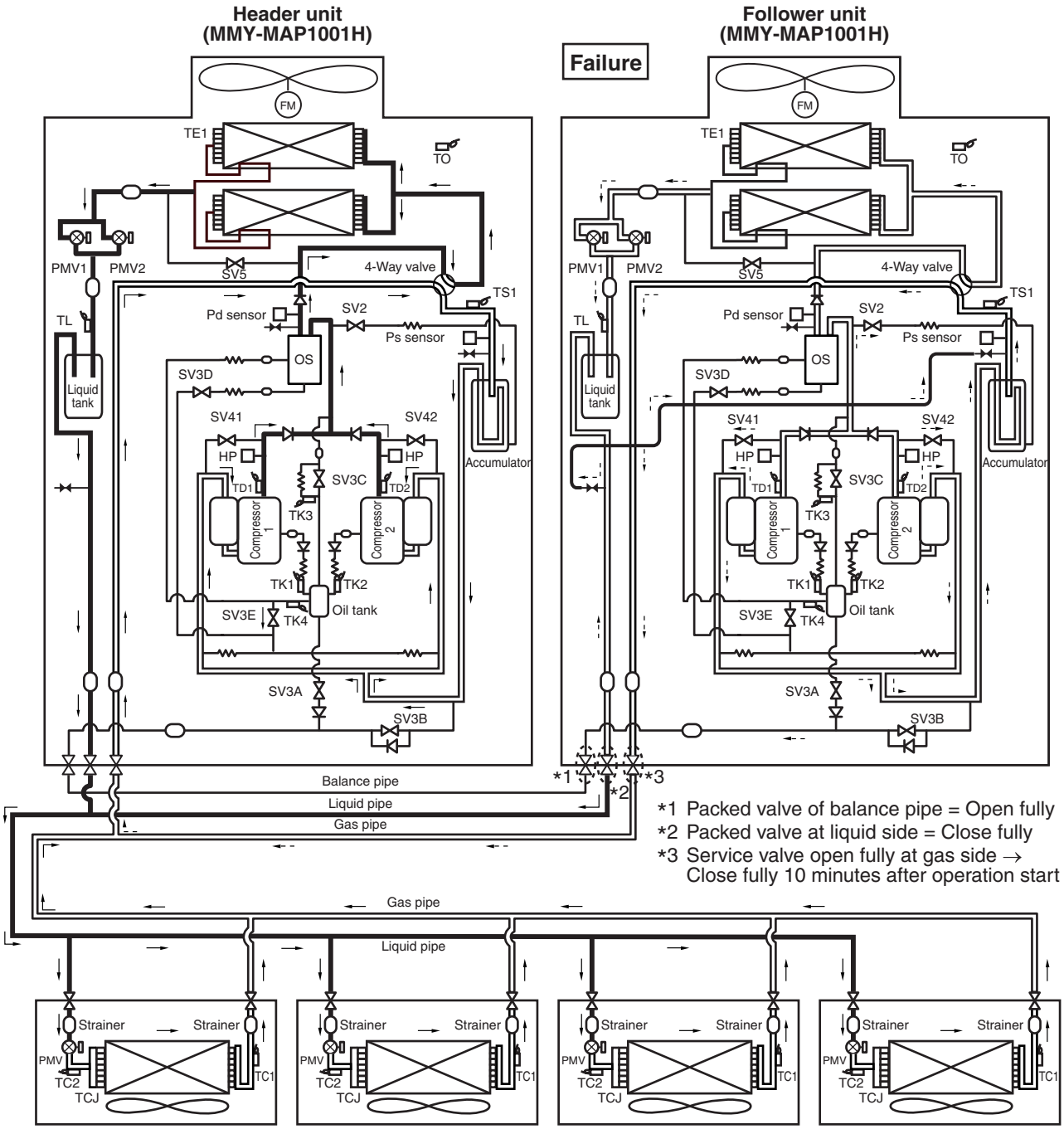


NOTE

An outdoor unit which is connected with indoor/outdoor communication lines is the “Header unit”, and the other unit is called “Follower unit”.

(Example: 20HP system)

5. Recovery of Refrigerant in Failed Outdoor Unit (In Case of Failure of Follower Unit)



NOTE

An outdoor unit which is connected with indoor/outdoor communication lines is the “Header unit”, and the other unit is called “Follower unit”.

(Example: 20HP system)

8

Sensible capacity table

8 Sensible capacity table

4-way Discharge Cassette Type (MMU-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
009	10.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	12.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	14.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	16.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	18.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	20.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	21.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	23.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	25.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	27.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	29.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	31.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	33.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	35.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	37.0	2.2	1.8	2.5	1.9	2.6	2.0	2.7	2.0	2.8	2.0	3.0	2.0	3.1	2.0
	39.0	2.2	1.8	2.4	1.9	2.6	2.0	2.6	2.0	2.7	2.0	2.9	2.0	3.0	1.9
012	10.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	12.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	14.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	16.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	18.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	20.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	21.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	23.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	25.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	27.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	29.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	31.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	33.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	35.0	3.0	2.3	3.3	2.5	3.5	2.6	3.6	2.6	3.7	2.6	3.9	2.6	4.1	2.5
	37.0	2.9	2.2	3.2	2.4	3.4	2.5	3.5	2.5	3.6	2.5	3.8	2.5	4.0	2.4
	39.0	2.8	2.2	3.1	2.3	3.3	2.5	3.4	2.4	3.5	2.4	3.7	2.4	3.9	2.4
015	10.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	12.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	14.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	16.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	18.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	20.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	21.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	23.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	25.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	27.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	29.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	31.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	33.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	35.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	37.0	3.6	2.7	4.0	2.9	4.2	3.1	4.4	3.1	4.5	3.1	4.7	3.1	5.0	3.0
	39.0	3.5	2.7	3.8	2.8	4.1	3.0	4.2	3.0	4.4	3.0	4.6	3.0	4.8	2.9
018	10.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	12.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	14.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	16.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	18.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	20.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	21.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	23.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	25.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	27.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	29.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	31.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	33.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	35.0	4.6	3.5	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	37.0	4.5	3.4	4.9	3.7	5.3	3.9	5.4	3.9	5.6	3.9	5.9	3.8	6.2	3.7
	39.0	4.3	3.3	4.8	3.6	5.1	3.8	5.3	3.8	5.4	3.8	5.7	3.7	6.0	3.6

4-way Discharge Cassette Type (MMU-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
024	10.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	12.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	14.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	16.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	18.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	20.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	21.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	23.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	25.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	27.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	29.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	31.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	33.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	35.0	5.8	4.3	6.4	4.6	6.9	4.9	7.1	4.9	7.3	4.9	7.7	4.9	8.1	4.7
	37.0	5.6	4.2	6.2	4.5	6.7	4.8	6.9	4.7	7.1	4.7	7.5	4.7	7.8	4.6
	39.0	5.5	4.1	6.1	4.4	6.5	4.6	6.7	4.6	6.9	4.6	7.3	4.6	7.6	4.5
027	10.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	12.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	14.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	16.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	18.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	20.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	21.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	23.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	25.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	27.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	29.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	31.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	33.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	35.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	37.0	6.4	4.7	7.0	5.0	7.5	5.3	7.7	5.3	8.0	5.3	8.4	5.3	8.8	5.2
	39.0	6.2	4.6	6.8	4.9	7.3	5.2	7.5	5.2	7.8	5.2	8.2	5.1	8.6	5.0
030	10.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	12.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	14.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	16.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	18.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	20.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	21.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	23.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	25.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	27.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	29.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	31.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	33.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	35.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	37.0	7.2	5.3	7.9	5.7	8.5	6.0	8.7	6.0	9.0	6.0	9.5	5.9	9.9	5.8
	39.0	7.0	5.2	7.7	5.5	8.2	5.9	8.5	5.8	8.7	5.8	9.2	5.8	9.7	5.6
036	10.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	12.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	14.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	16.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	18.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	20.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	21.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	23.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	25.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	27.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	29.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	31.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	33.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	35.0	9.2	6.8	10.2	7.3	10.9	7.7	11.2	7.7	11.5	7.7	12.2	7.6	12.8	7.5
	37.0	8.9	6.6	9.8	7.0	10.5	7.5	10.8	7.5	11.2	7.5	11.8	7.4	12.4	7.2
	39.0	8.7	6.4	9.6	6.8	10.2	7.3	10.5	7.2	10.9	7.2	11.5	7.2	12.0	7.0

4-way Discharge Cassette Type (MMU-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
048	10.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	12.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	14.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	16.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	18.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	20.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	21.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	23.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	25.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	27.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	29.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	31.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	33.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	35.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	37.0	11.1	8.4	12.3	9.0	13.1	9.5	13.6	9.5	14.0	9.5	14.8	9.4	15.4	9.2
	39.0	10.8	8.2	12.0	8.7	12.8	9.2	13.2	9.2	13.6	9.2	14.4	9.1	15.0	8.9
056	10.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	12.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	14.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	16.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	18.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	20.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	21.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	23.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	25.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	27.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	29.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	31.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	33.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	35.0	13.1	9.8	14.5	10.4	15.5	11.0	16.0	11.0	16.5	11.0	17.4	10.9	18.2	10.6
	37.0	12.7	9.4	14.1	10.1	15.0	10.7	15.5	10.6	16.0	10.6	16.9	10.5	17.7	10.3
	39.0	12.4	9.2	13.7	9.8	14.6	10.4	15.1	10.4	15.5	10.4	16.4	10.3	17.2	10.0

2-way Air Discharge Cassette Type (MMU-AP****WH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	12.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	14.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	16.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	18.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	20.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	21.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	23.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	25.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	27.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	29.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	31.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	33.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	35.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	37.0	1.7	1.5	1.9	1.6	2.1	1.7	2.1	1.6	2.2	1.6	2.3	1.6	2.4	1.6
	39.0	1.7	1.4	1.9	1.5	2.0	1.6	2.1	1.6	2.1	1.6	2.3	1.6	2.4	1.5
009	10.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	12.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	14.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	16.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	18.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	20.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	21.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	23.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	25.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	27.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	29.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	31.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	33.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	35.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	37.0	2.2	1.7	2.5	1.8	2.6	1.9	2.7	1.9	2.8	1.9	3.0	1.9	3.1	1.9
	39.0	2.2	1.7	2.4	1.8	2.6	1.9	2.6	1.9	2.7	1.9	2.9	1.9	3.0	1.8
012	10.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	12.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	14.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	16.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	18.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	20.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	21.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	23.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	25.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	27.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	29.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	31.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	33.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	35.0	3.0	2.0	3.3	2.2	3.5	2.3	3.6	2.3	3.7	2.3	3.9	2.3	4.1	2.2
	37.0	2.9	2.0	3.2	2.1	3.4	2.2	3.5	2.2	3.6	2.2	3.8	2.2	4.0	2.2
	39.0	2.8	1.9	3.1	2.0	3.3	2.2	3.4	2.2	3.5	2.2	3.7	2.1	3.9	2.1
015	10.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	12.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	14.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	16.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	18.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	20.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	21.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	23.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	25.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	27.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	29.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	31.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	33.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	35.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	37.0	3.6	2.6	4.0	2.8	4.2	3.0	4.4	3.0	4.5	3.0	4.7	2.9	5.0	2.9
	39.0	3.5	2.5	3.8	2.7	4.1	2.9	4.2	2.9	4.4	2.9	4.6	2.8	4.8	2.8

2-way Air Discharge Cassette Type (MMU-AP****WH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
018	10.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	12.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	14.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	16.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	18.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	20.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	21.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	23.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	25.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	27.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	29.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	31.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	33.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	35.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	37.0	4.5	3.3	4.9	3.5	5.3	3.7	5.4	3.7	5.6	3.7	5.9	3.6	6.2	3.6
	39.0	4.3	3.2	4.8	3.4	5.1	3.6	5.3	3.6	5.4	3.6	5.7	3.5	6.0	3.5
024	10.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	12.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	14.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	16.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	18.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	20.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	21.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	23.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	25.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	27.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	29.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	31.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	33.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	35.0	5.8	4.3	6.4	4.5	6.9	4.8	7.1	4.8	7.3	4.8	7.7	4.8	8.1	4.6
	37.0	5.6	4.1	6.2	4.4	6.7	4.7	6.9	4.6	7.1	4.6	7.5	4.6	7.8	4.5
	39.0	5.5	4.0	6.1	4.3	6.5	4.5	6.7	4.5	6.9	4.5	7.3	4.5	7.6	4.4
027	10.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	12.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	14.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	16.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	18.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	20.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	21.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	23.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	25.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	27.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	29.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	31.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	33.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	35.0	6.6	4.9	7.3	5.2	7.8	5.5	8.0	5.5	8.2	5.5	8.7	5.4	9.1	5.3
	37.0	6.4	4.7	7.0	5.0	7.5	5.3	7.7	5.3	8.0	5.3	8.4	5.3	8.8	5.2
	39.0	6.2	4.6	6.8	4.9	7.3	5.2	7.5	5.2	7.8	5.2	8.2	5.1	8.6	5.0
030	10.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	12.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	14.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	16.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	18.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	20.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	21.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	23.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	25.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	27.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	29.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	31.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	33.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	35.0	7.4	5.3	8.2	5.7	8.7	6.0	9.0	6.0	9.3	6.0	9.8	5.9	10.3	5.8
	37.0	7.2	5.1	7.9	5.5	8.5	5.8	8.7	5.8	9.0	5.8	9.5	5.8	9.9	5.6
	39.0	7.0	5.0	7.7	5.3	8.2	5.7	8.5	5.6	8.7	5.6	9.2	5.6	9.7	5.5

2-way Air Discharge Cassette Type (MMU-AP****WH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp.													
		14.0˚CWB		16.0˚CWB		18.0˚CWB		19.0˚CWB		20.0˚CWB		22.0˚CWB		24.0˚CWB	
		20˚CDB		23˚CDB		26˚CDB		27˚CDB		28˚CDB		30˚CDB		32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
048	10.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	12.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	14.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	16.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	18.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	20.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	21.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	23.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	25.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	27.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	29.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	31.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	33.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	35.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	37.0	11.1	8.2	12.3	8.7	13.1	9.2	13.6	9.2	14.0	9.2	14.8	9.1	15.4	8.9
	39.0	10.8	7.9	12.0	8.4	12.8	9.0	13.2	8.9	13.6	8.9	14.4	8.9	15.0	8.7

1-way Air Discharge Cassette Type (MMU-AP****YH [007～012] , -AP****SH [015～024])

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
007	10.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	12.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	14.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	16.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	18.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	20.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	21.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	23.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	25.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	27.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	29.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	31.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	33.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	35.0	1.8	1.6	2.0	1.7	2.1	1.8	2.2	1.8	2.3	1.8	2.4	1.8	2.5	1.7
	37.0	1.7	1.5	1.9	1.6	2.1	1.7	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7
	39.0	1.7	1.5	1.9	1.6	2.0	1.7	2.1	1.7	2.1	1.7	2.3	1.7	2.4	1.6
009	10.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	12.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	14.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	16.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	18.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	20.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	21.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	23.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	25.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	27.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	29.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	31.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	33.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	35.0	2.3	2.0	2.5	2.1	2.7	2.2	2.8	2.2	2.9	2.2	3.1	2.2	3.2	2.1
	37.0	2.2	1.9	2.5	2.0	2.6	2.1	2.7	2.1	2.8	2.1	3.0	2.1	3.1	2.1
	39.0	2.2	1.8	2.4	2.0	2.6	2.1	2.6	2.1	2.7	2.1	2.9	2.1	3.0	2.0
012	10.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	12.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	14.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	16.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	18.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	20.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	21.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	23.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	25.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	27.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	29.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	31.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	33.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	35.0	3.0	2.4	3.3	2.5	3.5	2.7	3.6	2.7	3.7	2.7	3.9	2.7	4.1	2.6
	37.0	2.9	2.3	3.2	2.5	3.4	2.6	3.5	2.6	3.6	2.6	3.8	2.6	4.0	2.5
	39.0	2.8	2.3	3.1	2.4	3.3	2.5	3.4	2.5	3.5	2.5	3.7	2.5	3.9	2.5
015	10.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	12.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	14.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	16.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	18.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	20.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	21.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	23.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	25.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	27.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	29.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	31.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	33.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	35.0	3.7	2.7	4.1	2.9	4.4	3.1	4.5	3.1	4.6	3.1	4.9	3.0	5.1	3.0
	37.0	3.6	2.6	4.0	2.8	4.2	3.0	4.4	3.0	4.5	3.0	4.7	2.9	5.0	2.9
	39.0	3.5	2.5	3.8	2.7	4.1	2.9	4.2	2.9	4.4	2.9	4.6	2.8	4.8	2.8

1-way Air Discharge Cassette Type (MMU-AP****YH [007～012] , -AP****SH [015～024])

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	12.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	14.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	16.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	18.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	20.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	21.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	23.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	25.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	27.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	29.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	31.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	33.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	35.0	4.6	3.4	5.1	3.6	5.4	3.8	5.6	3.8	5.8	3.8	6.1	3.8	6.4	3.7
	37.0	4.5	3.3	4.9	3.5	5.3	3.7	5.4	3.7	5.6	3.7	5.9	3.6	6.2	3.6
	39.0	4.3	3.2	4.8	3.4	5.1	3.6	5.3	3.6	5.4	3.6	5.7	3.5	6.0	3.5
024	10.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	12.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	14.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	16.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	18.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	20.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	21.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	23.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	25.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	27.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	29.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	31.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	33.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	35.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	37.0	5.6	4.3	6.2	4.6	6.7	4.9	6.9	4.8	7.1	4.8	7.5	4.8	7.8	4.7
	39.0	5.5	4.2	6.1	4.4	6.5	4.7	6.7	4.7	6.9	4.7	7.3	4.7	7.6	4.6

Concealed Duct Standard Type (MMD-AP****BH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
007	10.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	12.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	14.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	16.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	18.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	20.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	21.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	23.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	25.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	27.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	29.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	31.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	33.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	35.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	37.0	1.7	1.5	1.9	1.6	2.1	1.7	2.1	1.6	2.2	1.6	2.3	1.6	2.4	1.6
	39.0	1.7	1.4	1.9	1.5	2.0	1.6	2.1	1.6	2.1	1.6	2.3	1.6	2.4	1.5
009	10.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	12.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	14.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	16.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	18.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	20.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	21.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	23.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	25.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	27.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	29.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	31.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	33.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	35.0	2.3	1.9	2.5	2.0	2.7	2.1	2.8	2.1	2.9	2.1	3.1	2.1	3.2	2.0
	37.0	2.2	1.8	2.5	1.9	2.6	2.0	2.7	2.0	2.8	2.0	3.0	2.0	3.1	2.0
	39.0	2.2	1.8	2.4	1.9	2.6	2.0	2.6	2.0	2.7	2.0	2.9	2.0	3.0	1.9
012	10.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	12.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	14.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	16.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	18.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	20.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	21.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	23.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	25.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	27.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	29.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	31.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	33.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	35.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	37.0	2.9	2.1	3.2	2.3	3.4	2.4	3.5	2.4	3.6	2.4	3.8	2.4	4.0	2.3
	39.0	2.8	2.1	3.1	2.2	3.3	2.4	3.4	2.4	3.5	2.4	3.7	2.3	3.9	2.3
015	10.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	12.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	14.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	16.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	18.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	20.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	21.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	23.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	25.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	27.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	29.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	31.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	33.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	35.0	3.7	2.7	4.1	2.8	4.4	3.0	4.5	3.0	4.6	3.0	4.9	3.0	5.1	2.9
	37.0	3.6	2.6	4.0	2.7	4.2	2.9	4.4	2.9	4.5	2.9	4.7	2.9	5.0	2.8
	39.0	3.5	2.5	3.8	2.7	4.1	2.8	4.2	2.8	4.4	2.8	4.6	2.8	4.8	2.7

Concealed Duct Standard Type (MMD-AP***BH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	12.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	14.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	16.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	18.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	20.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	21.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	23.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	25.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	27.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	29.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	31.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	33.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	35.0	4.6	3.3	5.1	3.5	5.4	3.7	5.6	3.7	5.8	3.7	6.1	3.7	6.4	3.6
	37.0	4.5	3.2	4.9	3.4	5.3	3.6	5.4	3.6	5.6	3.6	5.9	3.5	6.2	3.5
	39.0	4.3	3.1	4.8	3.3	5.1	3.5	5.3	3.5	5.4	3.5	5.7	3.4	6.0	3.4
024	10.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	12.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	14.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	16.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	18.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	20.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	21.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	23.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	25.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	27.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	29.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	31.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	33.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	35.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	37.0	5.6	4.3	6.2	4.6	6.7	4.9	6.9	4.8	7.1	4.8	7.5	4.8	7.8	4.7
	39.0	5.5	4.2	6.1	4.4	6.5	4.7	6.7	4.7	6.9	4.7	7.3	4.7	7.6	4.6
027	10.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	12.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	14.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	16.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	18.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	20.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	21.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	23.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	25.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	27.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	29.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	31.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	33.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	35.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	37.0	6.4	4.8	7.0	5.1	7.5	5.4	7.7	5.4	8.0	5.4	8.4	5.4	8.8	5.2
	39.0	6.2	4.7	6.8	5.0	7.3	5.3	7.5	5.3	7.8	5.3	8.2	5.2	8.6	5.1
030	10.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	12.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	14.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	16.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	18.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	20.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	21.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	23.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	25.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	27.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	29.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	31.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	33.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	35.0	7.4	5.5	8.2	5.9	8.7	6.2	9.0	6.2	9.3	6.2	9.8	6.1	10.3	6.0
	37.0	7.2	5.3	7.9	5.7	8.5	6.0	8.7	6.0	9.0	6.0	9.5	5.9	9.9	5.8
	39.0	7.0	5.2	7.7	5.5	8.2	5.9	8.5	5.8	8.7	5.8	9.2	5.8	9.7	5.6

Concealed Duct Standard Type (MMD-AP***BH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
036	10.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	12.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	14.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	16.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	18.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	20.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	21.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	23.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	25.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	27.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	29.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	31.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	33.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	35.0	9.2	6.5	10.2	6.9	10.9	7.3	11.2	7.3	11.5	7.3	12.2	7.2	12.8	7.1
	37.0	8.9	6.3	9.8	6.7	10.5	7.1	10.8	7.1	11.2	7.1	11.8	7.0	12.4	6.8
	39.0	8.7	6.1	9.6	6.5	10.2	6.9	10.5	6.9	10.9	6.9	11.5	6.8	12.0	6.6
048	10.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	12.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	14.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	16.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	18.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	20.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	21.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	23.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	25.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	27.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	29.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	31.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	33.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	35.0	11.5	8.2	12.7	8.7	13.6	9.2	14.0	9.2	14.4	9.2	15.3	9.1	16.0	8.9
	37.0	11.1	7.9	12.3	8.4	13.1	8.9	13.6	8.9	14.0	8.9	14.8	8.8	15.4	8.6
	39.0	10.8	7.7	12.0	8.2	12.8	8.7	13.2	8.7	13.6	8.7	14.4	8.6	15.0	8.4
056	10.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	12.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	14.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	16.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	18.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	20.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	21.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	23.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	25.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	27.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	29.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	31.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	33.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	35.0	13.1	9.6	14.5	10.2	15.5	10.8	16.0	10.8	16.5	10.8	17.4	10.7	18.2	10.5
	37.0	12.7	9.3	14.1	9.9	15.0	10.5	15.5	10.5	16.0	10.5	16.9	10.4	17.7	10.1
	39.0	12.4	9.0	13.7	9.6	14.6	10.2	15.1	10.2	15.5	10.2	16.4	10.1	17.2	9.8

Concealed Duct High Static Pressure Type (MMD-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
018	10.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	12.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	14.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	16.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	18.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	20.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	21.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	23.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	25.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	27.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	29.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	31.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	33.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	35.0	4.6	3.6	5.1	3.8	5.4	4.0	5.6	4.0	5.8	4.0	6.1	4.0	6.4	3.9
	37.0	4.5	3.5	4.9	3.7	5.3	3.9	5.4	3.9	5.6	3.9	5.9	3.9	6.2	3.8
	39.0	4.3	3.4	4.8	3.6	5.1	3.8	5.3	3.8	5.4	3.8	5.7	3.8	6.0	3.7
024	10.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	12.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	14.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	16.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	18.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	20.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	21.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	23.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	25.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	27.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	29.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	31.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	33.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	35.0	5.8	4.4	6.4	4.7	6.9	5.0	7.1	5.0	7.3	5.0	7.7	5.0	8.1	4.8
	37.0	5.6	4.3	6.2	4.6	6.7	4.9	6.9	4.8	7.1	4.8	7.5	4.8	7.8	4.7
	39.0	5.5	4.2	6.1	4.4	6.5	4.7	6.7	4.7	6.9	4.7	7.3	4.7	7.6	4.6
027	10.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	12.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	14.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	16.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	18.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	20.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	21.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	23.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	25.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	27.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	29.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	31.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	33.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	35.0	6.6	4.8	7.3	5.1	7.8	5.4	8.0	5.4	8.2	5.4	8.7	5.3	9.1	5.2
	37.0	6.4	4.6	7.0	4.9	7.5	5.2	7.7	5.2	8.0	5.2	8.4	5.2	8.8	5.1
	39.0	6.2	4.5	6.8	4.8	7.3	5.1	7.5	5.1	7.8	5.1	8.2	5.0	8.6	4.9
036	10.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	12.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	14.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	16.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	18.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	20.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	21.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	23.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	25.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	27.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	29.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	31.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	33.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	35.0	9.2	6.9	10.2	7.4	10.9	7.8	11.2	7.8	11.5	7.8	12.2	7.7	12.8	7.5
	37.0	8.9	6.7	9.8	7.1	10.5	7.6	10.8	7.6	11.2	7.5	11.8	7.5	12.4	7.3
	39.0	8.7	6.5	9.6	6.9	10.2	7.4	10.5	7.3	10.9	7.3	11.5	7.3	12.0	7.1

Concealed Duct High Static Pressure Type (MMD-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
048	10.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	12.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	14.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	16.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	18.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	20.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	21.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	23.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	25.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	27.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	29.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	31.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	33.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	35.0	11.5	8.4	12.7	9.0	13.6	9.5	14.0	9.5	14.4	9.5	15.3	9.4	16.0	9.2
	37.0	11.1	8.2	12.3	8.7	13.1	9.2	13.6	9.2	14.0	9.2	14.8	9.1	15.4	8.9
	39.0	10.8	7.9	12.0	8.4	12.8	9.0	13.2	8.9	13.6	8.9	14.4	8.9	15.0	8.7
072	10.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	12.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	14.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	16.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	18.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	20.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	21.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	23.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	25.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	27.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	29.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	31.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	33.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	35.0	18.4	13.2	20.3	14.1	21.7	14.9	22.4	14.9	23.1	14.9	24.4	14.8	25.5	14.4
	37.0	17.8	12.8	19.7	13.6	21.0	14.5	21.7	14.4	22.3	14.4	23.6	14.3	24.7	14.0
	39.0	17.3	12.4	19.1	13.2	20.4	14.1	21.1	14.0	21.7	14.0	23.0	13.9	24.0	13.6
096	10.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	12.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	14.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	16.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	18.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	20.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	21.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	23.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	25.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	27.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	29.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	31.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	33.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	35.0	23.0	16.2	25.4	17.3	27.2	18.4	28.0	18.3	28.8	18.3	30.5	18.1	31.9	17.7
	37.0	22.3	15.7	24.6	16.7	26.3	17.8	18.3	17.7	27.9	17.7	29.5	17.6	30.9	17.1
	39.0	21.6	15.3	23.9	16.3	25.6	17.3	26.3	17.2	27.1	17.2	28.7	17.1	30.0	16.7

Under Ceiling Type (MMC-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
015	10.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	12.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	14.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	16.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	18.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	20.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	21.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	23.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	25.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	27.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	29.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	31.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	33.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	35.0	3.7	2.8	4.1	3.0	4.4	3.2	4.5	3.2	4.6	3.2	4.9	3.2	5.1	3.1
	37.0	3.6	2.7	4.0	2.9	4.2	3.1	4.4	3.1	4.5	3.1	4.7	3.1	5.0	3.0
	39.0	3.5	2.7	3.8	2.8	4.1	3.0	4.2	3.0	4.4	3.0	4.6	3.0	4.8	2.9
018	10.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	12.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	14.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	16.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	18.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	20.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	21.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	23.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	25.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	27.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	29.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	31.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	33.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	35.0	4.6	3.5	5.1	3.7	5.4	3.9	5.6	3.9	5.8	3.9	6.1	3.9	6.4	3.8
	37.0	4.5	3.3	4.9	3.6	5.3	3.8	5.4	3.8	5.6	3.8	5.9	3.7	6.2	3.7
	39.0	4.3	3.3	4.8	3.5	5.1	3.7	5.3	3.7	5.4	3.7	5.7	3.6	6.0	3.6
024	10.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	12.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	14.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	16.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	18.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	20.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	21.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	23.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	25.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	27.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	29.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	31.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	33.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	35.0	5.8	4.5	6.4	4.8	6.9	5.1	7.1	5.1	7.3	5.1	7.7	5.1	8.1	4.9
	37.0	5.6	4.4	6.2	4.7	6.7	5.0	6.9	4.9	7.1	4.9	7.5	4.9	7.8	4.8
	39.0	5.5	4.3	6.1	4.5	6.5	4.8	6.7	4.8	6.9	4.8	7.3	4.8	7.6	4.6
027	10.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	12.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	14.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	16.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	18.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	20.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	21.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	23.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	25.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	27.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	29.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	31.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	33.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	35.0	6.6	5.0	7.3	5.3	7.8	5.6	8.0	5.6	8.2	5.6	8.7	5.5	9.1	5.4
	37.0	6.4	4.8	7.0	5.1	7.5	5.4	7.7	5.4	8.0	5.4	8.4	5.4	8.8	5.2
	39.0	6.2	4.7	6.8	5.0	7.3	5.3	7.5	5.3	7.8	5.3	8.2	5.2	8.6	5.1

Under Ceiling Type (MMC-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
036	10.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	12.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	14.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	16.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	18.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	20.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	21.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	23.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	25.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	27.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	29.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	31.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	33.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	35.0	9.2	6.7	10.2	7.2	10.9	7.6	11.2	7.6	11.5	7.6	12.2	7.5	12.8	7.4
	37.0	8.9	6.5	9.8	6.9	10.5	7.4	10.8	7.4	11.2	7.4	11.8	7.3	12.4	7.1
	39.0	8.7	6.3	9.6	6.8	10.2	7.2	10.5	7.2	10.9	7.2	11.5	7.1	12.0	6.9
048	10.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	12.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	14.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	16.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	18.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	20.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	21.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	23.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	25.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	27.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	29.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	31.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	33.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	35.0	11.5	8.7	12.7	9.3	13.6	9.8	14.0	9.8	14.4	9.8	15.3	9.7	16.0	9.5
	37.0	11.1	8.4	12.3	9.0	13.1	9.5	13.6	9.5	14.0	9.5	14.8	9.4	15.4	9.2
	39.0	10.8	8.2	12.0	8.7	12.8	9.2	13.2	9.2	13.6	9.2	14.4	9.1	15.0	8.9

High Wall Type (MMK-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	12.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	14.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	16.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	18.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	20.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	21.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	23.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	25.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	27.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	29.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	31.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	33.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	35.0	1.8	1.5	2.0	1.6	2.1	1.7	2.2	1.7	2.3	1.7	2.4	1.7	2.5	1.6
	37.0	1.7	1.5	1.9	1.6	2.1	1.7	2.1	1.6	2.2	1.6	2.3	1.6	2.4	1.6
	39.0	1.7	1.4	1.9	1.5	2.0	1.6	2.1	1.6	2.1	1.6	2.3	1.6	2.4	1.5
009	10.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	12.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	14.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	16.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	18.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	20.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	21.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	23.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	25.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	27.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	29.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	31.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	33.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	35.0	2.3	1.8	2.5	1.9	2.7	2.0	2.8	2.0	2.9	2.0	3.1	2.0	3.2	1.9
	37.0	2.2	1.7	2.5	1.8	2.6	1.9	2.7	1.9	2.8	1.9	3.0	1.9	3.1	1.9
	39.0	2.2	1.7	2.4	1.8	2.6	1.9	2.6	1.9	2.7	1.9	2.9	1.9	3.0	1.8
012	10.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	12.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	14.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	16.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	18.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	20.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	21.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	23.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	25.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	27.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	29.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	31.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	33.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	35.0	3.0	2.2	3.3	2.4	3.5	2.5	3.6	2.5	3.7	2.5	3.9	2.5	4.1	2.4
	37.0	2.9	2.1	3.2	2.3	3.4	2.4	3.5	2.4	3.6	2.4	3.8	2.4	4.0	2.3
	39.0	2.8	2.1	3.1	2.2	3.3	2.4	3.4	2.4	3.5	2.4	3.7	2.3	3.9	2.3
015	10.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	12.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	14.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	16.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	18.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	20.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	21.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	23.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	25.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	27.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	29.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	31.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	33.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	35.0	3.7	2.6	4.1	2.7	4.4	2.9	4.5	2.9	4.6	2.9	4.9	2.9	5.1	2.8
	37.0	3.6	2.5	4.0	2.6	4.2	2.8	4.4	2.8	4.5	2.8	4.7	2.8	5.0	2.7
	39.0	3.5	2.4	3.8	2.6	4.1	2.7	4.2	2.7	4.4	2.7	4.6	2.7	4.8	2.6

High Wall Type (MMK-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	12.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	14.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	16.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	18.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	20.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	21.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	23.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	25.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	27.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	29.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	31.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	33.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	35.0	4.6	3.2	5.1	3.4	5.4	3.6	5.6	3.6	5.8	3.6	6.1	3.6	6.4	3.5
	37.0	4.5	3.1	4.9	3.3	5.3	3.5	5.4	3.5	5.6	3.5	5.9	3.5	6.2	3.4
	39.0	4.3	3.0	4.8	3.2	5.1	3.4	5.3	3.4	5.4	3.4	5.7	3.4	6.0	3.3
024	10.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	12.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	14.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	16.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	18.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	20.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	21.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	23.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	25.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	27.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	29.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	31.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	33.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	35.0	5.8	4.2	6.4	4.4	6.9	4.7	7.1	4.7	7.3	4.7	7.7	4.7	8.1	4.5
	37.0	5.6	4.0	6.2	4.3	6.7	4.6	6.9	4.5	7.1	4.5	7.5	4.5	7.8	4.4
	39.0	5.5	3.9	6.1	4.2	6.5	4.4	6.7	4.4	6.9	4.4	7.3	4.4	7.6	4.3

Floor Standing Cabinet Type (MML-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	12.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	14.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	16.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	18.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	20.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	21.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	23.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	25.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	27.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	29.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	31.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	33.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	35.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	37.0	1.7	1.2	1.9	1.3	2.1	1.4	2.1	1.4	2.2	1.4	2.3	1.3	2.4	1.3
	39.0	1.7	1.2	1.9	1.2	2.0	1.3	2.1	1.3	2.1	1.3	2.3	1.3	2.4	1.3
009	10.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	12.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	14.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	16.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	18.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	20.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	21.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	23.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	25.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	27.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	29.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	31.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	33.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	35.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	37.0	2.2	1.4	2.5	1.5	2.6	1.6	2.7	1.5	2.8	1.5	3.0	1.5	3.1	1.5
	39.0	2.2	1.3	2.4	1.4	2.6	1.5	2.6	1.5	2.7	1.5	2.9	1.5	3.0	1.5
012	10.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	12.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	14.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	16.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	18.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	20.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	21.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	23.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	25.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	27.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	29.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	31.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	33.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	35.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	37.0	2.9	1.9	3.2	2.0	3.4	2.1	3.5	2.1	3.6	2.1	3.8	2.1	4.0	2.1
	39.0	2.8	1.8	3.1	2.0	3.3	2.1	3.4	2.1	3.5	2.1	3.7	2.1	3.9	2.0
015	10.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	12.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	14.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	16.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	18.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	20.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	21.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	23.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	25.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	27.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	29.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	31.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	33.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	35.0	3.6	2.4	4.0	2.6	4.2	2.7	4.5	2.8	4.5	2.7	4.7	2.7	5.0	2.6
	37.0	3.5	2.3	3.8	2.5	4.1	2.6	4.4	2.7	4.3	2.6	4.6	2.6	4.8	2.6
	39.0	3.4	2.3	3.7	2.4	4.0	2.6	4.2	2.6	4.2	2.6	4.5	2.5	4.7	2.5

Floor Standing Cabinet Type (MML-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	12.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	14.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	16.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	18.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	20.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	21.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	23.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	25.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	27.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	29.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	31.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	33.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	35.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	37.0	4.5	3.0	4.9	3.2	5.3	3.4	5.4	3.4	5.6	3.4	5.9	3.4	6.2	3.3
	39.0	4.3	2.9	4.8	3.1	5.1	3.3	5.3	3.3	5.4	3.3	5.7	3.3	6.0	3.2
024	10.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	12.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	14.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	16.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	18.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	20.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	21.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	23.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	25.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	27.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	29.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	31.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	33.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	35.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	37.0	5.6	3.9	6.2	4.1	6.7	4.4	6.9	4.4	7.1	4.4	7.5	4.3	7.8	4.2
	39.0	5.5	3.8	6.1	4.0	6.5	4.2	6.7	4.2	6.9	4.2	7.3	4.2	7.6	4.1

Floor Standing Concealed Type (MML-AP****BH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
007	10.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	12.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	14.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	16.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	18.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	20.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	21.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	23.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	25.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	27.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	29.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	31.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	33.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	35.0	1.8	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.3	1.4	2.4	1.4	2.5	1.4
	37.0	1.7	1.2	1.9	1.3	2.1	1.4	2.1	1.4	2.2	1.4	2.3	1.3	2.4	1.3
	39.0	1.7	1.2	1.9	1.2	2.0	1.3	2.1	1.3	2.1	1.3	2.3	1.3	2.4	1.3
009	10.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	12.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	14.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	16.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	18.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	20.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	21.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	23.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	25.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	27.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	29.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	31.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	33.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	35.0	2.3	1.4	2.5	1.5	2.7	1.6	2.8	1.6	2.9	1.6	3.1	1.6	3.2	1.5
	37.0	2.2	1.4	2.5	1.5	2.6	1.6	2.7	1.5	2.8	1.5	3.0	1.5	3.1	1.5
	39.0	2.2	1.3	2.4	1.4	2.6	1.5	2.6	1.5	2.7	1.5	2.9	1.5	3.0	1.5
012	10.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	12.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	14.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	16.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	18.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	20.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	21.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	23.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	25.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	27.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	29.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	31.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	33.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	35.0	3.0	2.0	3.3	2.1	3.5	2.2	3.6	2.2	3.7	2.2	3.9	2.2	4.1	2.1
	37.0	2.9	1.9	3.2	2.0	3.4	2.1	3.5	2.1	3.6	2.1	3.8	2.1	4.0	2.1
	39.0	2.8	1.8	3.1	2.0	3.3	2.1	3.4	2.1	3.5	2.1	3.7	2.1	3.9	2.0
015	10.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	12.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	14.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	16.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	18.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	20.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	21.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	23.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	25.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	27.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	29.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	31.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	33.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	35.0	3.7	2.5	4.1	2.7	4.4	2.8	4.5	2.8	4.6	2.8	4.9	2.8	5.1	2.7
	37.0	3.6	2.4	4.0	2.6	4.2	2.7	4.4	2.7	4.5	2.7	4.7	2.7	5.0	2.6
	39.0	3.5	2.3	3.8	2.5	4.1	2.7	4.2	2.6	4.4	2.6	4.6	2.6	4.8	2.6

Floor Standing Concealed Type (MML-AP****BH)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
018	10.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	12.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	14.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	16.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	18.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	20.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	21.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	23.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	25.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	27.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	29.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	31.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	33.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	35.0	4.6	3.1	5.1	3.3	5.4	3.5	5.6	3.5	5.8	3.5	6.1	3.5	6.4	3.4
	37.0	4.5	3.0	4.9	3.2	5.3	3.4	5.4	3.4	5.6	3.4	5.9	3.4	6.2	3.3
	39.0	4.3	2.9	4.8	3.1	5.1	3.3	5.3	3.3	5.4	3.3	5.7	3.3	6.0	3.2
024	10.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	12.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	14.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	16.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	18.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	20.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	21.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	23.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	25.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	27.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	29.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	31.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	33.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	35.0	5.8	4.0	6.4	4.2	6.9	4.5	7.1	4.5	7.3	4.5	7.7	4.5	8.1	4.4
	37.0	5.6	3.9	6.2	4.1	6.7	4.4	6.9	4.4	7.1	4.4	7.5	4.3	7.8	4.2
	39.0	5.5	3.8	6.1	4.0	6.5	4.2	6.7	4.2	6.9	4.2	7.3	4.2	7.6	4.1

Floor Standing Type (MMF-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp. ˚CDB	indoor air temp. 14.0˚CWB 20˚CDB TC	SHC	16.0˚CWB 23˚CDB TC	SHC	18.0˚CWB 26˚CDB TC	SHC	19.0˚CWB 27˚CDB TC	SHC	20.0˚CWB 28˚CDB TC	SHC	22.0˚CWB 30˚CDB TC	SHC	24.0˚CWB 32˚CDB TC	SHC
015	10.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	12.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	14.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	16.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	18.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	20.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	21.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	23.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	25.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	27.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	29.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	31.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	33.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	35.0	3.7	3.0	4.1	3.2	4.4	3.4	4.5	3.4	4.6	3.4	4.9	3.4	5.1	3.3
	37.0	3.6	2.9	4.0	3.1	4.2	3.3	4.4	3.3	4.5	3.3	4.7	3.3	5.0	3.2
	39.0	3.5	2.8	3.8	3.0	4.1	3.2	4.2	3.2	4.4	3.2	4.6	3.2	4.8	3.1
018	10.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	12.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	14.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	16.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	18.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	20.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	21.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	23.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	25.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	27.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	29.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	31.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	33.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	35.0	4.6	3.6	5.1	3.9	5.4	4.1	5.6	4.1	5.8	4.1	6.1	4.1	6.4	4.0
	37.0	4.5	3.5	4.9	3.7	5.3	4.0	5.4	4.0	5.6	4.0	5.9	3.9	6.2	3.8
	39.0	4.3	3.4	4.8	3.6	5.1	3.9	5.3	3.9	5.4	3.9	5.7	3.8	6.0	3.7
024	10.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	12.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	14.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	16.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	18.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	20.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	21.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	23.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	25.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	27.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	29.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	31.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	33.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	35.0	5.8	4.7	6.4	5.0	6.9	5.3	7.1	5.3	7.3	5.3	7.7	5.3	8.1	5.1
	37.0	5.6	4.5	6.2	4.8	6.7	5.1	6.9	5.1	7.1	5.1	7.5	5.1	7.8	5.0
	39.0	5.5	4.4	6.1	4.7	6.5	5.0	6.7	5.0	6.9	5.0	7.3	4.9	7.6	4.8
027	10.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	12.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	14.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	16.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	18.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	20.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	21.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	23.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	25.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	27.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	29.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	31.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	33.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	35.0	6.6	5.2	7.3	5.6	7.8	5.9	8.0	5.9	8.2	5.9	8.7	5.8	9.1	5.7
	37.0	6.4	5.1	7.0	5.4	7.5	5.7	7.7	5.7	8.0	5.7	8.4	5.7	8.8	5.5
	39.0	6.2	4.9	6.8	5.2	7.3	5.6	7.5	5.6	7.8	5.6	8.2	5.5	8.6	5.4

Floor Standing Type (MMF-AP****H)

TC : Total capacity [kW] SHC : Sensible capacity [kW]

unit size	outdoor air temp.	indoor air temp. 14.0˚CWB 20˚CDB		16.0˚CWB 23˚CDB		18.0˚CWB 26˚CDB		19.0˚CWB 27˚CDB		20.0˚CWB 28˚CDB		22.0˚CWB 30˚CDB		24.0˚CWB 32˚CDB	
	˚CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
036	10.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	12.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	14.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	16.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	18.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	20.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	21.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	23.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	25.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	27.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	29.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	31.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	33.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	35.0	9.2	7.1	10.2	7.6	10.9	8.0	11.2	8.0	11.5	8.0	12.2	7.9	12.8	7.7
	37.0	8.9	6.9	9.8	7.3	10.5	7.8	10.8	7.7	11.2	7.7	11.8	7.7	12.4	7.5
	39.0	8.7	6.7	9.6	7.1	10.2	7.6	10.5	7.5	10.9	7.5	11.5	7.5	12.0	7.3
048	10.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	12.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	14.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	16.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	18.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	20.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	21.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	23.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	25.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	27.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	29.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	31.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	33.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	35.0	11.5	8.8	12.7	9.3	13.6	9.9	14.0	9.9	14.4	9.9	15.3	9.8	16.0	9.6
	37.0	11.1	8.5	12.3	9.0	13.1	9.6	13.6	9.6	14.0	9.6	14.8	9.5	15.4	9.3
	39.0	10.8	8.3	12.0	8.8	12.8	9.3	13.2	9.3	13.6	9.3	14.4	9.2	15.0	9.0
056	10.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	12.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	14.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	16.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	18.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	20.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	21.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	23.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	25.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	27.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	29.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	31.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	33.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	35.0	13.1	10.1	14.5	10.8	15.5	11.4	16.0	11.4	16.5	11.4	17.4	11.3	18.2	11.0
	37.0	12.7	9.8	14.1	10.4	15.0	11.1	15.5	11.0	16.0	11.0	16.9	10.9	17.7	10.7
	39.0	12.4	9.5	13.7	10.1	14.6	10.8	15.1	10.7	15.5	10.7	16.4	10.6	17.2	10.4

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Part load performance

Part Load Performance

MMY-MAP0501* (5HP, 14kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	13.0	3.86	3.16	2.54	2.02	1.59	1.24	1.03	0.88
35˚C	14.0	3.65	2.98	2.40	1.90	1.49	1.16	0.96	0.82
30˚C	14.0	3.02	2.48	2.00	1.60	1.27	1.00	0.84	0.73
25˚C	14.0	2.71	2.22	1.80	1.45	1.15	0.92	0.78	0.68
20˚C	14.0	2.52	2.07	1.68	1.35	1.08	0.87	0.74	0.65
15˚C	14.0	2.34	1.93	1.57	1.26	1.01	0.82	0.70	0.61

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	16.0	3.35	2.80	2.32	1.90	1.53	1.23	0.99	0.80
11˚C	16.0	3.61	3.01	2.48	2.01	1.61	1.28	1.01	0.81
7˚C	16.0	3.84	3.19	2.62	2.12	1.69	1.32	1.03	0.81
1˚C	14.9	3.90	3.24	2.65	2.14	1.69	1.32	1.02	0.80
-5˚C	12.8	3.63	3.02	2.47	1.99	1.58	1.24	0.96	0.75
-10˚C	10.9	3.26	2.72	2.23	1.81	1.44	1.14	0.89	0.71

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-MAP0601* (6HP, 16kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	14.9	4.91	4.01	3.23	2.57	2.02	1.58	1.26	1.05
35˚C	16.0	4.64	3.79	3.05	2.42	1.90	1.48	1.17	0.97
30˚C	16.0	3.84	3.15	2.55	2.03	1.61	1.28	1.03	0.87
25˚C	16.0	3.44	2.83	2.29	1.84	1.46	1.17	0.95	0.82
20˚C	16.0	3.20	2.63	2.14	1.72	1.37	1.10	0.90	0.78
15˚C	16.0	2.97	2.45	1.99	1.61	1.29	1.04	0.86	0.74

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

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Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	18.0	3.97	3.33	2.76	2.25	1.82	1.46	1.17	0.96
11˚C	18.0	4.28	3.57	2.94	2.39	1.92	1.52	1.20	0.96
7˚C	18.0	4.56	3.79	3.11	2.52	2.00	1.57	1.23	0.97
1˚C	16.7	4.64	3.85	3.15	2.54	2.01	1.57	1.22	0.95
-5˚C	14.4	4.31	3.58	2.93	2.37	1.88	1.47	1.14	0.89
-10˚C	12.2	3.87	3.23	2.65	2.15	1.71	1.35	1.06	0.84

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-MAP0801* (8HP, 22.4kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	20.8	6.00	4.91	3.95	3.14	2.47	1.93	1.54	1.28
35˚C	22.4	5.67	4.63	3.73	2.96	2.32	1.81	1.43	1.19
30˚C	22.4	4.69	3.85	3.11	2.49	1.97	1.56	1.26	1.07
25˚C	22.4	4.20	3.45	2.80	2.25	1.79	1.43	1.16	1.00
20˚C	22.4	3.91	3.21	2.61	2.10	1.68	1.35	1.10	0.95
15˚C	22.4	3.63	2.99	2.44	1.96	1.57	1.27	1.05	0.91

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	25.0	5.12	4.29	3.55	2.91	2.35	1.89	1.51	1.23
11˚C	25.0	5.52	4.61	3.79	3.08	2.47	1.96	1.55	1.24
7˚C	25.0	5.88	4.89	4.01	3.24	2.58	2.03	1.58	1.25
1˚C	23.3	5.98	4.97	4.06	3.27	2.59	2.02	1.57	1.22
-5˚C	20.0	5.55	4.62	3.78	3.05	2.42	1.90	1.47	1.15
-10˚C	17.0	5.00	4.16	3.42	2.77	2.21	1.74	1.37	1.08

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-MAP1001* (10HP, 28kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	26.0	8.13	6.65	5.35	4.25	3.34	2.62	2.08	1.73
35˚C	28.0	7.68	6.27	5.05	4.00	3.14	2.45	1.94	1.61
30˚C	28.0	6.36	5.21	4.22	3.37	2.67	2.11	1.71	1.45
25˚C	28.0	5.69	4.68	3.79	3.04	2.42	1.93	1.58	1.35
20˚C	28.0	5.29	4.35	3.54	2.84	2.27	1.82	1.50	1.29
15˚C	28.0	4.92	4.05	3.30	2.66	2.13	1.72	1.42	1.23

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

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Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	31.5	6.94	5.82	4.82	3.94	3.18	2.56	2.05	1.67
11˚C	31.5	7.49	6.25	5.14	4.18	3.35	2.65	2.10	1.68
7˚C	31.5	7.97	6.63	5.44	4.40	3.50	2.75	2.15	1.69
1˚C	29.3	8.10	6.73	5.51	4.44	3.52	2.74	2.12	1.66
-5˚C	25.2	7.53	6.26	5.13	4.13	3.28	2.57	2.00	1.56
-10˚C	21.4	6.77	5.64	4.63	3.75	2.99	2.36	1.85	1.47

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-MAP1201* (12HP, 33.5kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	31.2	12.61	9.39	7.47	5.82	4.44	3.32	2.48	1.92
35˚C	33.5	11.92	8.87	7.05	5.49	4.18	3.12	2.33	1.79
30˚C	33.5	9.87	7.33	5.85	4.57	3.51	2.65	2.01	1.58
25˚C	33.5	8.84	6.56	5.24	4.11	3.17	2.41	1.85	1.47
20˚C	33.5	8.22	6.10	4.88	3.83	2.96	2.26	1.74	1.40
15˚C	33.5	7.64	5.66	4.54	3.57	2.76	2.12	1.64	1.33

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

9

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	37.5	8.88	7.53	6.26	5.14	4.06	3.15	2.42	1.87
11˚C	37.5	9.57	8.12	6.73	5.50	4.31	3.31	2.51	1.90
7˚C	37.5	10.19	8.66	7.16	5.82	4.54	3.46	2.59	1.93
1˚C	34.9	10.36	8.81	7.27	5.90	4.58	3.48	2.58	1.91
-5˚C	30.0	9.63	8.18	6.76	5.49	4.27	3.25	2.42	1.79
-10˚C	25.5	8.66	7.35	6.08	4.96	3.87	2.96	2.23	1.67

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP1601* (16HP, 45kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	41.9	12.91	10.01	8.11	6.48	5.13	4.06	3.27	2.76
35˚C	45.0	12.20	9.46	7.66	6.11	4.83	3.82	3.07	2.58
30˚C	45.0	10.10	7.90	6.43	5.17	4.14	3.32	2.72	2.34
25˚C	45.0	9.04	7.11	5.80	4.69	3.78	3.05	2.53	2.20
20˚C	45.0	8.41	6.63	5.42	4.40	3.55	2.89	2.41	2.10
15˚C	45.0	7.82	6.19	5.07	4.13	3.35	2.73	2.29	2.02

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	50.0	10.70	8.80	7.33	6.03	4.92	3.99	3.25	2.69
11˚C	50.0	11.53	9.44	7.81	6.38	5.16	4.14	3.31	2.69
7˚C	50.0	12.28	10.00	8.25	6.71	5.38	4.28	3.39	2.71
1˚C	46.5	12.49	10.15	8.35	6.77	5.41	4.27	3.36	2.66
-5˚C	40.0	11.60	9.45	7.78	6.32	5.06	4.01	3.17	2.53
-10˚C	34.0	10.43	8.54	7.06	5.76	4.64	3.70	2.95	2.39

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP2001* (20HP, 56kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	52.1	17.11	13.49	10.91	8.70	6.88	5.43	4.36	3.67
35˚C	56.0	16.17	12.75	10.30	8.21	6.48	5.10	4.09	3.43
30˚C	56.0	13.38	10.62	8.63	6.93	5.53	4.42	3.61	3.09
25˚C	56.0	11.99	9.56	7.79	6.28	5.04	4.07	3.35	2.90
20˚C	56.0	10.82	8.66	7.08	5.74	4.63	3.76	3.13	2.73
15˚C	56.0	10.06	8.08	6.62	5.37	4.35	3.55	2.97	2.61

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

9

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	63.0	14.34	11.86	9.85	8.10	6.59	5.33	4.32	3.56
11˚C	63.0	15.46	12.71	10.51	8.57	6.91	5.53	4.41	3.57
7˚C	63.0	16.46	13.48	11.10	9.01	7.22	5.72	4.51	3.60
1˚C	58.6	16.74	13.68	11.24	9.09	7.25	5.71	4.47	3.53
-5˚C	50.4	15.55	12.74	10.47	8.49	6.79	5.36	4.21	3.35
-10˚C	42.8	13.98	11.50	9.49	7.72	6.21	4.94	3.93	3.16

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP2601* (26HP, 73kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	67.9	21.47	16.76	13.56	10.83	8.57	6.78	5.45	4.60
35˚C	73.0	20.29	15.84	12.81	10.22	8.07	6.37	5.11	4.29
30˚C	73.0	16.79	13.21	10.74	8.64	6.90	5.53	4.52	3.88
25˚C	73.0	15.04	11.88	9.70	7.83	6.30	5.09	4.20	3.65
20˚C	73.0	13.98	11.08	9.06	7.34	5.93	4.81	4.00	3.49
15˚C	73.0	13.00	10.34	8.47	6.88	5.58	4.55	3.81	3.34

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	81.5	17.87	14.73	12.25	10.08	8.21	6.66	5.41	4.47
11˚C	81.5	19.26	15.79	13.06	10.67	8.62	6.90	5.52	4.48
7˚C	81.5	20.51	16.75	13.80	11.21	8.99	7.14	5.64	4.52
1˚C	75.8	20.86	16.99	13.97	11.31	9.03	7.12	5.59	4.43
-5˚C	65.2	19.37	15.82	13.02	10.57	8.46	6.69	5.27	4.20
-10˚C	55.4	17.42	14.29	11.80	9.62	7.74	6.18	4.92	3.96

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP3001* (30HP, 84kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	78.1	25.67	20.24	16.36	13.06	10.32	8.15	6.54	5.50
35˚C	84.0	24.26	19.12	15.45	12.31	9.72	7.65	6.13	5.14
30˚C	84.0	20.08	15.94	12.95	10.40	8.30	6.64	5.42	4.64
25˚C	84.0	17.98	14.33	11.68	9.43	7.57	6.10	5.03	4.35
20˚C	84.0	16.72	13.36	10.91	8.83	7.12	5.77	4.79	4.17
15˚C	84.0	15.55	12.46	10.20	8.27	6.69	5.45	4.55	3.99

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

9

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	95.0	21.63	17.78	14.78	12.14	9.88	8.00	6.48	5.34
11˚C	95.0	23.31	19.07	15.76	12.86	10.37	8.29	6.62	5.36
7˚C	95.0	24.82	20.22	16.65	13.52	10.83	8.58	6.77	5.40
1˚C	88.4	25.24	20.52	16.85	13.64	10.88	8.56	6.70	5.30
-5˚C	76.0	23.45	19.10	15.71	12.73	10.18	8.04	6.32	5.02
-10˚C	64.6	21.09	17.25	14.23	11.59	9.31	7.41	5.89	4.73

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP3411* (34HP, 96kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	89.3	35.00	25.73	20.59	16.18	12.51	9.56	7.35	5.87
35˚C	96.0	33.08	24.32	19.45	15.28	11.79	9.00	6.90	5.48
30˚C	96.0	27.38	20.18	16.21	12.81	9.98	7.72	6.03	4.91
25˚C	96.0	24.52	18.10	14.58	11.56	9.06	7.06	5.57	4.59
20˚C	96.0	22.80	16.85	13.59	10.80	8.49	6.65	5.28	4.38
15˚C	96.0	21.20	15.68	12.67	10.10	7.96	6.26	5.00	4.18

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	108.0	25.74	21.20	17.66	14.54	11.63	9.19	7.23	5.75
11˚C	108.0	27.74	22.82	18.94	15.50	12.29	9.61	7.44	5.81
7˚C	108.0	29.54	24.28	20.08	16.37	12.90	10.00	7.66	5.89
1˚C	100.4	30.04	24.68	20.38	16.56	13.01	10.03	7.62	5.80
-5˚C	86.4	27.90	22.95	18.97	15.44	12.15	9.39	7.17	5.48
-10˚C	73.4	25.10	20.68	17.13	13.99	11.07	8.61	6.64	5.14

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP4001* (40HP, 112kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	104.2	34.22	26.98	21.82	17.41	13.76	10.86	8.72	7.34
35˚C	112.0	32.34	25.49	20.60	16.42	12.95	10.20	8.17	6.85
30˚C	112.0	26.77	21.25	17.26	13.87	11.06	8.85	7.22	6.19
25˚C	112.0	23.97	19.11	15.58	12.57	10.09	8.13	6.71	5.81
20˚C	112.0	22.29	17.82	14.55	11.78	9.49	7.69	6.38	5.56
15˚C	112.0	20.72	16.61	13.60	11.03	8.92	7.27	6.07	5.32

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

9

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	126.5	28.80	23.71	19.70	16.19	13.18	10.66	8.64	7.12
11˚C	126.5	31.04	25.42	21.01	17.15	13.83	11.05	8.83	7.15
7˚C	126.5	33.05	26.96	22.20	18.02	14.44	11.44	9.03	7.20
1˚C	117.6	33.61	27.36	22.47	18.19	14.50	11.42	8.94	7.06
-5˚C	101.2	31.22	25.47	20.95	16.98	13.57	10.72	8.43	6.69
-10˚C	86.0	28.08	23.00	18.98	15.45	12.42	9.89	7.85	6.31

Indoor air temperature conditions : 20.0˚C dry-bulb

Part Load Performance

MMY-AP4801* (48HP, 135kW system)

Cooling

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Cooling Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
40˚C	125.6	52.55	37.96	30.27	23.67	18.14	13.70	10.34	8.06
35˚C	135.0	49.67	35.89	28.61	22.35	17.11	12.90	9.71	7.54
30˚C	135.0	41.11	29.74	23.79	18.69	14.43	11.02	8.45	6.72
25˚C	135.0	36.82	26.65	21.37	16.84	13.07	10.05	7.78	6.27
20˚C	135.0	34.23	24.79	19.90	15.72	12.24	9.45	7.37	5.98
15˚C	135.0	31.83	23.06	18.54	14.68	11.46	8.89	6.97	5.70

Indoor air temperature conditions : 27.0˚C dry-bulb / 19.0˚C wet bulb

Heating

		Compressor + Oudoor Fan Power consumption (kW)							
Outdoor Unit Dry-Bulb (˚C)	Outdoor Unit 100% Heating Capacity (kW)	100% Capacity	90% Capacity	80% Capacity	70% Capacity	60% Capacity	50% Capacity	40% Capacity	30% Capacity
15˚C	150.0	36.42	30.54	25.48	20.98	16.66	13.05	10.14	7.93
11˚C	150.0	39.26	32.93	27.37	22.42	17.67	13.68	10.47	8.04
7˚C	150.0	41.80	35.07	29.06	23.72	18.59	14.28	10.81	8.17
1˚C	139.5	42.50	35.68	29.51	24.04	18.76	14.34	10.77	8.06
-5˚C	120.0	39.49	33.17	27.46	22.39	17.51	13.42	10.12	7.61
-10˚C	102.0	35.51	29.85	24.77	20.26	15.92	12.29	9.36	7.13

Indoor air temperature conditions : 20.0˚C dry-bulb

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Wiring guideline

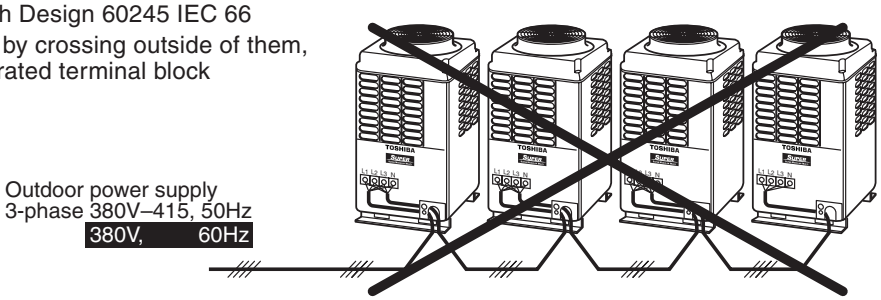
WIRING DESIGN

1. General

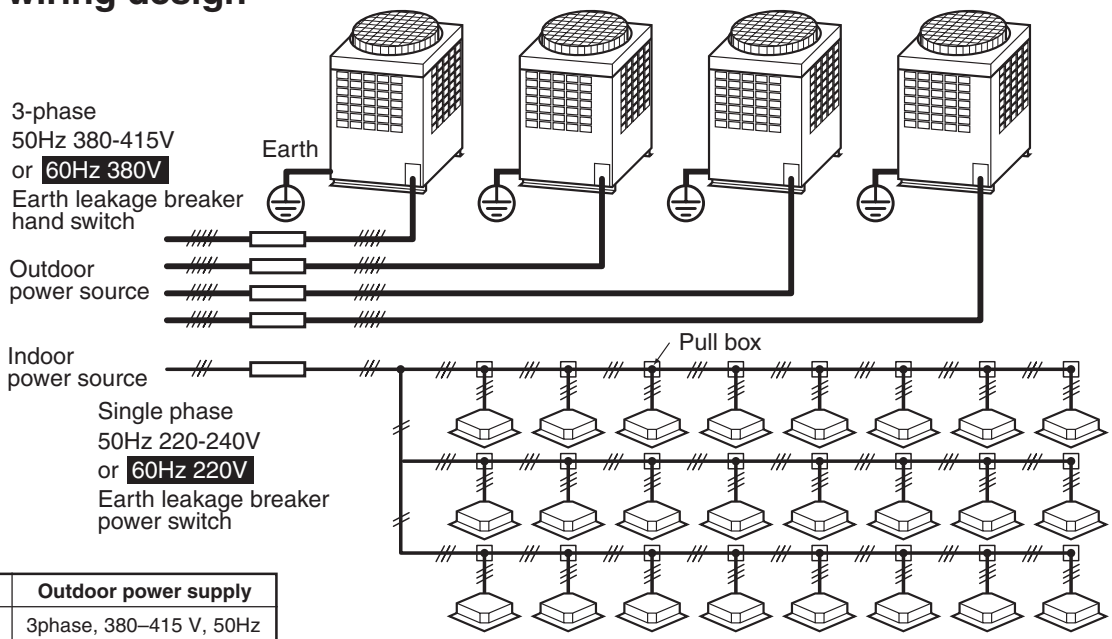
(1) Perform wiring of the power supply in conformance with the regulations of the local electric company.
(2) For the control wires connecting indoor units, outdoor units, and between indoor and outdoor units, use of double-core shield wires is recommended to prevent noise trouble.
(3) Be sure to set the earth leakage breaker and the switches to the power supply section of the indoor unit.
(4) Supply power to each outdoor unit and provide an earth leakage breaker or hand switch for each outdoor unit.
(5) Never connect the 220–240V power to the terminal block (U1, U2, U3, U4, U5, U6) for control cables. (Trouble is caused.)
(6) Store wiring system for control and refrigerant piping system in the same line.
(7) 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.
(8) Do not turn on power of the indoor unit until vacuuming of the refrigerant pipe will finish.

2. For outdoor unit power supply

- Select the power supply cabling and fuse of each outdoor unit from the following specifications:
  Cable 5-core, in conformance with Design 60245 IEC 66
- Do not connect the outdoor units by crossing outside of them, but connect them via the incorporated terminal block (L1, L2, L3, N).



3. Electrical wiring design



Model	Outdoor power supply
MMY-AP • • • T8, HT8	3phase, 380–415 V, 50Hz
MMY-AP • • • HT7	3phase, 380 V, 60Hz

- Unit capacities and power supply wire sizes (Reference)

Model MMY-			Power supply wiring	
			Wire size	Field fuse
MAP0501T8	MAP0501HT8	MAP0501HT7	3.5 m² (A WG #12) Max. 26 m	20 A
MAP0601T8	MAP0601HT8	MAP0601HT7	3.5 m² (A WG #12) Max. 26 m	20 A
MAP0801T8	MAP0801HT8	MAP0801HT7	3.5 m² (A WG #10) Max. 20 m	30 A
MAP1001T8	MAP1001HT8	MAP1001HT7	5.5 m² (A WG #10) Max. 28 m	30 A
MAP1201T8	MAP1201HT8	MAP1201HT7	5.5 m² (A WG #10) Max. 27 m	30 A

- Determine the wire size for indoor unit according to the number of connected indoor units downstream.
- Observe local regulation regarding wire size selection and installation.

4. For Indoor unit power supply (Must be independent from outdoor unit power.)

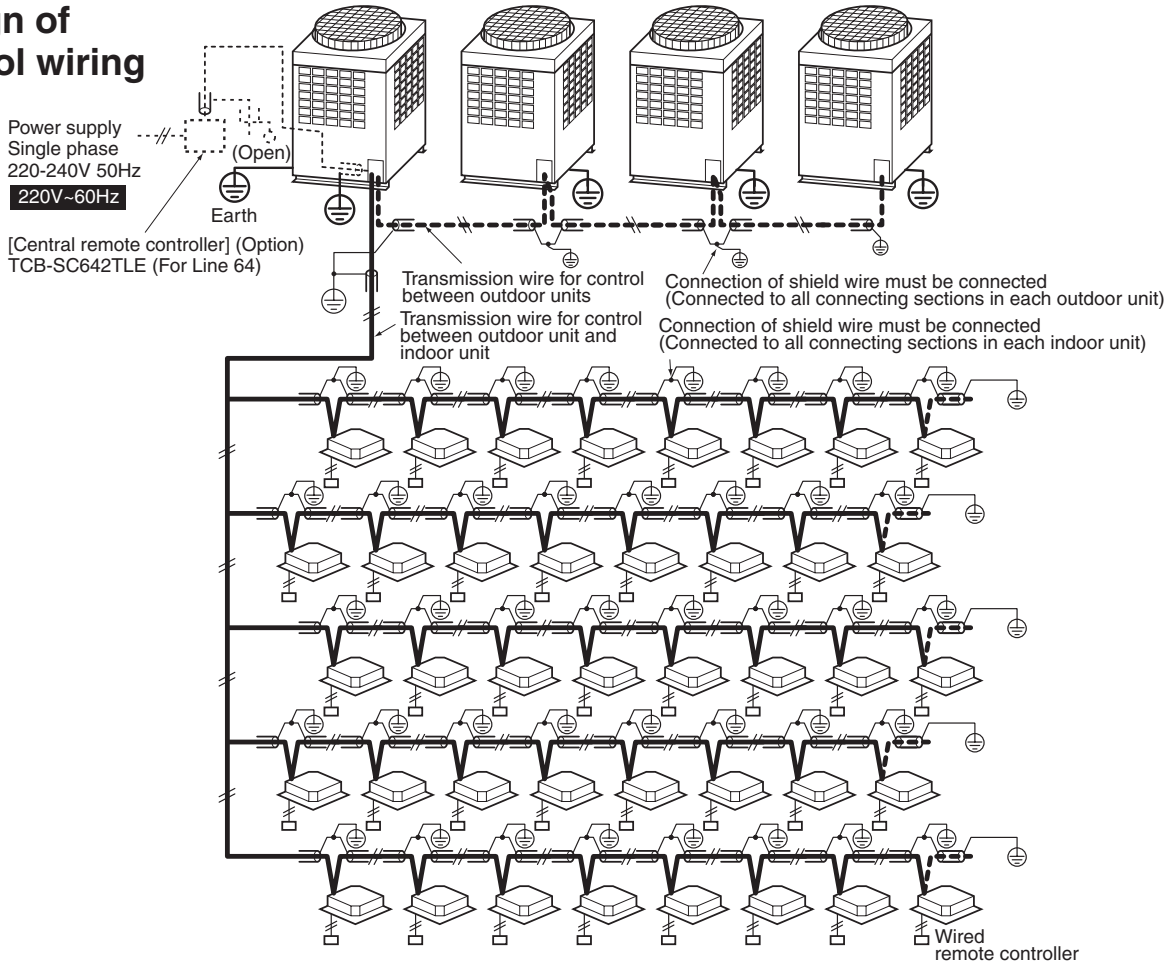
Item / Model	Power supply wiring				
	Wire size				Field fuse
All models of indoor units	2.0m² (AWG#14)	Max. 20m	3.5m² (AWG#12)	Max. 50m	15A

NOTE :
The connecting length indicated in the table represents the length from the pull box to the outdoor unit when the indoor units are connected in parallel for power, as shown in the above illustration. A voltage drop of no more than 2% is also assumed. If the connecting length will exceed the length indicated in the table, select the wire thickness in accordance with local wiring standards.

⚠ CAUTIONS

(1) Keep the refrigerant piping system and the indoor-indoor/indoor-outdoor control wiring systems together.
(2) When running power wires and control wires parallel to each other, either run them through separate conduits, or maintain a suitable distance between them.
(Current capacity of power wires: 10A or less for 300m, 50A or less for 500m)

5. Design of control wiring



- Wire specification, quantity, size of crossover wiring and remote controller wiring

Name	Q'ty	Size			Specification
		Up to 500m	Up to 1000m	1000 to 2000m	
Crossover wiring (indoor-indoor / indoor-outdoor / outdoor-indoor control wiring, central control wiring)	2 cores	1.25mm²		2.0mm²	Shield wire
Remote controller wiring	2 cores	0.5 to 2.0mm²	—	—	—

(1) The crossover wiring and central control wiring use 2-core non-polarity transmission wires. Use 2-core shield wires to prevent noise trouble. In this case, close (connect) the end of shield wires, and perform the functional grounding for the end of the shield wires which are connected to both indoor and outdoor units.
For the shield wires which are connected between the central remote controller and the outdoor unit, perform the functional grounding at only one end of central control wiring.
(2) Use 2-core and non-polarity wire for remote controller. (A, B terminals)
Use 2-core and non-polarity wire for wiring of group control. (A, B terminals)

6. Control wiring Diagram

1. All control wiring is 2-core and non-polarity wire.
2. Be sure to use shield wire for the following wiring to prevent noise trouble.
   - Outdoor-outdoor / indoor-indoor / outdoor-indoor control wiring, Central control wiring.

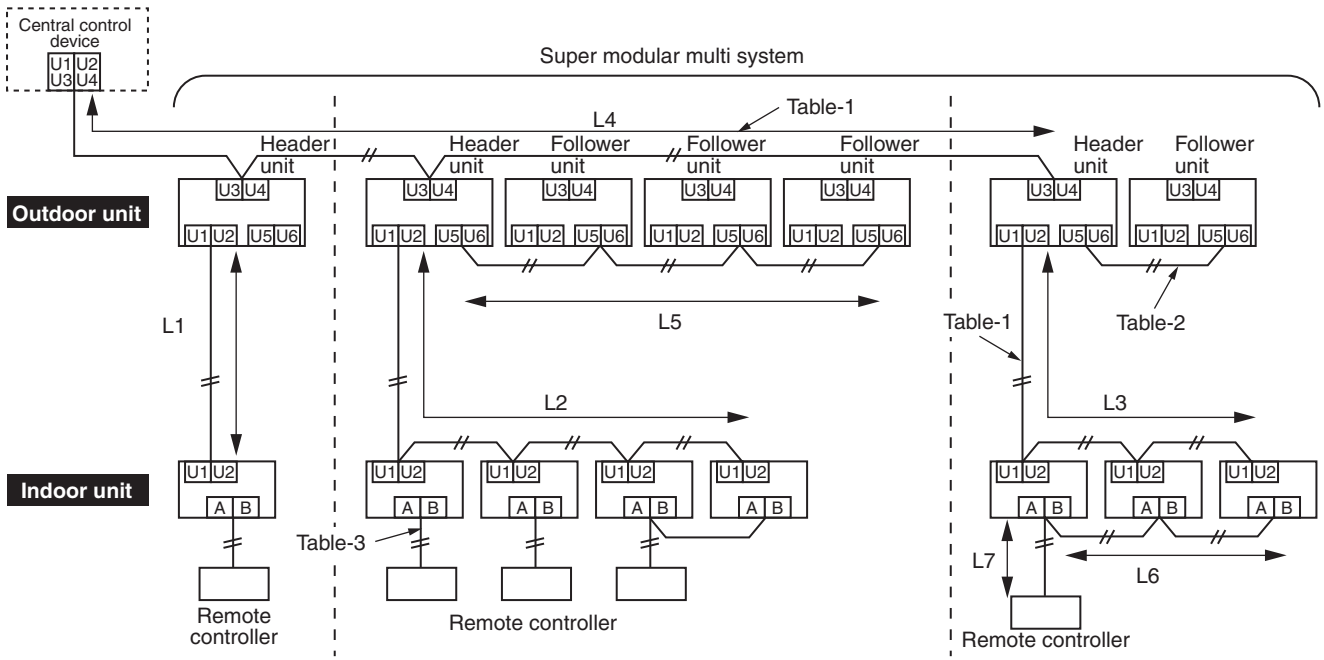


Table-1 Control wiring between indoor and outdoor units (L1, L2, L3), Central control wiring (L4)

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

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

Table-2 Control wiring between outdoor units (L5)

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

Table-3 Remote controller wiring (L6, L7)

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

50Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power Supply	
			Min	Max	kW	FLA	MCA	MOCP
4-Way Air Discharge Cassette Type	MMU-AP 0091 H	230-1-50	198	264	0.060	0.20	0.25	15
	MMU-AP 0121 H	230-1-50	198	264	0.060	0.20	0.25	15
	MMU-AP 0151 H	230-1-50	198	264	0.060	0.22	0.28	15
	MMU-AP 0181 H	230-1-50	198	264	0.060	0.24	0.30	15
	MMU-AP 0241 H	230-1-50	198	264	0.060	0.28	0.35	15
	MMU-AP 0271 H	230-1-50	198	264	0.060	0.28	0.35	15
	MMU-AP 0301 H	230-1-50	198	264	0.060	0.40	0.50	15
	MMU-AP 0361 H	230-1-50	198	264	0.090	0.68	0.85	15
	MMU-AP 0481 H	230-1-50	198	264	0.090	0.93	1.16	15
	MMU-AP 0561 H	230-1-50	198	264	0.090	0.95	1.19	15
2-Way Air Discharge Cassette Type	MMU-AP 0071 WH	230-1-50	198	264	0.053	0.36	0.45	15
	MMU-AP 0091 WH	230-1-50	198	264	0.053	0.36	0.45	15
	MMU-AP 0121 WH	230-1-50	198	264	0.053	0.36	0.45	15
	MMU-AP 0151 WH	230-1-50	198	264	0.039	0.37	0.46	15
	MMU-AP 0181 WH	230-1-50	198	264	0.039	0.37	0.46	15
	MMU-AP 0241 WH	230-1-50	198	264	0.053	0.53	0.66	15
	MMU-AP 0271 WH	230-1-50	198	264	0.053	0.53	0.66	15
	MMU-AP 0301 WH	230-1-50	198	264	0.053	0.54	0.68	15
	MMU-AP 0481 WH	220-1-50	198	242	0.092	1.33	1.67	15
1-Way Air Discharge Cassette Type	MMU-AP 0071 YH	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP 0091 YH	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP 0121 YH	230-1-50	198	264	0.022	0.28	0.35	15
	MMU-AP 0151 SH	230-1-50	198	264	0.034	0.55	0.69	15
	MMU-AP 0181 SH	230-1-50	198	264	0.034	0.55	0.69	15
	MMU-AP 0241 SH	230-1-50	198	264	0.034	0.63	0.79	15
Concealed Duct Type	MMD-AP 0071 BH	230-1-50	198	264	0.120	0.33	0.41	15
	MMD-AP 0091 BH	230-1-50	198	264	0.120	0.33	0.41	15
	MMD-AP 0121 BH	230-1-50	198	264	0.120	0.39	0.49	15
	MMD-AP 0151 BH	230-1-50	198	264	0.120	0.39	0.49	15
	MMD-AP 0181 BH	230-1-50	198	264	0.120	0.50	0.62	15
	MMD-AP 0241 BH	230-1-50	198	264	0.120	0.60	0.75	15
	MMD-AP 0271 BH	230-1-50	198	264	0.120	0.60	0.75	15
	MMD-AP 0301 BH	230-1-50	198	264	0.120	0.70	0.88	15
	MMD-AP 0361 BH	230-1-50	198	264	0.120	0.96	1.20	15
	MMD-AP 0481 BH	230-1-50	198	264	0.120	1.13	1.41	15
	MMD-AP 0561 BH	230-1-50	198	264	0.120	1.13	1.41	15
Concealed Duct High Static Pressure Type	MMD-AP 0181 H	230-1-50	198	264	0.160	0.93	1.16	15
	MMD-AP 0241 H	230-1-50	198	264	0.160	1.55	1.94	15
	MMD-AP 0271 H	230-1-50	198	264	0.160	1.55	1.94	15
	MMD-AP 0361 H	230-1-50	198	264	0.260	1.87	2.34	15
	MMD-AP 0481 H	230-1-50	198	264	0.260	2.12	2.65	15
	MMD-AP 0721 H	230-1-50	198	264	0.370×3	6.04	7.55	15
	MMD-AP 0961 H	230-1-50	198	264	0.370×3	6.35	7.94	15
Under Ceiling Type	MMC-AP 0151 H	230-1-50	198	264	0.030	0.33	0.41	15
	MMC-AP 0181 H	230-1-50	198	264	0.030	0.37	0.46	15
	MMC-AP 0241 H	230-1-50	198	264	0.040	0.48	0.60	15
	MMC-AP 0271 H	230-1-50	198	264	0.040	0.48	0.60	15
	MMC-AP 0361 H	230-1-50	198	264	0.080	0.90	1.13	15
	MMC-AP 0481 H	230-1-50	198	264	0.080	0.96	1.20	15
Hige Wall Type	MMK-AP 0071 H	230-1-50	198	264	0.030	0.35	0.44	15
	MMK-AP 0091 H	230-1-50	198	264	0.030	0.35	0.44	15
	MMK-AP 0121 H	230-1-50	198	264	0.030	0.35	0.44	15
	MMK-AP 0151 H	230-1-50	198	264	0.030	0.37	0.46	15
	MMK-AP 0181 H	230-1-50	198	264	0.030	0.37	0.46	15
	MMK-AP 0241 H	230-1-50	198	264	0.030	0.40	0.50	15
Floor Standing Cabinet Type	MML-AP 0071 H	230-1-50	198	264	0.045	0.30	0.37	15
	MML-AP 0091 H	230-1-50	198	264	0.045	0.30	0.37	15
	MML-AP 0121 H	230-1-50	198	264	0.045	0.49	0.62	15
	MML-AP 0151 H	230-1-50	198	264	0.045	0.49	0.62	15
	MML-AP 0181 H	230-1-50	198	264	0.070	0.54	0.68	15
	MML-AP 0241 H	230-1-50	198	264	0.070	0.54	0.68	15
Floor Standing Concealed Type	MML-AP 0071 BH	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP 0091 BH	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP 0121 BH	230-1-50	198	264	0.019	0.29	0.36	15
	MML-AP 0151 BH	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP 0181 BH	230-1-50	198	264	0.070	0.52	0.65	15
	MML-AP 0241 BH	230-1-50	198	264	0.070	0.53	0.66	15
Floor Standing Type	MMF-AP 0151 H	230-1-50	198	264	0.037	0.77	0.96	15
	MMF-AP 0181 H	230-1-50	198	264	0.037	0.77	0.96	15
	MMF-AP 0241 H	230-1-50	198	264	0.063	1.01	1.27	15
	MMF-AP 0271 H	230-1-50	198	264	0.063	1.01	1.27	15
	MMF-AP 0361 H	230-1-50	198	264	0.110	1.48	1.85	15
	MMF-AP 0481 H	230-1-50	198	264	0.160	1.84	2.30	15
	MMF-AP 0561 H	230-1-50	198	264	0.160	1.84	2.30	15

60Hz

Type	Model	Nominal Voltage (V-Ph-Hz)	Voltage Range		Fan Motor		Power Supply	
			Min	Max	kW	FLA	MCA	MOCP
4-Way Air Discharge Cassette Type	MMU-AP 0091 H	220-1-60	198	242	0.060	0.21	0.26	15
	MMU-AP 0121 H	220-1-60	198	242	0.060	0.21	0.26	15
	MMU-AP 0151 H	220-1-60	198	242	0.060	0.23	0.29	15
	MMU-AP 0181 H	220-1-60	198	242	0.060	0.25	0.31	15
	MMU-AP 0241 H	220-1-60	198	242	0.060	0.29	0.37	15
	MMU-AP 0271 H	220-1-60	198	242	0.060	0.29	0.37	15
	MMU-AP 0301 H	220-1-60	198	242	0.060	0.42	0.52	15
	MMU-AP 0361 H	220-1-60	198	242	0.090	0.70	0.88	15
	MMU-AP 0481 H	220-1-60	198	242	0.090	0.98	1.22	15
	MMU-AP 0561 H	220-1-60	198	242	0.090	1.00	1.25	15
2-Way Air Discharge Cassette Type	MMU-AP 0071 WH	220-1-60	198	242	0.053	0.38	0.47	15
	MMU-AP 0091 WH	220-1-60	198	242	0.053	0.38	0.47	15
	MMU-AP 0121 WH	220-1-60	198	242	0.053	0.38	0.47	15
	MMU-AP 0151 WH	220-1-60	198	242	0.039	0.44	0.55	15
	MMU-AP 0181 WH	220-1-60	198	242	0.039	0.44	0.55	15
	MMU-AP 0241 WH	220-1-60	198	242	0.053	0.61	0.76	15
	MMU-AP 0271 WH	220-1-60	198	242	0.053	0.61	0.76	15
	MMU-AP 0301 WH	220-1-60	198	242	0.053	0.67	0.84	15
1-Way Air Discharge Cassette Type	MMU-AP 0071 YH	220-1-60	198	242	0.022	0.30	0.37	15
	MMU-AP 0091 YH	220-1-60	198	242	0.022	0.30	0.37	15
	MMU-AP 0121 YH	220-1-60	198	242	0.022	0.30	0.37	15
	MMU-AP 0151 SH	220-1-60	198	242	0.034	0.62	0.78	15
	MMU-AP 0181 SH	220-1-60	198	242	0.034	0.62	0.78	15
	MMU-AP 0241 SH	220-1-60	198	242	0.034	0.70	0.88	15
Concealed Duct Type	MMD-AP 0071 BH	220-1-60	198	242	0.120	0.35	0.43	15
	MMD-AP 0091 BH	220-1-60	198	242	0.120	0.35	0.43	15
	MMD-AP 0121 BH	220-1-60	198	242	0.120	0.41	0.51	15
	MMD-AP 0151 BH	220-1-60	198	242	0.120	0.41	0.51	15
	MMD-AP 0181 BH	220-1-60	198	242	0.120	0.52	0.65	15
	MMD-AP 0241 BH	220-1-60	198	242	0.120	0.63	0.78	15
	MMD-AP 0271 BH	220-1-60	198	242	0.120	0.63	0.78	15
	MMD-AP 0301 BH	220-1-60	198	242	0.120	0.73	0.91	15
	MMD-AP 0361 BH	220-1-60	198	242	0.120	1.00	1.25	15
	MMD-AP 0481 BH	220-1-60	198	242	0.120	1.18	1.48	15
	MMD-AP 0561 BH	220-1-60	198	242	0.120	1.18	1.48	15
Concealed Duct High Static Pressure Type	MMD-AP 0181 H	220-1-60	198	242	0.160	1.06	1.32	15
	MMD-AP 0241 H	220-1-60	198	242	0.160	2.07	2.59	15
	MMD-AP 0271 H	220-1-60	198	242	0.160	2.07	2.59	15
	MMD-AP 0361 H	220-1-60	198	242	0.260	2.38	2.98	15
	MMD-AP 0481 H	220-1-60	198	242	0.260	2.60	3.25	15
	MMD-AP 0721 H	220-1-60	198	242	0.370×3	8.17	10.2	15
	MMD-AP 0961 H	220-1-60	198	242	0.370×3	8.53	10.7	15
Under Ceiling Type	MMC-AP 0151 H	220-1-60	198	242	0.030	0.35	0.43	15
	MMC-AP 0181 H	220-1-60	198	242	0.030	0.39	0.48	15
	MMC-AP 0241 H	220-1-60	198	242	0.040	0.50	0.63	15
	MMC-AP 0271 H	220-1-60	198	242	0.040	0.50	0.63	15
	MMC-AP 0361 H	220-1-60	198	242	0.080	0.94	1.18	15
	MMC-AP 0481 H	220-1-60	198	242	0.080	1.00	1.25	15
Hige Wall Type	MMK-AP 0071 H	220-1-60	198	242	0.030	0.37	0.46	15
	MMK-AP 0091 H	220-1-60	198	242	0.030	0.37	0.46	15
	MMK-AP 0121 H	220-1-60	198	242	0.030	0.37	0.46	15
	MMK-AP 0151 H	220-1-60	198	242	0.030	0.39	0.48	15
	MMK-AP 0181 H	220-1-60	198	242	0.030	0.39	0.48	15
	MMK-AP 0241 H	220-1-60	198	242	0.030	0.40	0.50	15
Floor Standing Cabinet Type	MML-AP 0071 H	220-1-60	198	242	0.045	0.29	0.36	15
	MML-AP 0091 H	220-1-60	198	242	0.045	0.29	0.36	15
	MML-AP 0121 H	220-1-60	198	242	0.045	0.51	0.63	15
	MML-AP 0151 H	220-1-60	198	242	0.045	0.51	0.63	15
	MML-AP 0181 H	220-1-60	198	242	0.070	0.61	0.76	15
	MML-AP 0241 H	220-1-60	198	242	0.070	0.61	0.76	15
Floor Standing Concealed Type	MML-AP 0071 BH	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP 0091 BH	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP 0121 BH	220-1-60	198	242	0.019	0.31	0.39	15
	MML-AP 0151 BH	220-1-60	198	242	0.070	0.53	0.66	15
	MML-AP 0181 BH	220-1-60	198	242	0.070	0.53	0.66	15
	MML-AP 0241 BH	220-1-60	198	242	0.070	0.59	0.73	15
Floor Standing Type	MMF-AP 0151 H	220-1-60	198	242	0.037	0.77	0.96	15
	MMF-AP 0181 H	220-1-60	198	242	0.037	0.77	0.96	15
	MMF-AP 0241 H	220-1-60	198	242	0.063	1.04	1.29	15
	MMF-AP 0271 H	220-1-60	198	242	0.063	1.04	1.29	15
	MMF-AP 0361 H	220-1-60	198	242	0.110	1.58	1.97	15
	MMF-AP 0481 H	220-1-60	198	242	0.160	2.01	2.52	15
	MMF-AP 0561 H	220-1-60	198	242	0.160	2.01	2.52	15

■ Single outdoor unit

50Hz

Heat Pump Model MMY-	Cooling Only model MMY-	Nominal Voltage (V-Ph-Hz)	Voltage Range		Compressor			Fan Motor		Power Supply		
			Min	Max	RLA	LRA		kW	FLA	MCA	MOCP	ICF
MAP0501HT8	MAP0501T8	400-3-50	342	457	4.0 + 4.0			0.60	0.8	16.5	20	—
MAP0601HT8	MAP0601T8	400-3-50	342	457	4.6 + 4.6			0.60	0.8	16.5	20	—
MAP0801HT8	MAP0801T8	400-3-50	342	457	5.2 + 5.2			0.60	1.0	20.0	30	—
MAP1001HT8	MAP1001T8	400-3-50	342	457	6.5 + 6.5			0.60	1.1	22.5	30	—
MAP1201HT8	MAP1201T8	400-3-50	342	457	9.5 + 9.5			0.60	1.1	24.5	30	—

■ Combination of outdoor unit

Heat Pump Model MMY-	Cooling Only model MMY-	Nominal Voltage (V-Ph-Hz)	Voltage Range		Compressor								Fan Motor		Power Supply		
					Unit No.1		Unit No.2		Unit No.3		Unit No.4						
			Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	kW	FLA	MCA	MOCP	ICF
AP1401HT8	AP1401T8	400-3-50	342	457	5.2 + 5.2	—	4.6 + 4.6	—	—	—	—	—	0.6×2	1.0 + 0.8	36.5	40	—
AP1601HT8	AP1601T8	400-3-50	342	457	5.2 + 5.2	—	5.2 + 5.2	—	—	—	—	—	0.6×2	1.0 + 1.0	40.0	50	—
AP1801HT8	AP1801T8	400-3-50	342	457	6.5 + 6.5	—	5.2 + 5.2	—	—	—	—	—	0.6×2	1.0 + 1.1	42.5	50	—
AP2001HT8	AP2001T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 6.5	—	—	—	—	—	0.6×2	1.1 + 1.1	45.0	60	—
AP2201HT8	AP2201T8	400-3-50	342	457	5.2 + 5.2	—	5.2 + 5.2	—	4.6 + 4.6	—	—	—	0.6×3	1.0 + 1.0 + 0.8	56.5	70	—
AP2211HT8	AP2211T8	400-3-50	342	457	9.5 + 9.5	—	6.5 + 6.5	—	—	—	—	—	0.6×2	1.1 + 1.1	47.0	60	—
AP2401HT8	AP2401T8	400-3-50	342	457	5.2 + 5.2	—	5.2 + 5.2	—	5.2 + 5.2	—	—	—	0.6×3	1.0 + 1.0 + 1.0	60.0	70	—
AP2411HT8	AP2411T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	—	—	—	—	0.6×2	1.1 + 1.1	49.0	60	—
AP2601HT8	AP2601T8	400-3-50	342	457	6.5 + 6.5	—	5.2 + 5.2	—	5.2 + 5.2	—	—	—	0.6×3	1.1 + 1.1 + 1.0	62.5	70	—
AP2801HT8	AP2801T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 6.5	—	5.2 + 5.2	—	—	—	0.6×3	1.1 + 1.1 + 1.0	65.0	80	—
AP3001HT8	AP3001T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 6.5	—	6.5 + 6.5	—	—	—	0.6×3	1.1 + 1.1 + 1.1	67.5	80	—
AP3201HT8	AP3201T8	400-3-50	342	457	5.2 + 5.2	—	5.2 + 5.2	—	5.2 + 5.2	—	5.2 + 5.2	—	0.6×4	1.0 + 1.0 + 1.0 + 1.0	80.0	90	—
AP3211HT8	AP3211T8	400-3-50	342	457	9.5 + 9.5	—	6.5 + 6.5	—	6.5 + 6.5	—	—	—	0.6×3	1.1 + 1.1 + 1.1	69.5	80	—
AP3401HT8	AP3401T8	400-3-50	342	457	6.5 + 6.5	—	5.2 + 5.2	—	5.2 + 5.2	—	5.2 + 5.2	—	0.6×4	1.1 + 1.0 + 1.0 + 1.0	82.5	100	—
AP3411HT8	AP3411T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	6.5 + 6.5	—	—	—	0.6×3	1.1 + 1.1 + 1.1	71.5	80	—
AP3601HT8	AP3601T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 6.5	—	5.2 + 5.2	—	5.2 + 5.2	—	0.6×4	1.1 + 1.1 + 1.0 + 1.0	85.0	100	—
AP3611HT8	AP3611T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	9.5 + 9.5	—	—	—	0.6×3	1.1 + 1.1 + 1.1	73.5	90	—
AP3801HT8	AP3801T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 9.5	—	6.5 + 6.5	—	5.2 + 5.2	—	0.6×4	1.1 + 1.1 + 1.1 + 1.0	87.5	100	—
AP4001HT8	AP4001T8	400-3-50	342	457	6.5 + 6.5	—	6.5 + 6.5	—	6.5 + 6.5	—	6.5 + 6.5	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	90.0	100	—
AP4201HT8	AP4201T8	400-3-50	342	457	9.5 + 9.5	—	6.5 + 6.5	—	6.5 + 6.5	—	6.5 + 6.5	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	92.0	110	—
AP4401HT8	AP4401T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	6.5 + 6.5	—	6.5 + 6.5	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	94.0	110	—
AP4601HT8	AP4601T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	9.5 + 9.5	—	6.5 + 6.5	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	96.0	110	—
AP4801HT8	AP4801T8	400-3-50	342	457	9.5 + 9.5	—	9.5 + 9.5	—	9.5 + 9.5	—	9.5 + 9.5	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	98.0	110	—

Legend
MCA : Minimum Circuit Amps
MOCP : Maximum Overcurrent Protection (Amps)
ICF : Maximum Instantaneous Current Flow Start
RLA : Rated Load Amps
LRA : Locked Rotor Amps
FLA : Full Load Amps
kW : Fan Motor Rated Output (kW)

NOTE :
RLA is based on the following conditions.
Indoor temperature : 27°C DB/19°C WB
Outdoor temperature : 35°C DB

■ Single outdoor unit

60Hz

Heat Pump Model MMY-	Nominal Voltage (V-Ph-Hz)	Voltage Range		Compressor			Fan Motor		Power Supply		
		Min	Max	RLA	LRA		kW	FLA	MCA	MOCP	ICF
MAP0501HT7	380-3-60	342	418	4.2 + 4.2			0.60	0.8	16.5	20	—
MAP0601HT7	380-3-60	342	418	4.8 + 4.8			0.60	0.8	16.5	20	—
MAP0801HT7	380-3-60	342	418	5.4 + 5.4			0.60	1.0	20.0	30	—
MAP1001HT7	380-3-60	342	418	6.9 + 6.9			0.60	1.1	22.5	30	—
MAP1201HT7	380-3-60	342	418	10.0 + 10.0			0.60	1.1	24.5	30	—

■ Combination of outdoor unit

Heat Pump Model MMY-	Nominal Voltage (V-Ph-Hz)	Voltage Range		Compressor						Fan Motor		Power Supply		
				Unit No.1		Unit No.2		Unit No.3		Unit No.4				
		Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	RLA	LRA	kW	FLA	MCA	MOCP	ICF
AP1401HT7	380-3-60	342	418	5.4 + 5.4	—	4.8 + 4.8	—	—	—	—	—	0.6×2	1.0 + 0.8	36.5	40	—
AP1601HT7	380-3-60	342	418	5.4 + 5.2	—	5.4 + 5.4	—	—	—	—	—	0.6×2	1.0 + 1.0	40.0	50	—
AP1801HT7	380-3-60	342	418	6.9 + 6.9	—	5.4 + 5.4	—	—	—	—	—	0.6×2	1.0 + 1.1	42.5	50	—
AP2001HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 6.9	—	—	—	—	—	0.6×2	1.1 + 1.1	45.0	60	—
AP2201HT7	380-3-60	342	418	5.4 + 5.4	—	5.4 + 5.4	—	4.8 + 4.8	—	—	—	0.6×3	1.0 + 1.0 + 0.8	56.5	70	—
AP2211HT7	380-3-60	342	418	10.0 + 10.0	—	6.9 + 6.9	—	—	—	—	—	0.6×2	1.1 + 1.1	47.0	60	—
AP2401HT7	380-3-60	342	418	5.4 + 5.4	—	5.4 + 5.4	—	5.4 + 5.4	—	—	—	0.6×3	1.0 + 1.0 + 1.0	60.0	70	—
AP2411HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	—	—	—	—	0.6×2	1.1 + 1.1	49.0	60	—
AP2601HT7	380-3-60	342	418	6.9 + 6.9	—	5.4 + 5.4	—	5.4 + 5.4	—	—	—	0.6×3	1.1 + 1.1 + 1.0	62.5	70	—
AP2801HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 6.9	—	5.4 + 5.4	—	—	—	0.6×3	1.1 + 1.1 + 1.0	65.0	80	—
AP3001HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 6.9	—	6.9 + 6.9	—	—	—	0.6×3	1.1 + 1.1 + 1.1	67.5	80	—
AP3201HT7	380-3-60	342	418	5.4 + 5.4	—	5.4 + 5.4	—	5.4 + 5.4	—	5.4 + 5.4	—	0.6×4	1.0 + 1.0 + 1.0 + 1.0	80.0	90	—
AP3211HT7	380-3-60	342	418	10.0 + 10.0	—	6.9 + 6.9	—	6.9 + 6.9	—	—	—	0.6×3	1.1 + 1.1 + 1.1	69.5	80	—
AP3401HT7	380-3-60	342	418	6.9 + 6.9	—	5.4 + 5.4	—	5.4 + 5.4	—	5.4 + 5.4	—	0.6×4	1.1 + 1.0 + 1.0 + 1.0	82.5	100	—
AP3411HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	6.9 + 6.9	—	—	—	0.6×3	1.1 + 1.1 + 1.1	71.5	80	—
AP3601HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 6.9	—	5.4 + 5.4	—	5.4 + 5.4	—	0.6×4	1.1 + 1.1 + 1.0 + 1.0	85.0	100	—
AP3611HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	10.0 + 10.0	—	—	—	0.6×3	1.1 + 1.1 + 1.1	73.5	90	—
AP3801HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 9.9	—	6.9 + 6.9	—	5.4 + 5.4	—	0.6×4	1.1 + 1.1 + 1.1 + 1.0	87.5	100	—
AP4001HT7	380-3-60	342	418	6.9 + 6.9	—	6.9 + 6.9	—	6.9 + 6.9	—	6.9 + 6.9	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	90.0	100	—
AP4201HT7	380-3-60	342	418	10.0 + 10.0	—	6.9 + 6.9	—	6.9 + 6.9	—	6.9 + 6.9	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	92.0	110	—
AP4401HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	6.9 + 6.9	—	6.9 + 6.9	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	94.0	110	—
AP4601HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	10.0 + 10.0	—	6.9 + 6.9	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	96.0	110	—
AP4801HT7	380-3-60	342	418	10.0 + 10.0	—	10.0 + 10.0	—	10.0 + 10.0	—	10.0 + 10.0	—	0.6×4	1.1 + 1.1 + 1.1 + 1.1	98.0	110	—

Legend
MCA : Minimum Circuit Amps
MOCP : Maximum Overcurrent Protection (Amps)
ICF : Maximum Instantaneous Current Flow Start
RLA : Rated Load Amps
LRA : Locked Rotor Amps
FLA : Full Load Amps
kW : Fan Motor Rated Output (kW)

NOTE :
RLA is based on the following conditions.
Indoor temperature : 27°C DB/19°C WB
Outdoor temperature : 35°C DB

11

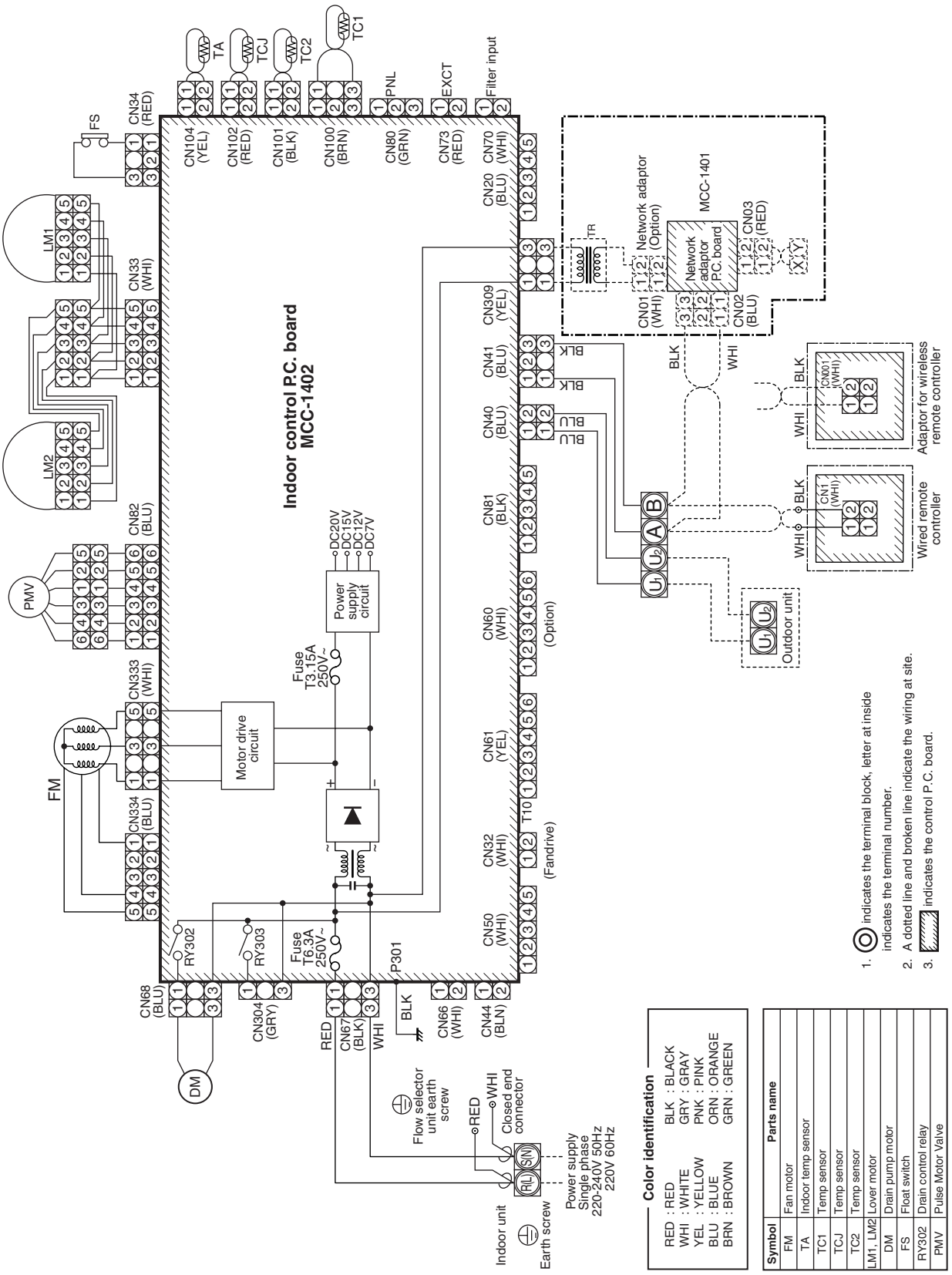
Wiring diagram

11 Wiring diagram

1. Indoor Unit

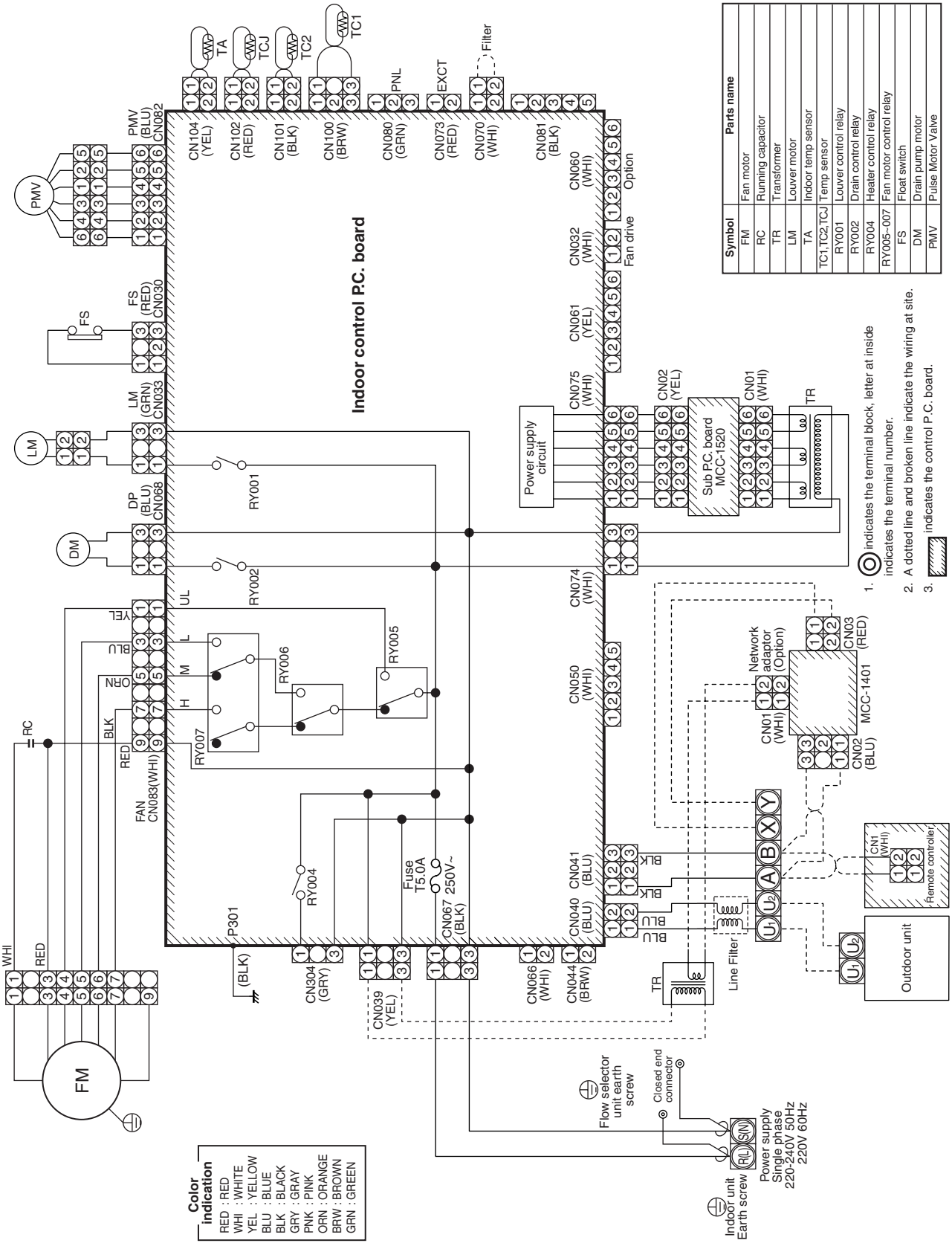
1-1. 4-way Air Discharge Cassette Type

Model: MMU-AP0091H, AP0121H, AP0151H, AP0181H, AP0241H, MMU-AP0271H, AP0301H, AP0361H, AP0481H, AP0561H



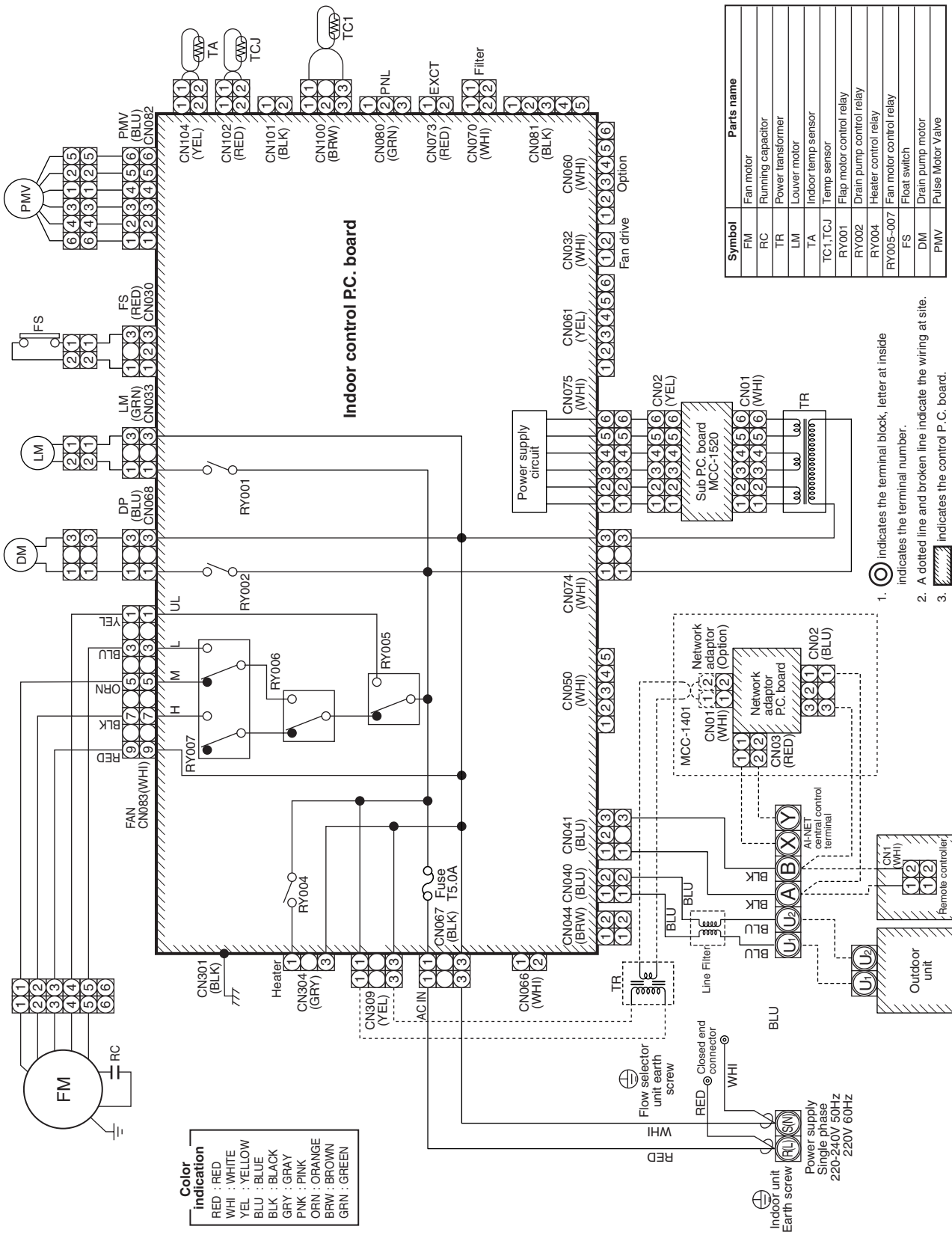
1-2. 2-way Air Discharge Cassette Type

Model: MMU-AP0071WH, AP0091WH, AP0121WH, AP0151WH, AP0181WH, MMU-AP0241WH, AP0271WH, AP0301WH, AP0481WH

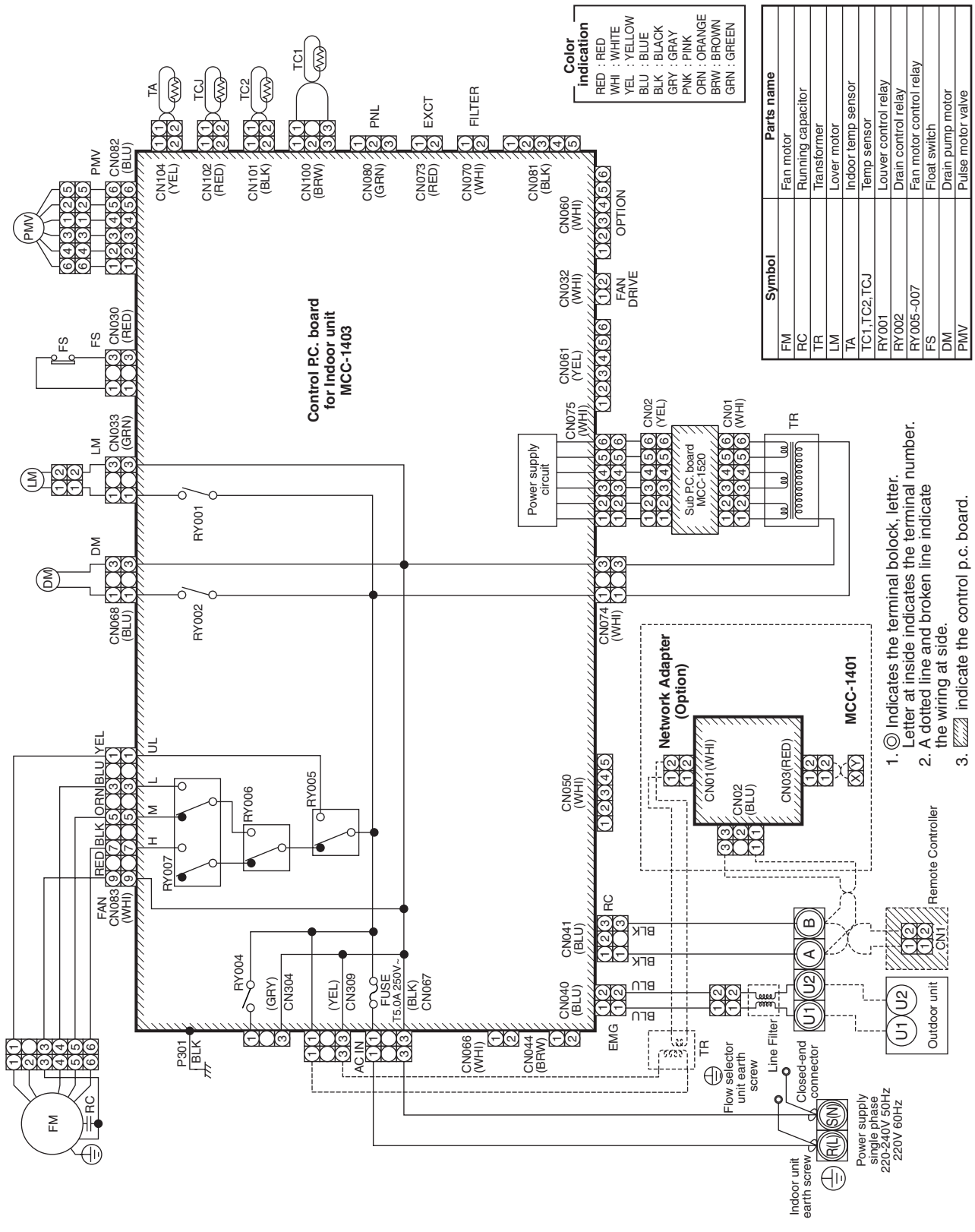


1-3. 1-way Air Discharge Cassette Type (Compact type)

Model: MMU-AP0071YH, AP0091YH, AP0121YH

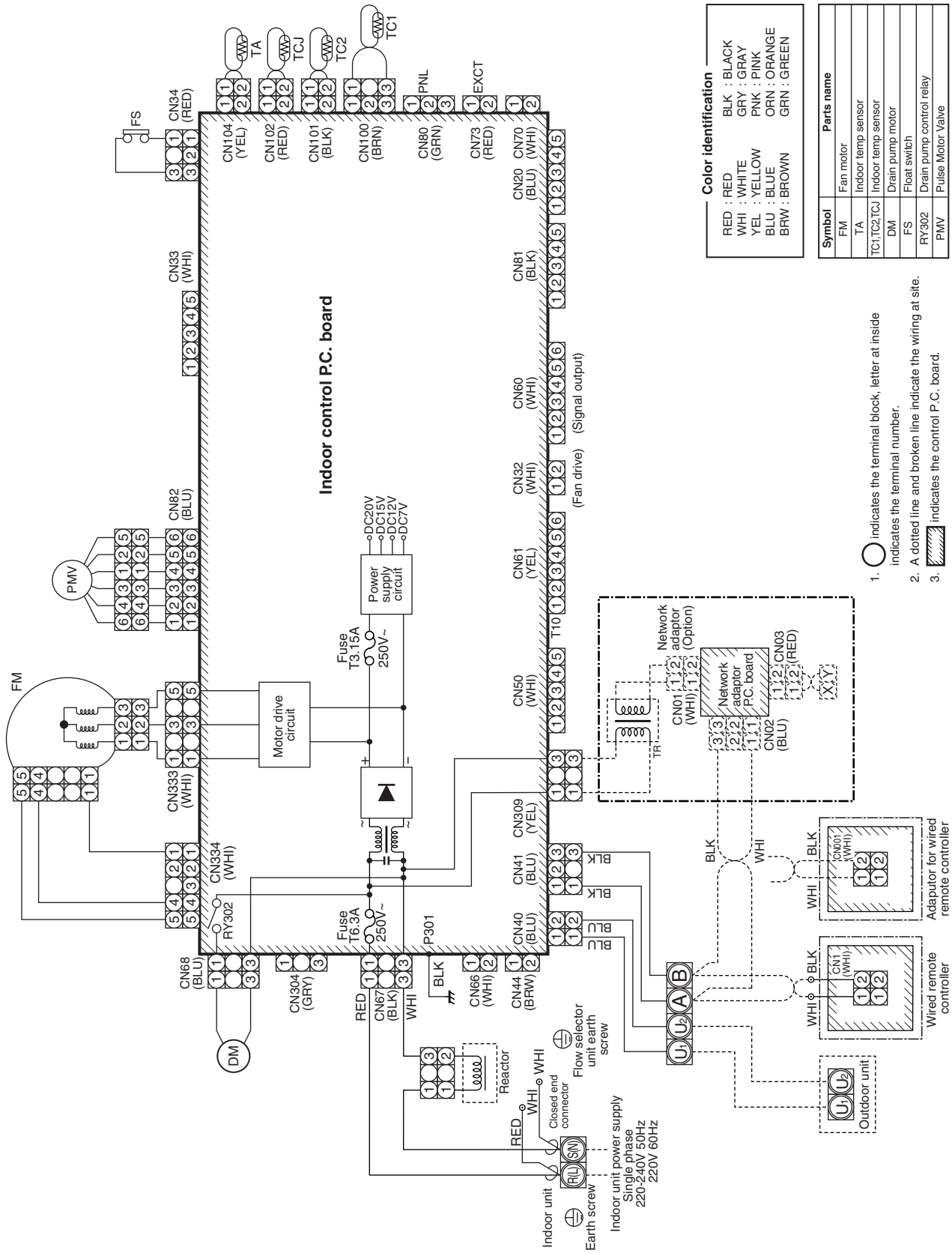


Model: MMU-AP0151SH, AP0181SH, AP0241SH



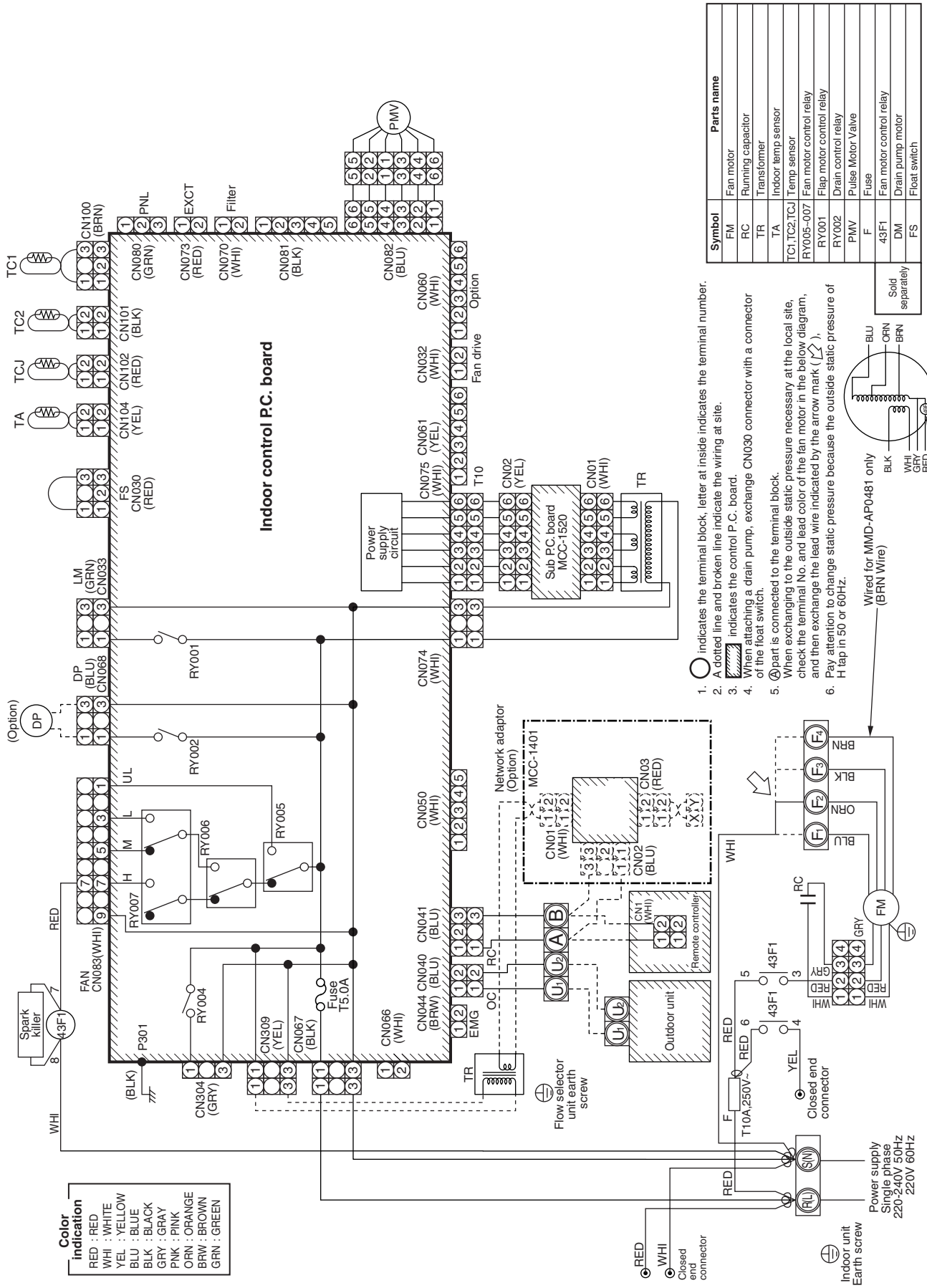
1-4. Concealed Duct Standard Type

Model: MMD-AP0071BH, AP0091BH, AP0121BH, AP0151BH, AP0181BH, AP0241BH
MMD-AP0271BH, AP0301BH, AP0361BH, AP0481BH, AP0561BH



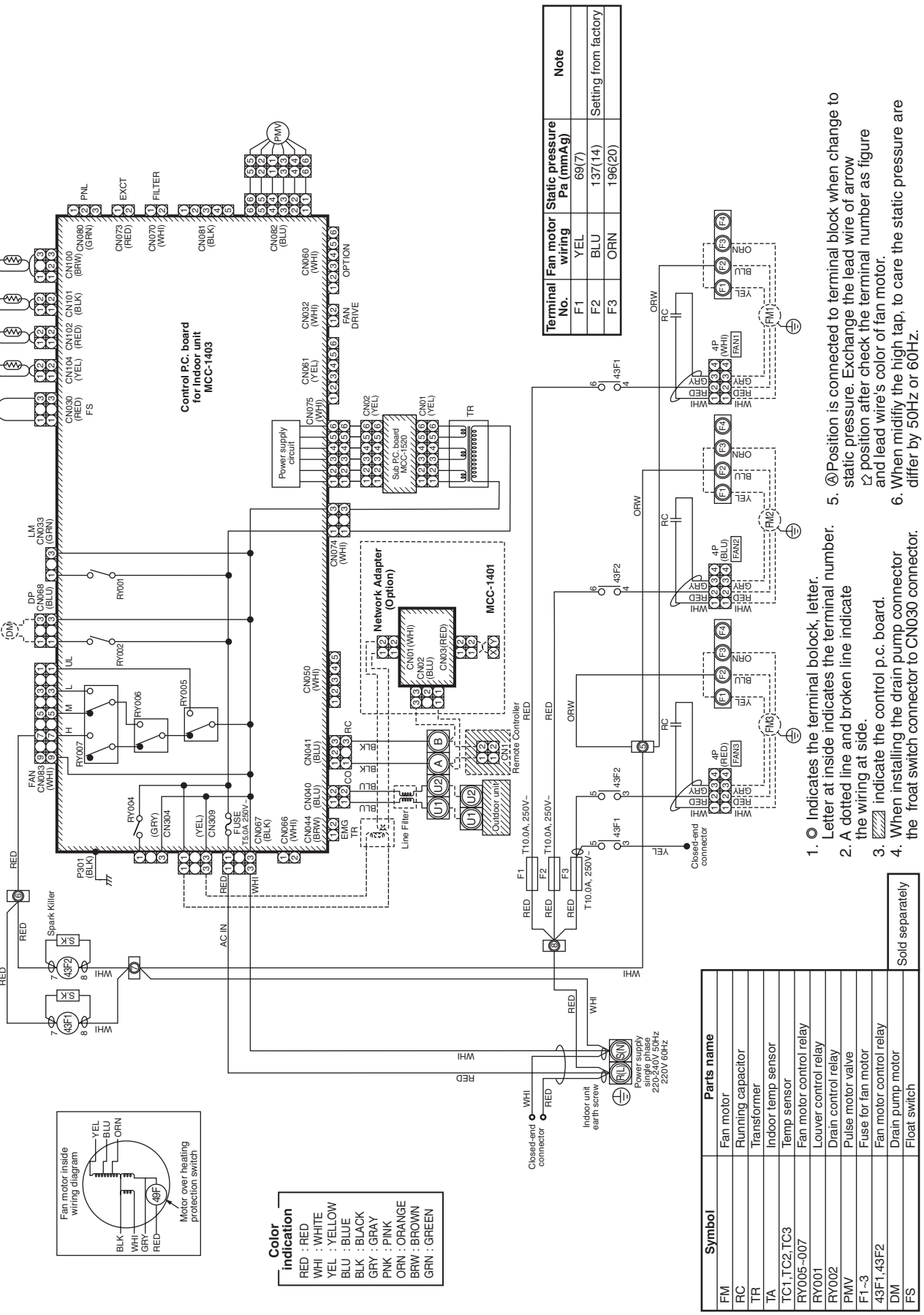
1-5. Concealed Duct High Static Pressure Type

Model: MMD-AP0181H, AP0241H, AP0271H, AP0361H, AP0481H



Symbol	Parts name
FM	Fan motor
RC	Running capacitor
TR	Transformer
TA	Indoor temp sensor
TC1,TC2,TCJ	Temp sensor
RY005-007	Fan motor control relay
RY001	Flap motor control relay
RY002	Drain control relay
PMV	Pulse Motor Valve
F	Fuse
43F1	Fan motor control relay
DM	Drain pump motor
FS	Float switch

Model: MMD-AP0721H, AP0961H



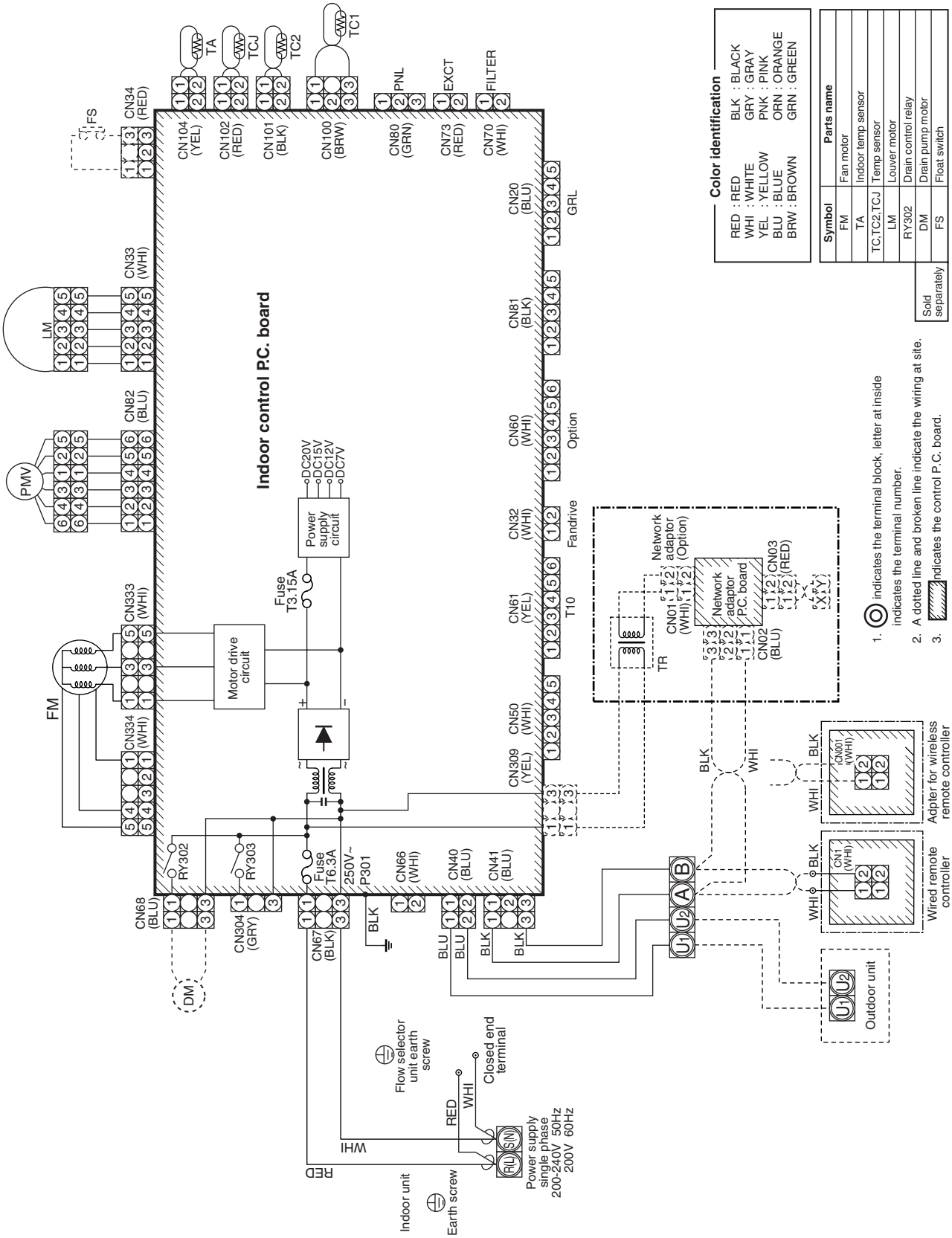
Terminal No.	Fan motor wiring	Static pressure Pa (mmAg)	Note
F1	YEL	69(7)	
F2	BLU	137(14)	Setting from factory
F3	ORN	196(20)	

1. ⊙ Indicates the terminal bolock, letter. Letter at inside indicates the terminal number.
2. A dotted line and broken line indicate the wiring at side.
3. ▨ indicate the control p.c. board.
4. When installing the drain pump connector the froat switch connector to CN030 connector.
5. Ⓐ Position is connected to terminal block when change to static pressure. Exchange the lead wire of arrow ⇨ position after check the terminal number as figure and lead wire's color of fan motor.
6. When midifiy the high tap, to care the static pressure are differ by 50Hz or 60Hz.

Symbol	Parts name	
FM	Fan motor	Sold separately
RC	Running capacitor	
TR	Transformer	
TA	Indoor temp sensor	
TC1,TC2,TC3	Temp sensor	
RY005~007	Fan motor control relay	
RY001	Louver control relay	
RY002	Drain control relay	
PMV	Pulse motor valve	
F1~3	Fuse for fan motor	
43F1,43F2	Fan motor control relay	
DM	Drain pump motor	
FS	Float switch	

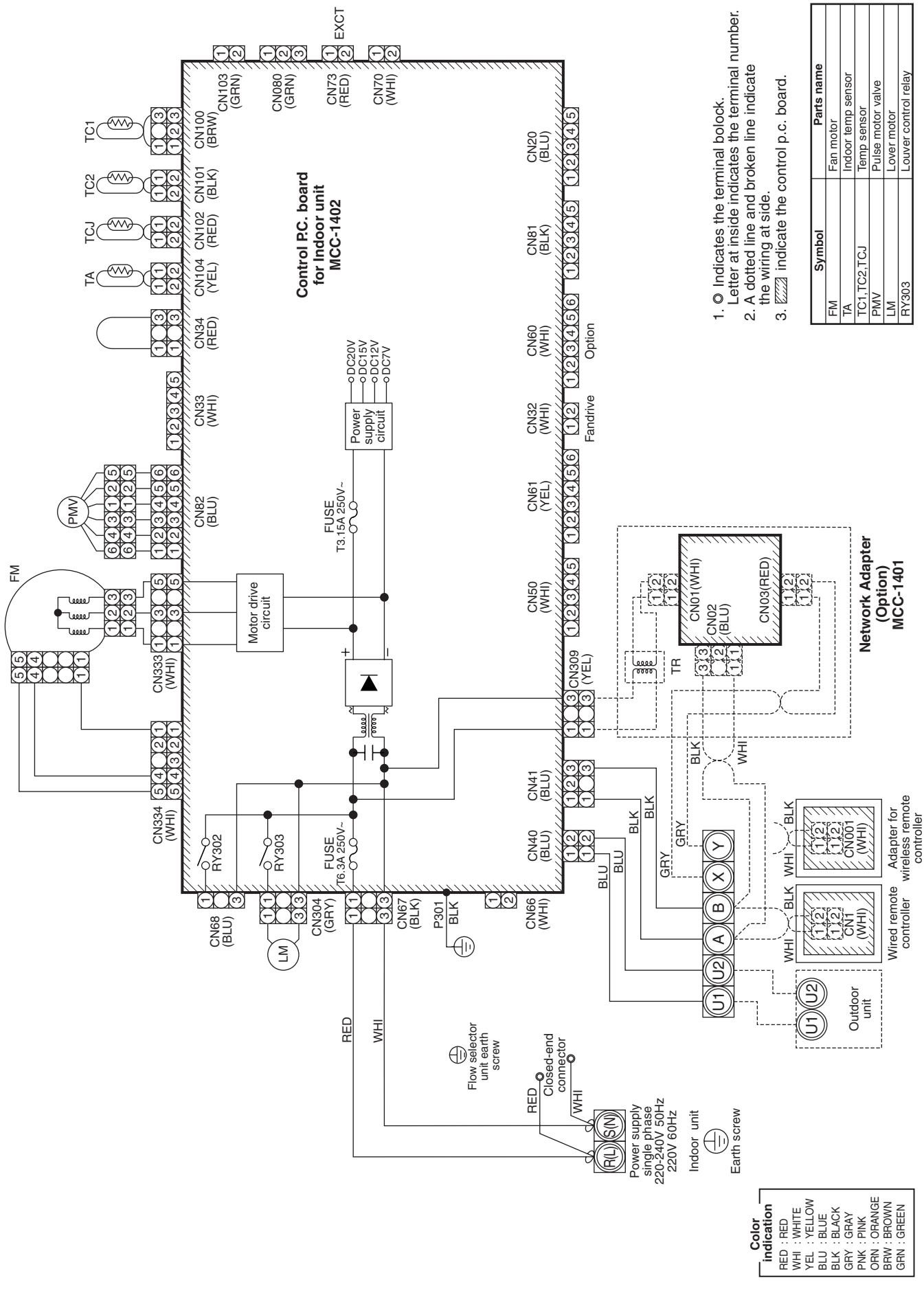
1-6. Under Ceiling Type

Model: MMC-AP0151H, AP0181H, AP0241H, AP0271H, AP0361H, AP0481H



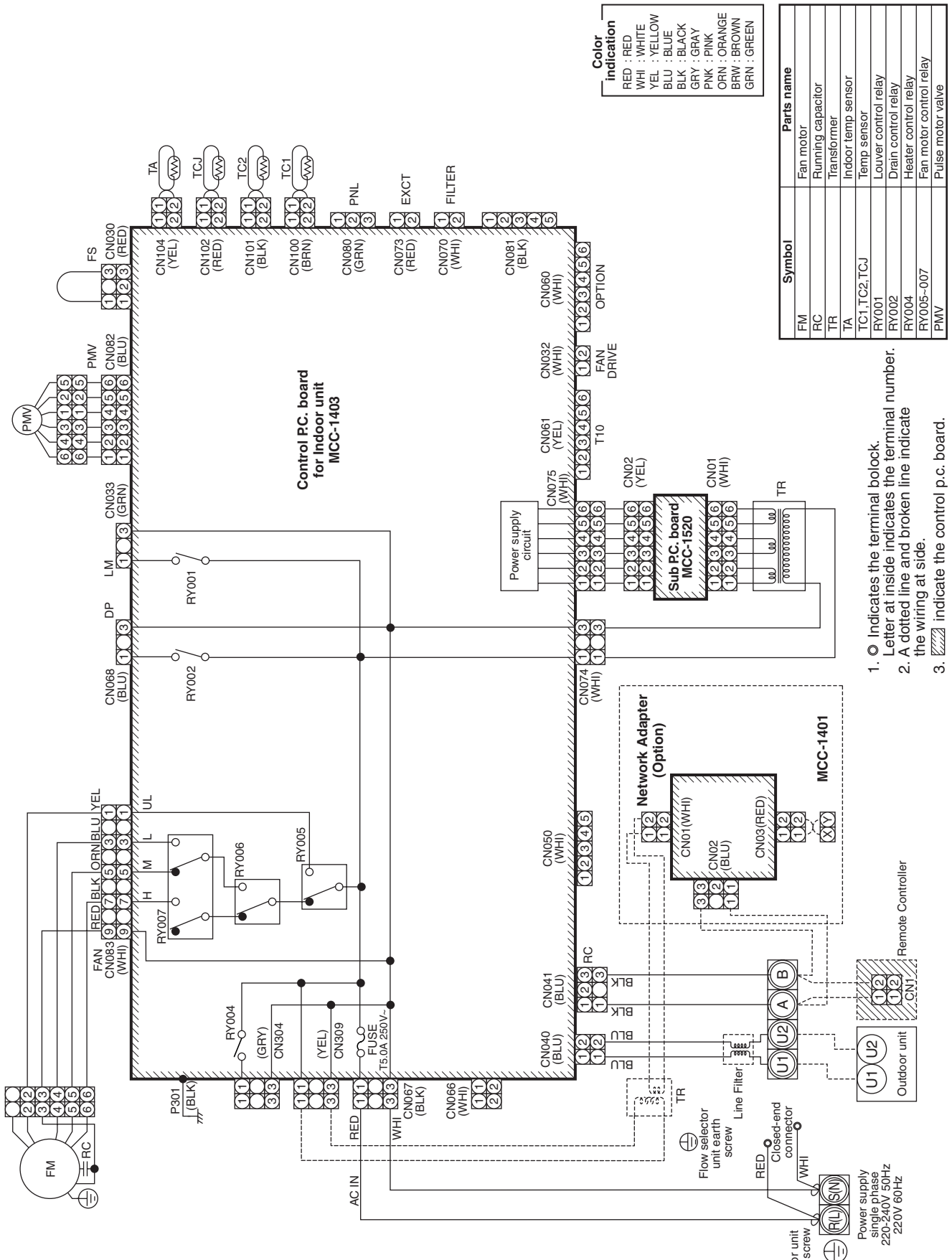
1-7. High Wall Type

Model: MMK-AP0071H, AP0091H, AP0121H, AP0151H, AP0181H, AP0241H



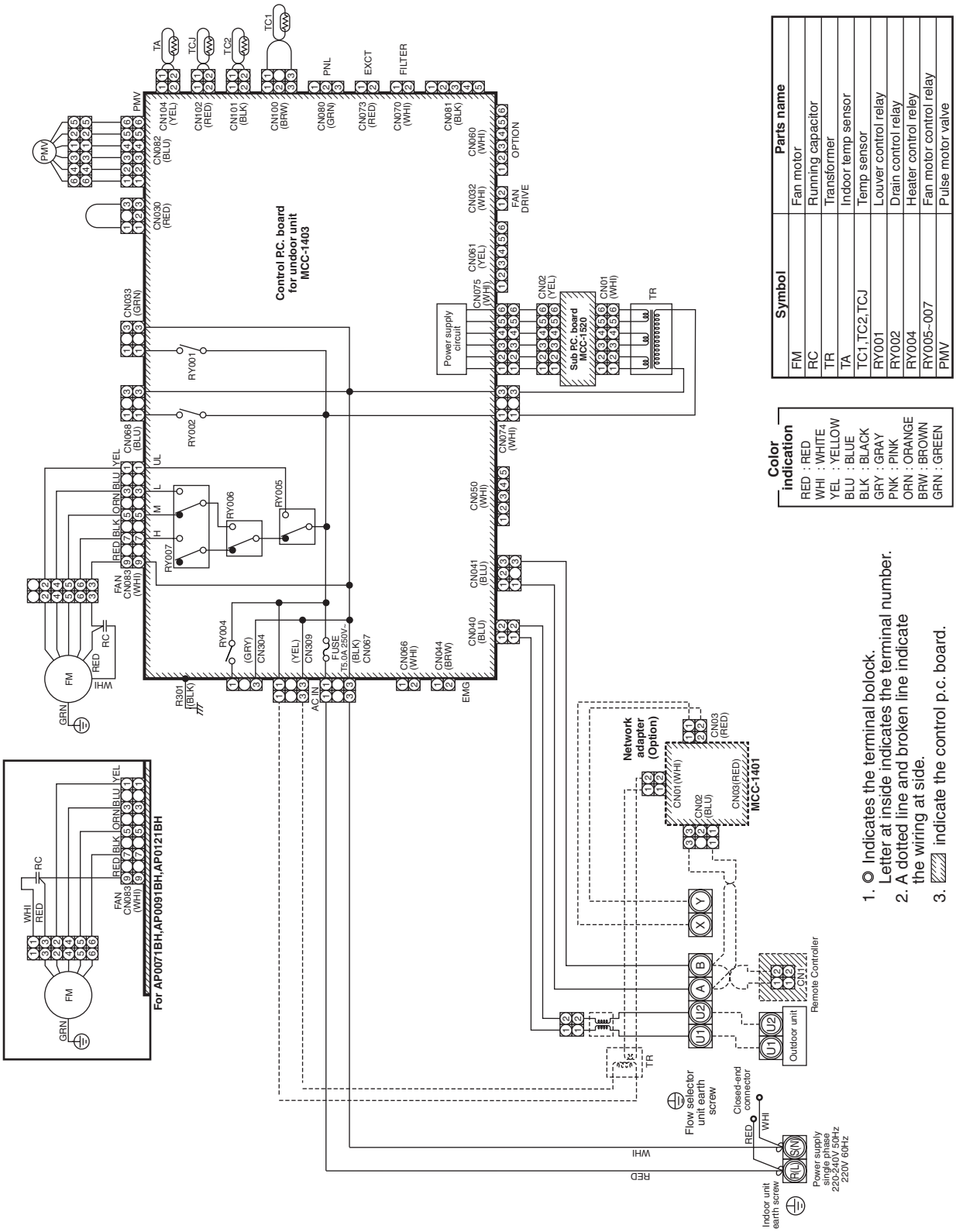
1-8. Floor Standing Cabinet Type

Model: MML-AP0071H, AP0091H, AP0121H, AP0151H, AP0181H, AP0241H



1-9. Floor Standing Concealed Type

Model: MML-AP0071BH, AP0091BH, AP0121BH, AP0151BH, AP0181BH, AP0241BH



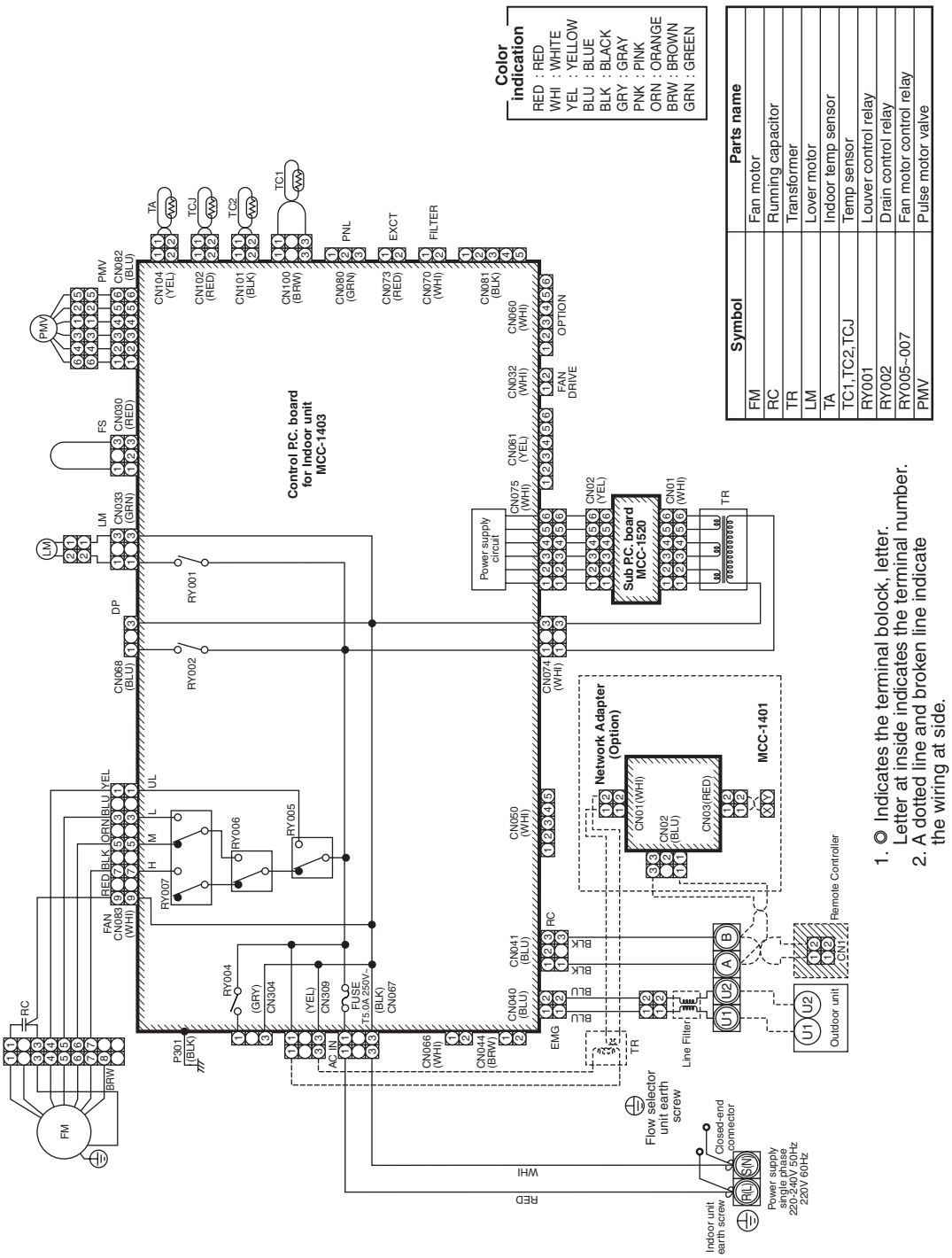
Symbol	Parts name
FM	Fan motor
RC	Running capacitor
TR	Transformer
TA	Indoor temp sensor
TC1,TC2,TCJ	Temp sensor
RY001	Louver control relay
RY002	Drain control relay
RY004	Heater control relay
RY005–007	Fan motor control relay
PMV	Pulse motor valve

Color indication

RED : RED
WHI : WHITE
YEL : YELLOW
BLU : BLUE
BLK : BLACK
GRY : GRAY
PNK : PINK
ORN : ORANGE
BRW : BROWN
GRN : GREEN

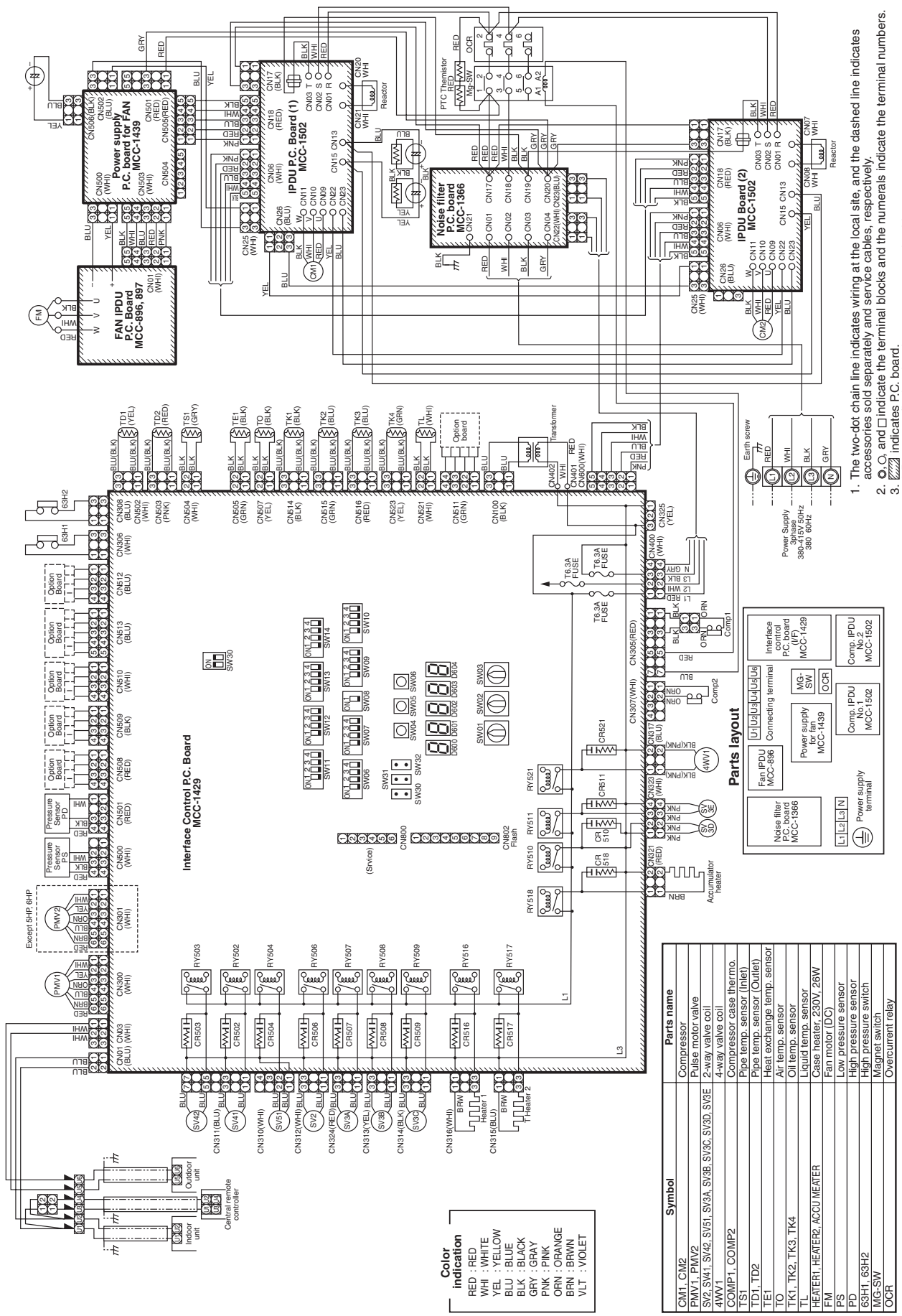
1-10. Floor Standing Type

Model: MMF-AP0151H, AP0181H, AP0241H, AP0271H, AP0361H, AP0481H, AP0561H



2. Outdoor Unit

Model: MMY-MAP0501HT*, MAP0601HT*, MAP0801HT*, MAP1001HT*, MAP1201HT*



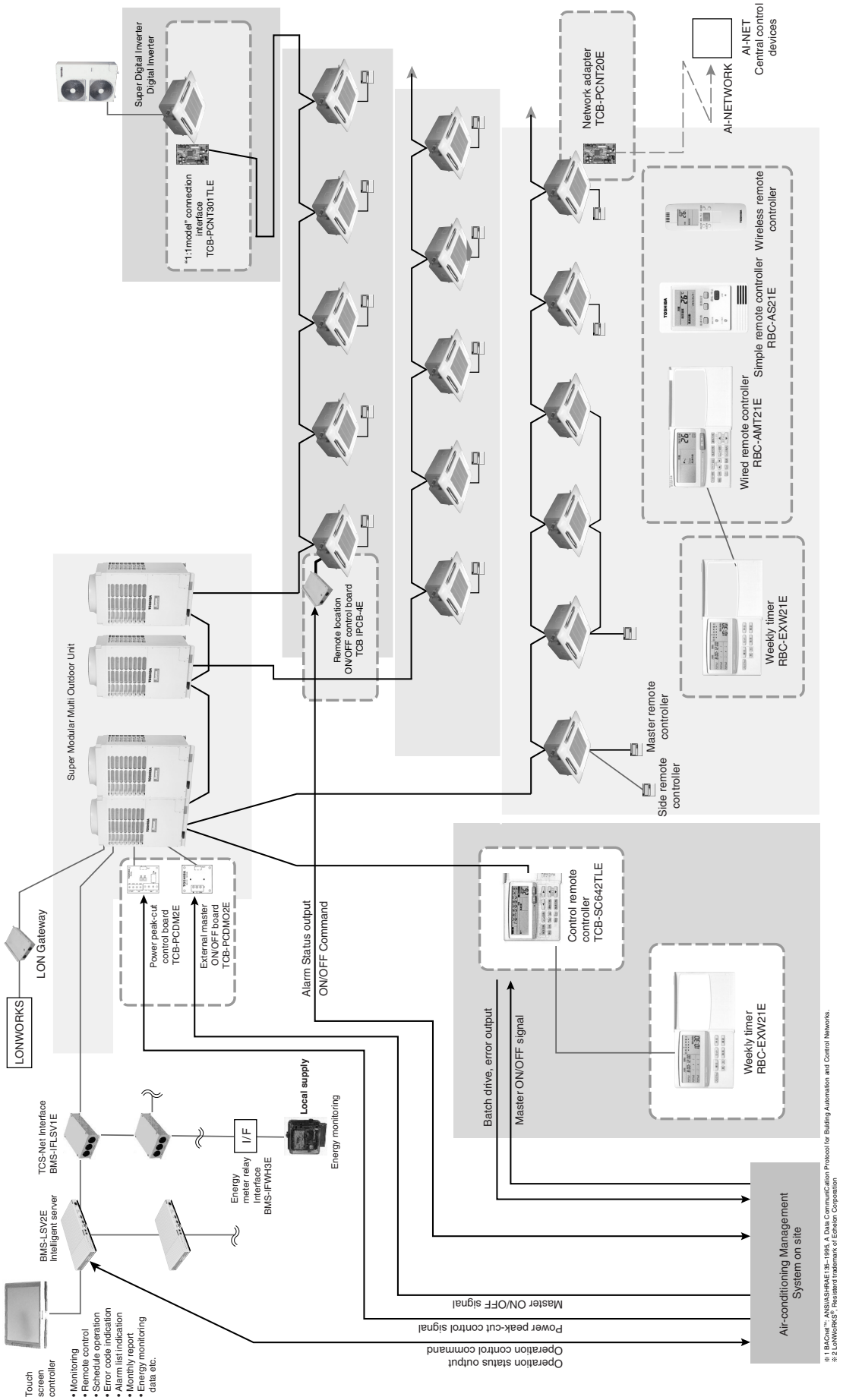
1. The two-dot chain line indicates wiring at the local site, and the dashed line indicates accessories sold separately and service cables, respectively.
2. ●,○, and □ indicate the terminal blocks and the numerals indicate the terminal numbers.
3. ▨ indicates P.C. board.
   * Be sure to fix the electric parts cover surely with two screws. (Otherwise water enters into the box resulting in a trouble.)

Symbol	Parts name
CM1, CM2	Compressor
PMV1, PMV2	Pulse motor valve
SV2, SV41, SV42, SV51, SV3A, SV3B, SV3C, SV3D, SV3E	2-way valve coil
4WV1	4-way valve coil
COMP1, COMP2	Compressor case thermo.
TS1	Pipe temp. sensor (Inlet)
TD1, TD2	Pipe temp. sensor (Outlet)
TE1	Heat exchange temp. sensor
TO	Air temp. sensor
TK1, TK2, TK3, TK4	Oil temp. sensor
TL	Liquid temp. sensor
HEATER1, HEATER2, ACCU MEATER	Case heater, 230V, 26W
FM	Fan motor (DC)
PS	Low pressure sensor
PD	High pressure sensor
63H1, 63H2	High pressure switch
MG-SW	Magnet switch
OCR	Overcurrent relay

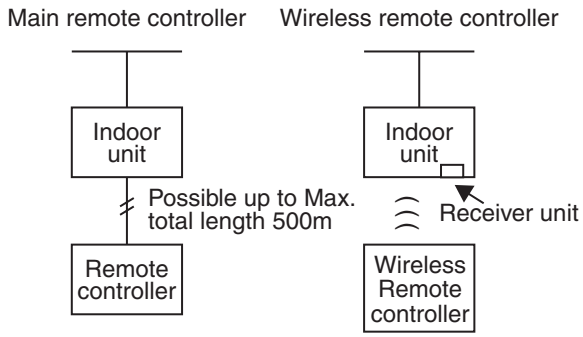
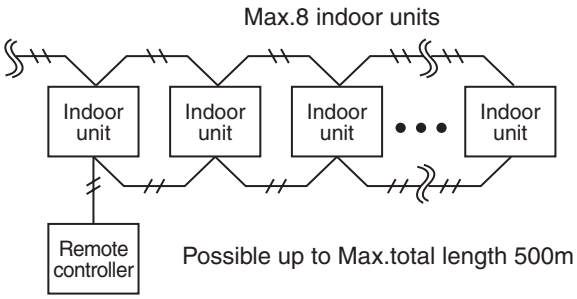
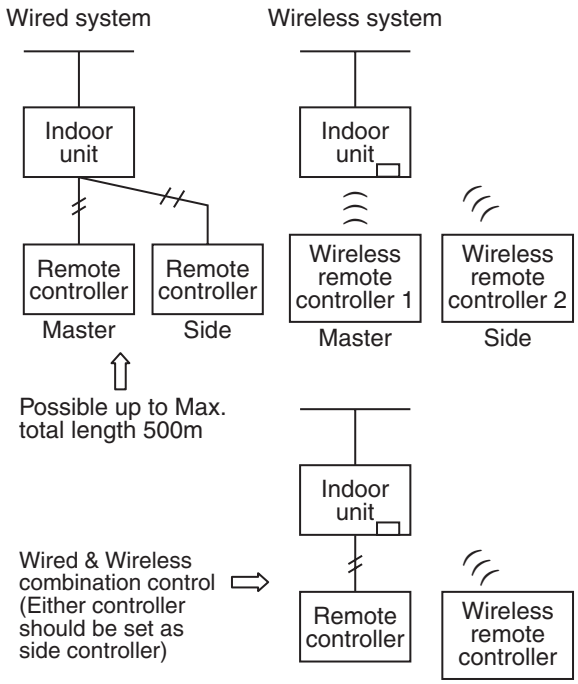
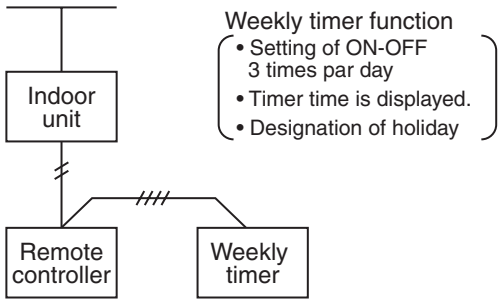
12

Controls

1:1 Outline of application Control

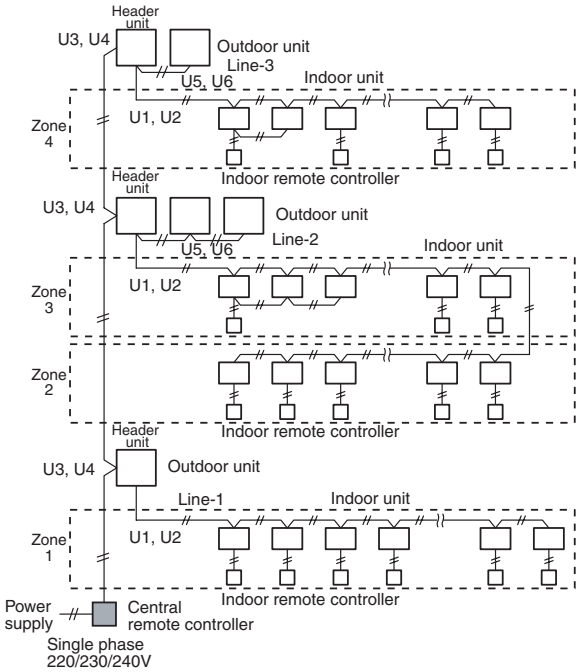
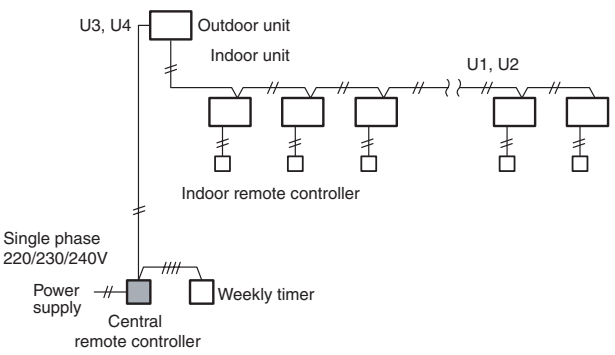


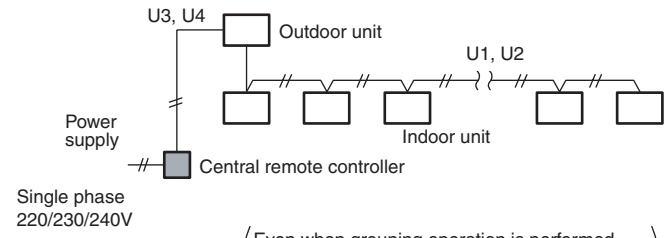
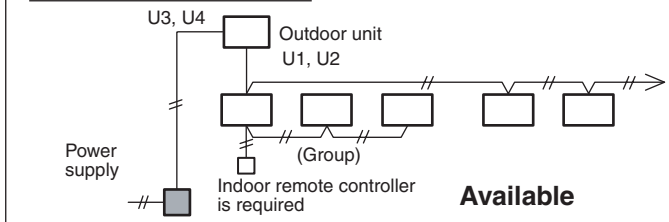
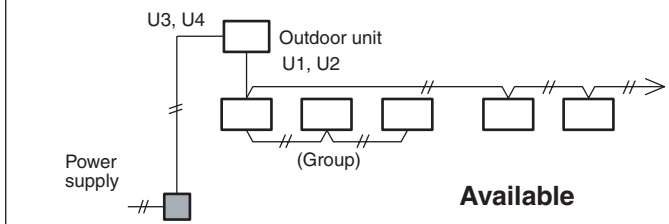
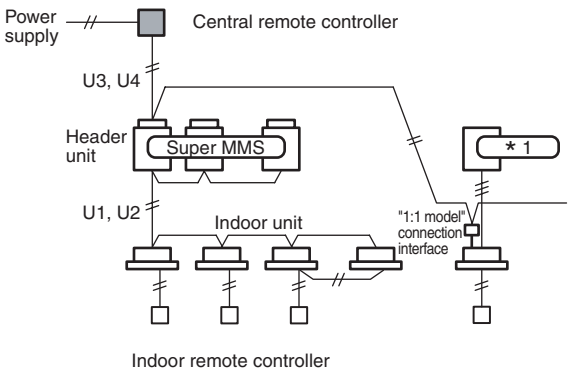
1. Applications for indoor remote controller

	Basic function	System diagram	Model
1-1	**Individual control** Air conditioner is individually operated at a distance.		• Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E** • Wireless remote controller kit **TCB-AX21U(W)-E** **RBC-AX22CE** **TCB-AX21E**
1-2	**GROUP control** One remote controller can control group of Max. 8 indoor units. Operating on the same setting		• Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E**
1-3	**Two remote control** Air conditioner is controlled by two remote controllers at two places.		• Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E** • Wireless remote controller kit **TCB-AX21U(W)-E** **RBC-AX22CE** **TCB-AX21E**
1-4	**Control by weekly timer** Weekly schedule operation		• Wired remote controller **RBC-AMT21E** + • Weekly timer **RBC-EXW21E**

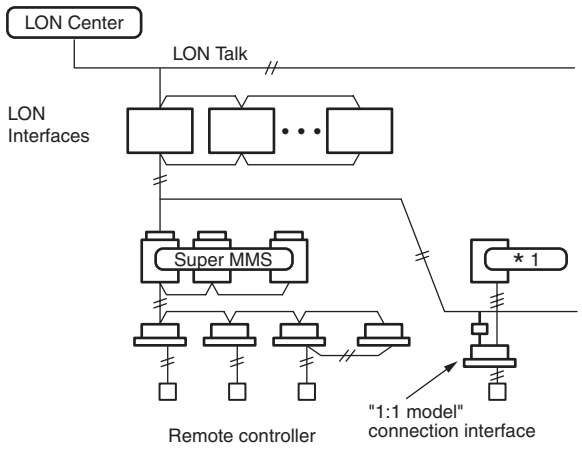
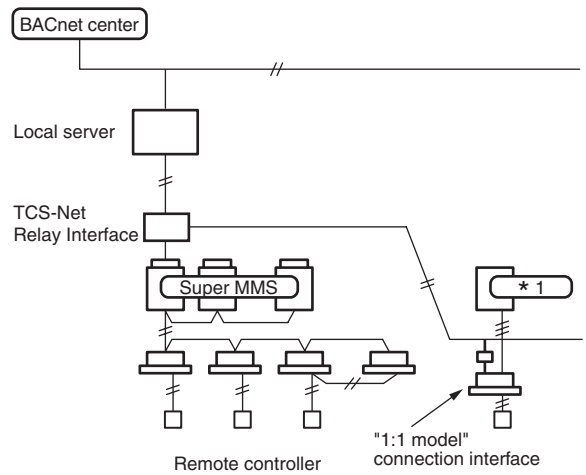
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2. Application controls for central remote controller

	Basic function	System diagram	Model
2-1	Central management controller for 64 units	 **Function of central remote controller** • Individual control up to 64 indoor units • Individual control for max. 64 indoor units divided 1 to 4 zone. (Up to 16 indoor units for each zone.) • Up to 16 outdoor header units are connectable. • 4 type central control setting to inhibit individual operation by remote controller can be selected. • Setting for one of 1 to 4 zone is available. • Usable with other central comtrol devices (Up to 10 central control devices in one control circuit) • Two control mode selectivity Central controller mode/Remote controller mode • Setting of simultaneous ON/OFF 3 times for each day of the week combined with weekly timer.	• Central remote controller **TCB-SC642TLE** **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E**
2-2	Central remote controller + Weekly timer [Weekly operation schedule can be set by connecting a weekly timer to the central remote controller]		• Central remote controller **TCB-SC642TLE** + • Weekly timer **RBC-EXW21E** **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** or • Simple remote controller **RBC-AS21E**

	Basic function	System diagram	Model
2-3	Remote central control without indoor remote controller	 (Even when grouping operation is performed by connecting multiple indoor units to 1 line, the indoor remote controller is required.) Example of grouping operation  	• Central remote controller **TCB-SC642TLE** **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E**
2-4	Central management control with "1 : 1 model"	 * TOSHIBA Digital Inverter System and Super Digital Inverter System	• Central remote controller **TCB-SC642TLE** • "1 : 1 model" connection interface **TCB-PCNT30TLE** [RAV-SM560KRT-E, SM800KRT-E are not available] **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E**

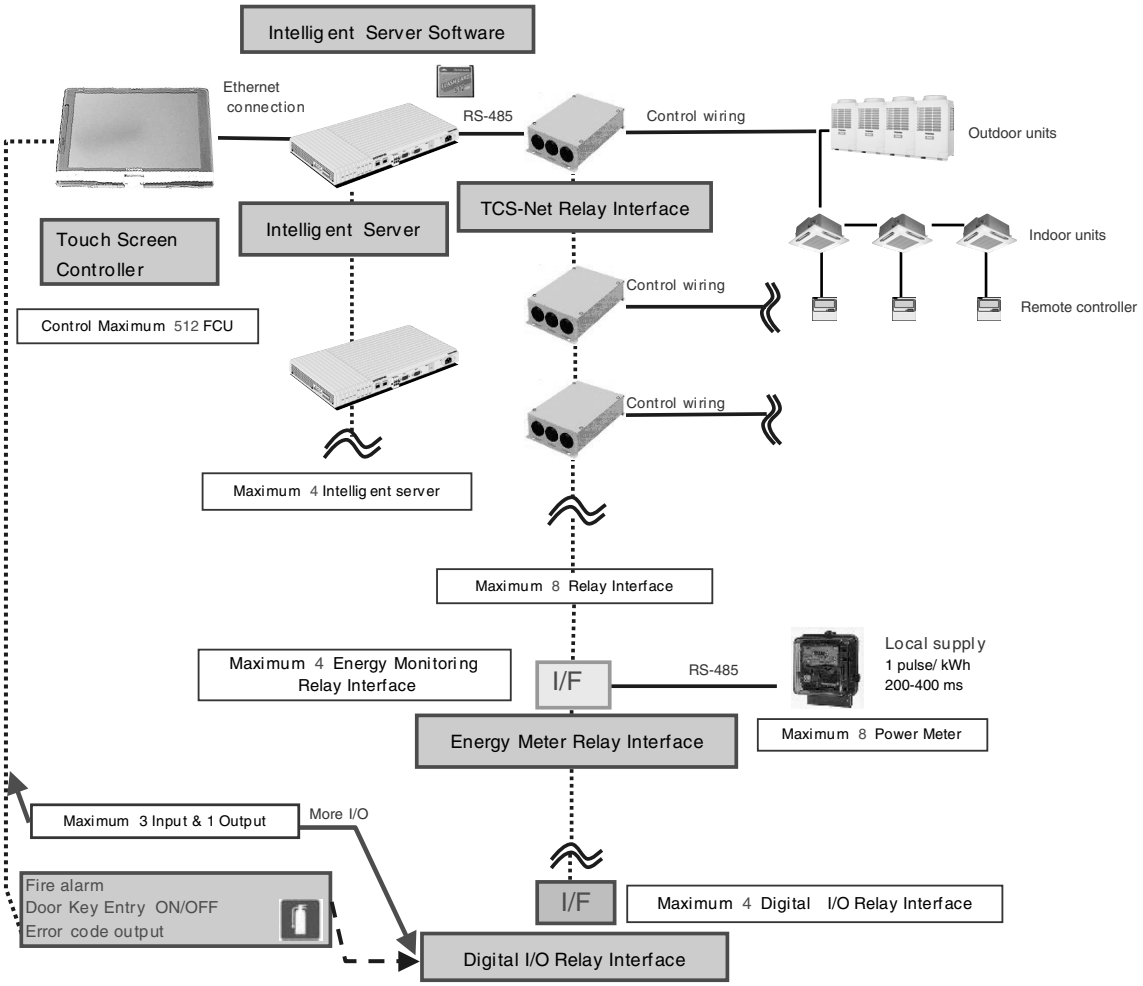
3. Application control for network

	Basic function	System diagram	Model
3-1-1	LONWORKS	 *1 TOSHIBA Digital Inverter System and Super Digital Inverter System The LONWORKS interface shall be connected between a building management computer and the Super MMS air conditioning system.	• LON Gateway **TCB-IFLN****** • "1 : 1 model" connection interface **TCB-PCNT30TLE** [RAV-SM560KRT-E, SM800KRT-E are not available] **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** or • Simple remote controller **RBC-AS21E**
3-1-2	BACnet	 *1 TOSHIBA Digital Inverter System and Super Digital Inverter System The local server shall be connected under the BACnet network, and shall be connected the Super MMS air conditioning system through the interface.	• BACnet local server **BMS-LSV******** • TCS-Net Relay Interface **BMS-IFLSV1E** • "1 : 1 model" connection interface **TCB-PCNT30TLE** [RAV-SM560KRT-E, SM800KRT-E are not available] **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E**

Touch screen controller system

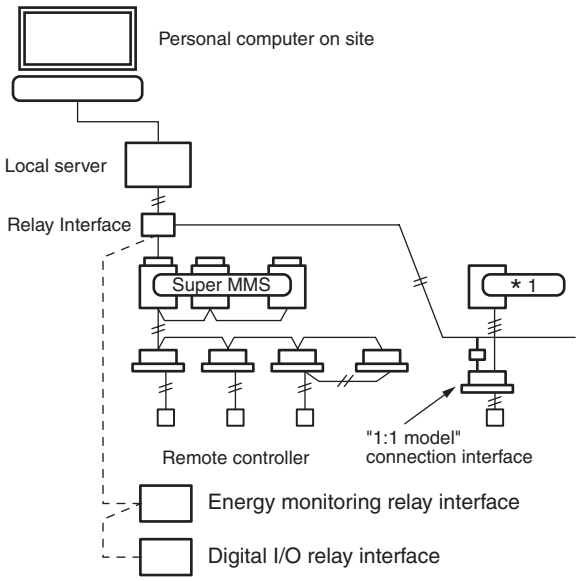
System Diagram

3-2-1



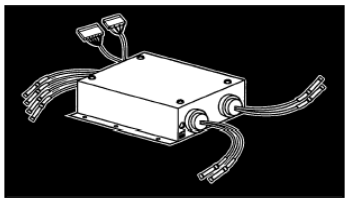
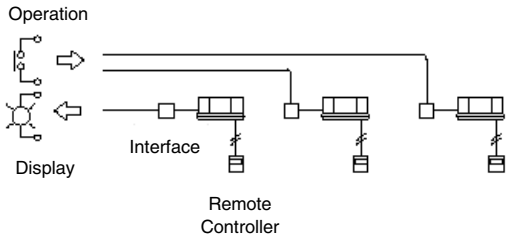
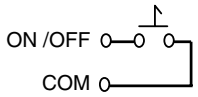
	Model Name	Model Name	Specification
Devices	Touch Screen controller (English version)	BMS-TP0640ACE	Max 64 FCU , without electrical bill calculation
		BMS-TP5120ACE	Max 512 FCU , without electrical bill calculation
		BMS-TP0640PWE	Max 64 FCU , with electrical bill calculation
		BMS-TP5120PWE	Max 512 FCU , with electrical bill calculation
	Intelligent Server	BMS-LSV2E	Server in between Screen controller & Control wiring
	Intelligent Server Software	BMS-STCC01E	Installed to Intelligent Server
	TCS-Net Relay Interface	BMS-IFLSV1E	I/F in between Intelligent server & Control wiring
	Energy Monitoring Relay Interface	BMS-IFWH3E	I/F for Power Meter
	Digital I/O Relay Interface	BMS-IFDD01E	I/F for I/O signal

Function	(1) Monitoring air-conditioners	Operation status can be seen according to a unit. 【Unit】 All building, All tenants, Each tenant, Each area, Each air-conditioning system 【Monitoring contents】 Operation and alarm status, Setting status for each air-conditioning system
	(2) Operating of air-conditioners	Master / individual control can be performed according to a unit. 【Operating contents】 ON/OFF, Operation setting （operation mode, air volume, frap position, setting temp., inhibited setting from remote location）
	(3) Schedule operation	Air-conditioners are operated according to set-up schedule / operation pattern. Schedule opretaion can be performed according to a unit. 【Operation pattern】 Weekly pattern, special day pattern (4 pattern), No-work days pattern
	(4) Alarm list display	The present alarm contents are list-displayed. 【Display contents】 Alarm contents, Unit number, Generated time
	(5) Alarm record display	The past alarm records are list-displayed. 【Display contents】 Alarm contents, Unit number, Generated time
	(6) Monthly report data extraction	Monthly report data is wrtten in "Compact Flash". Monthly report can be created according to a unit using monthly report software. 【Monthly report contents】 The number of ON/OFF, Operating time, Results of energy monitoring
	(7) Energy monitoring data extraction	Power consumption data is written in "Compact Flash". Energy monitoring can be performed according to a unit using energy monitoring software. 【Energy monitoring data】 Power consumption according to the power meter

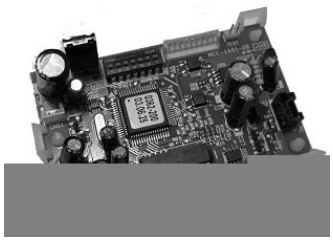
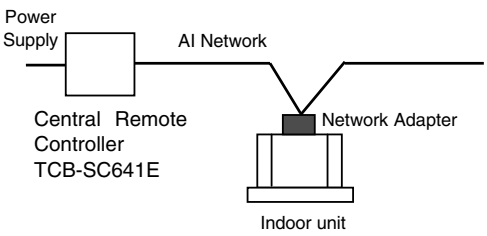
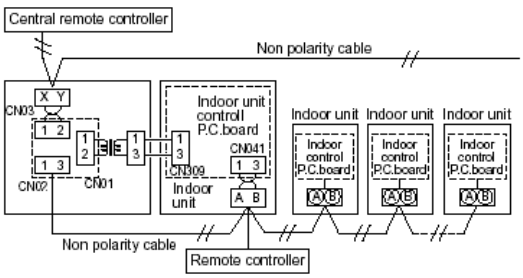
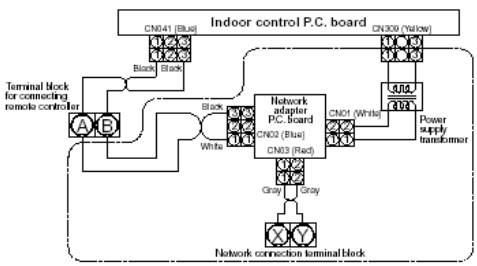
	Basic function	System diagram	Model
3-2-2	Windows based central controller	 *1 TOSHIBA Digital Inverter System and Super Digital Inverter System The local server shall be “Plug-in” into a cutomer’s personal computer.	• WINDOWS based central controller **BMS-LSV**** • TCS-Net Relay Interface **BMS-IFLSV1E** • Intelligent server **BMS-LSV2E** **BMS-STC01E** • Energy Monitoring Relay Interface **BMS-IFWH3E** • Digital I/O Relay Interface **BMS-IFDD01E** • “1 : 1 model” connection interface **TCB-PCNT30TLE** [RAV-SM560KRT-E, SM800KRT-E are not available] **<Indoor remote controller>** • Wired remote controller **RBC-AMT21E** • Simple remote controller **RBC-AS21E**

Application controls of optional devices connected to indoor unit

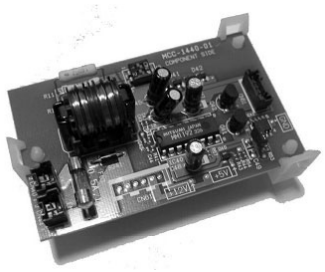
[1] Remote location ON/OFF control box

Model Name	Appearance	Features
TCB-IFCB-4E		● Start and stop of air conditioner is possible by the external signal, and also indication of operation/alarm to outside is possible.
	Application	**Function**
		•Monitoring ON/OFF status (for indoor unit) Alarm status (system & indoor unit stop) •ON/OFF command Air conditioner can be turned ON/OFF by external signals. The external ON/OFF signals are output for the signals below.  Non-voltage ON /OFF continious signal

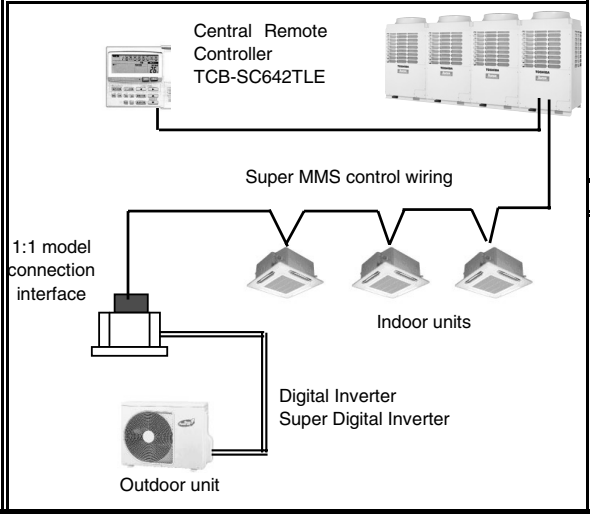
[2] Network adapter

Model Name	Appearance	Features
TCB-PCNT20E	 Place optional P.C. board in Electrical parts box of indoor unit.	● Indoor units of Super MMS system is controled by AI-NETWORK central remote controller. Connectable indoor units per group.
	Application	**Connection of cables**
		
		Wiring diagram of indoor P.C. board
		

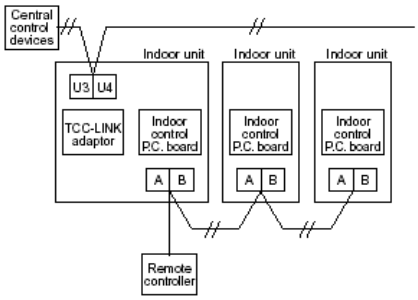
[3] "1:1 model" connection interface

Model Name	Appearance	Features
TCB-PCNT30TLE	 Place optional P.C. board in Electrical parts box of indoor unit.	● Link adapter for "1:1 model" into super modular muti network 1:1 model : Super digital inverter Digital inverter

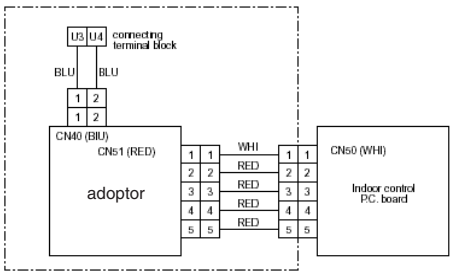
Application



Connection of cables



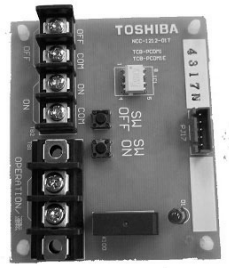
Wiring diagram of indoor P.C. board



Application controls by optional P.C. board of outdoor unit

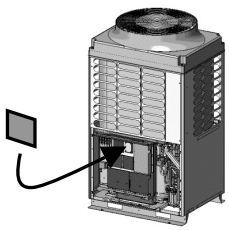
Model name: TCB-PCDM2E

Appearance



Size : 71 x 85

Application



*Place this optional P.C. board to inverter assembly of the header outdoor unit.

Function

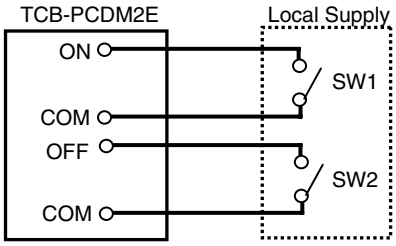
[1] Power peak-cut Control

● **Feature**

The upper limit capacity of the outdoor unit is restricted based on the power peak cut request signal from outside.

● **Function**

Two type control can be selected by setting SW07 on the interface P.C. board of the header outdoor unit.



[Standard funciton]

SW07-2 OFF

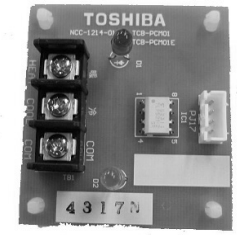
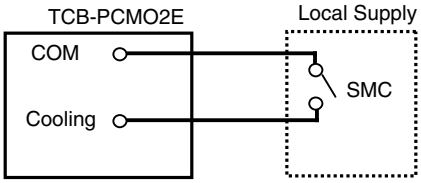
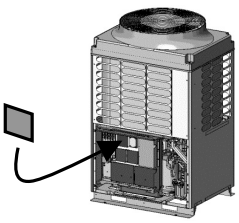
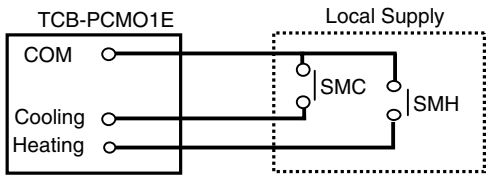
Input		SW07-1	
SW01	SW02	OFF	ON
ON	OFF	0% (stop)	Up to 60%
OFF	ON	100% (Nomal)	100% (Normal)

[Expansion function]

SW07-2 ON

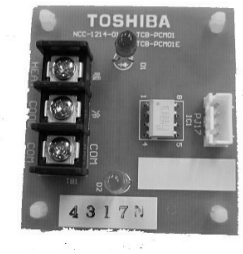
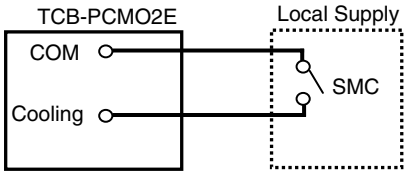
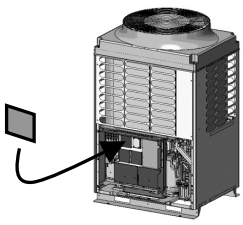
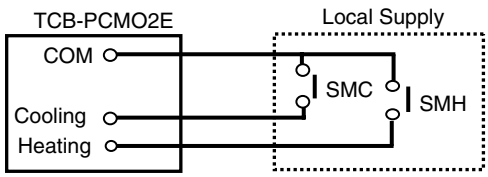
Input		SW07-1	
SW01	SW02	OFF	ON
OFF	OFF	100% (Nomal)	100% (Normal)
ON	OFF	Up to 80%	Up to 85%
OFF	ON	Up to 60%	Up to 75%
ON	ON	0% (stop)	Up to 60%

- Be sure to prepare the point of contact for each terminal.
- Don't turn on both SW1 and SW2 terminal simultaneously.

Model name	Appearance	Function
TCB-PCMO2E	 Size : 55.5 x 60	**[4] Night operation (Sound reduction) control** ● **Feature** Sound level can be reduced with connecting outdoor E-parts by restricting compressor and fan speed. ● **Function**  SMC : Cooling mode designated input switch Terminal / Input signal / Operation: SMC — ON — Night operation control SMC — OFF — Usual Operation This control is conducted when input signal stand up or fall down. (Standing and falling status should be held for 100 mm.sec or more.)
	Application  *Place this optional P.C. board to inverter assembly of the header outdoor unit.	**[5] Operation mode selection control** ● **Feature** This control can be operated with the operation mode which is permitted by SMC or SMH. ● **Function**  SMC : Cooling mode designated input switch SMH : Heating mode designated input switch Be sure to prepare non-voltage continuous point of contact for each terminal.

SMC	SMH	Selected operation mode
ON	OFF	Only cooling mode permitted
OFF	ON	Only heating mode permitted

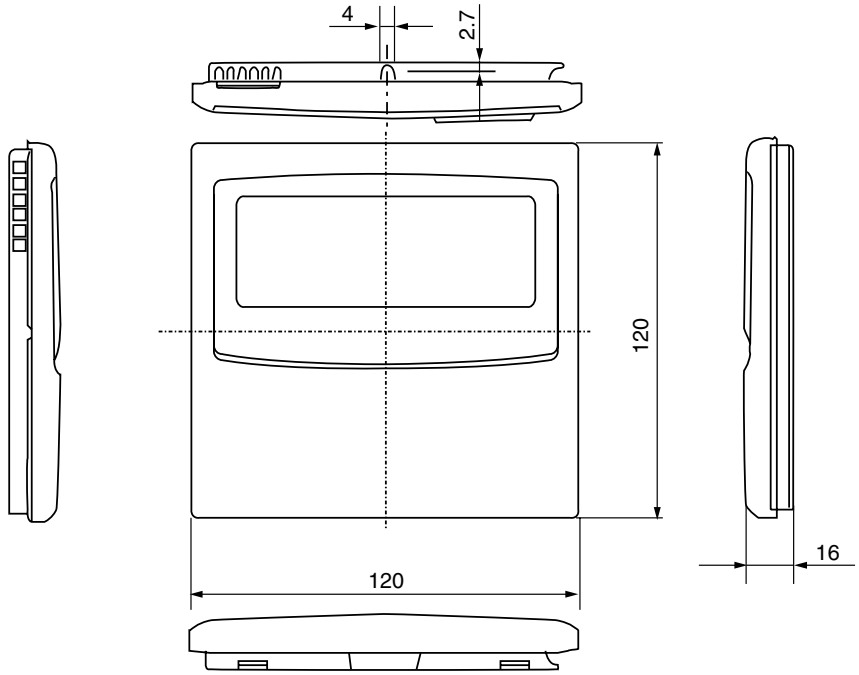
12

Model name	Appearance	Function
TCB-PCMO2E	 Size : 55.5 x 60	[2] Snowfall fan control ● **Feature** Outdoor fan is operated by the snowfall signal from outside. ● **Function**  SMC : Cooling mode select input (switch) Terminal: SMC Input signal: ON / OFF Operation: Snowfall fan control (Operates outdoor fan.) Input signal: ON / OFF Operation: Usual operation This control is conducted when input signal stand up and fall down. (Standing and falling status should be held for 100 mm.sec. or more.)
	Application  *Place this optional P.C. board to inverter assembly of the header outdoor unit.	[3] External master ON/OFF control ● **Feature** The outdoor unit starts or stops the system. ● **Function**  SMC : Input signal for start SMH : Input signal for stop Terminal: SMC Input signal: ON / OFF Operation: Starts all indoor units. Terminal: SMH Input signal: ON / OFF Operation: Stops all indoor units. • Be sure to prepare non voltage continuous point of contact for each terminal. This control is conducted when input signal stand up or fall down. (Standing and falling status should be held for 100 mm.sec. or more.)

Remote controller

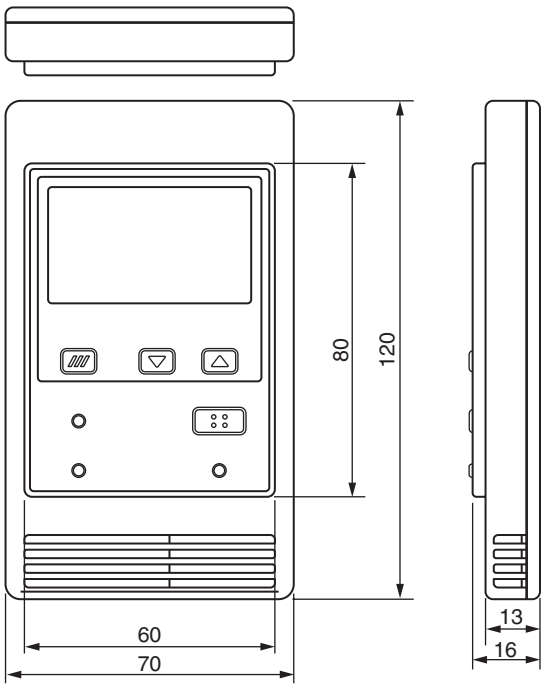
• Wired remote controller

RBC-AMT21E



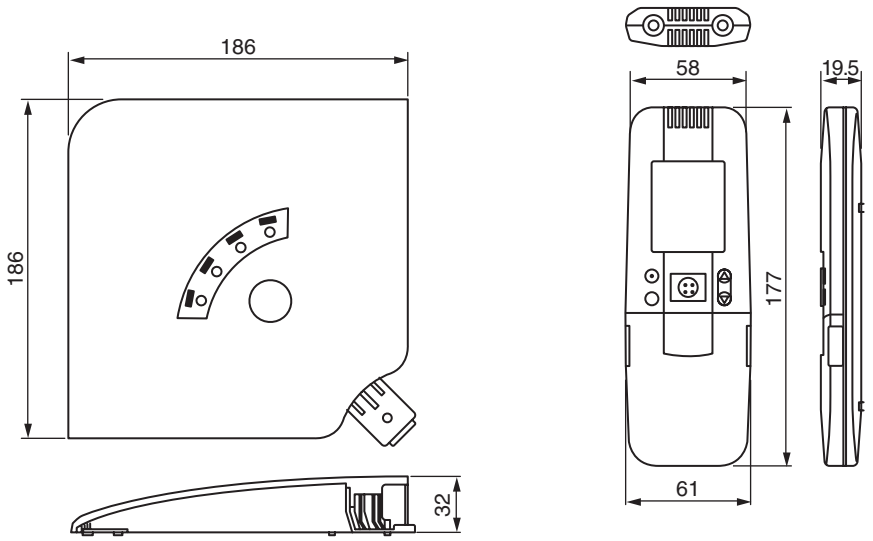
• Simple remote controller

RBC-AS21E



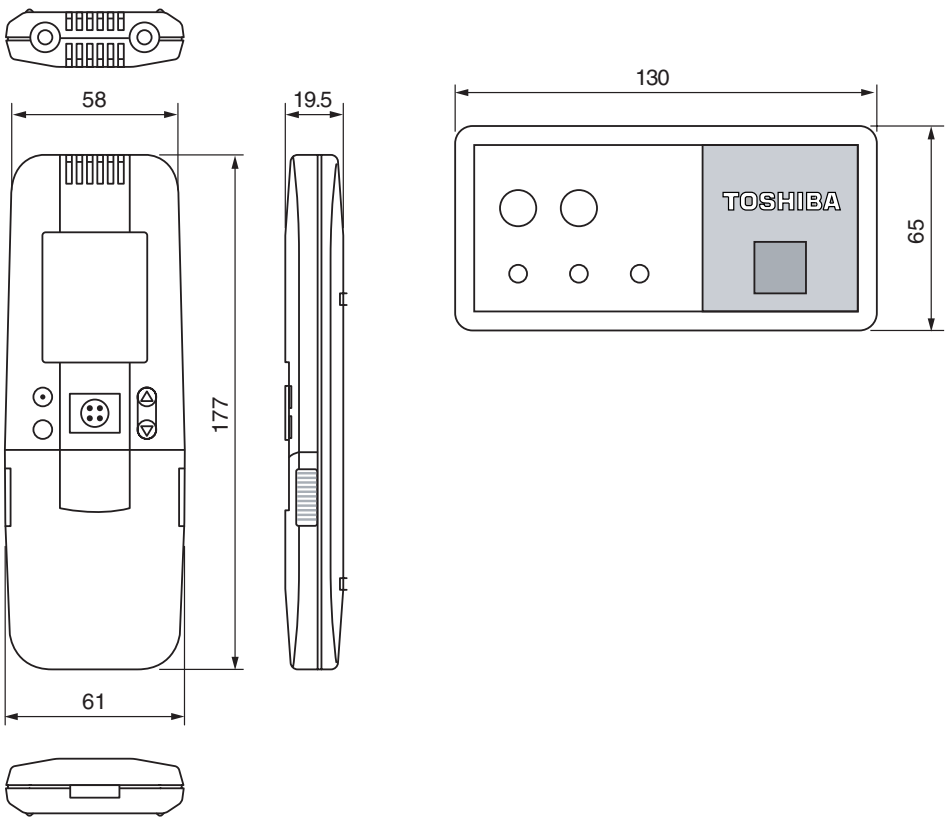
• Wireless remote controller

TCB-AX21U (W)-E



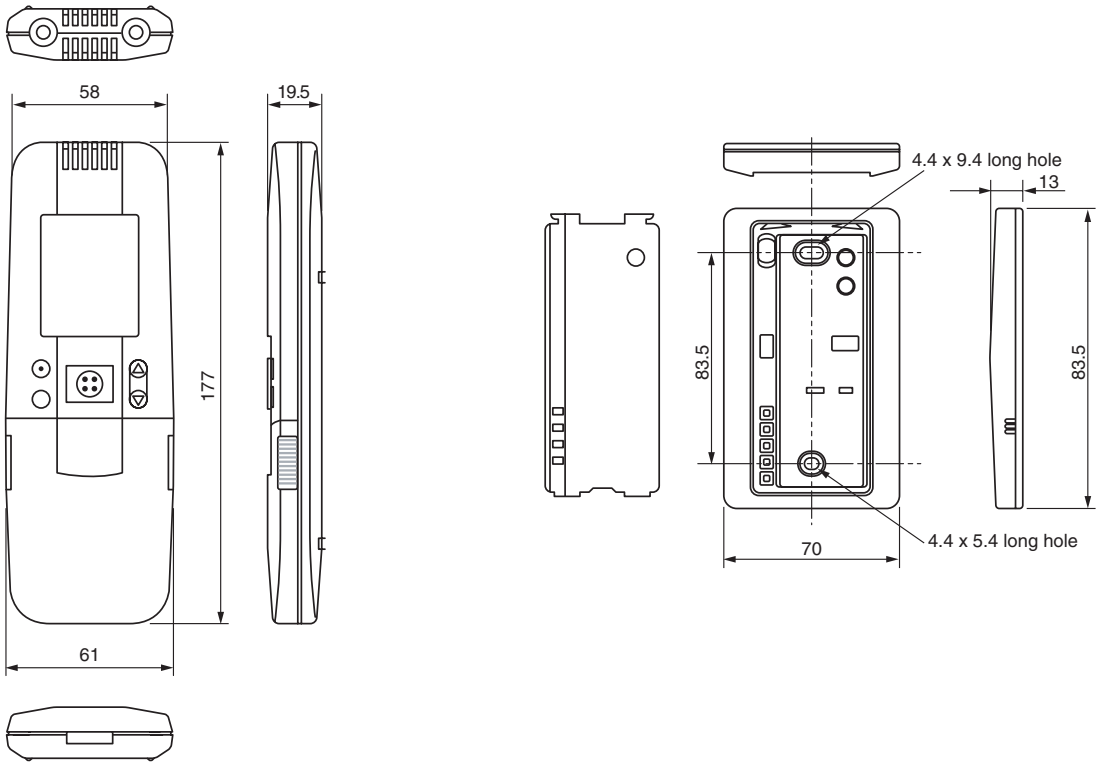
• Wireless remote controller kit

RBC-AX22CE



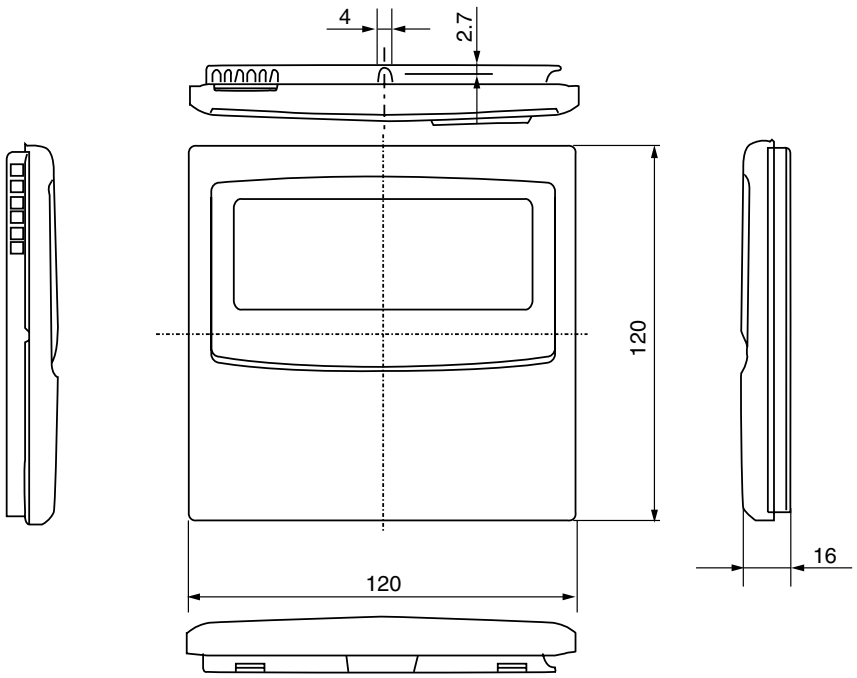
• Wireless remote controller kit

TCB-AX21E



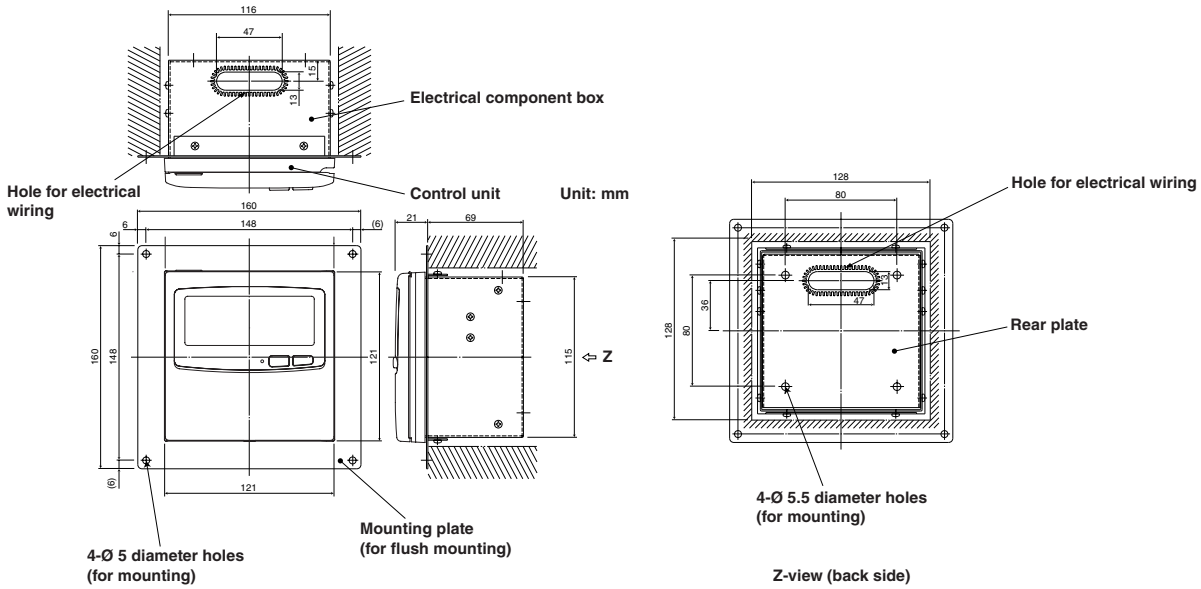
• Weekly timer

RBC-EXW21E



• Central remote controller

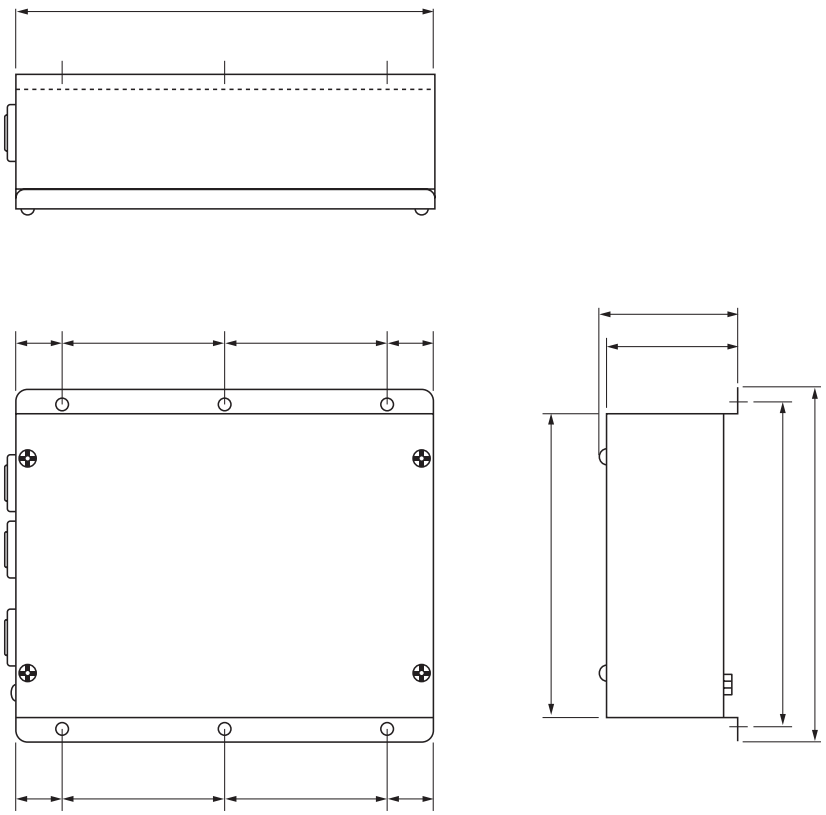
TCB-SC642TLE



* In order to mount the central controller flush with the wall, an opening measuring 128 mm x 128 mm is necessary.

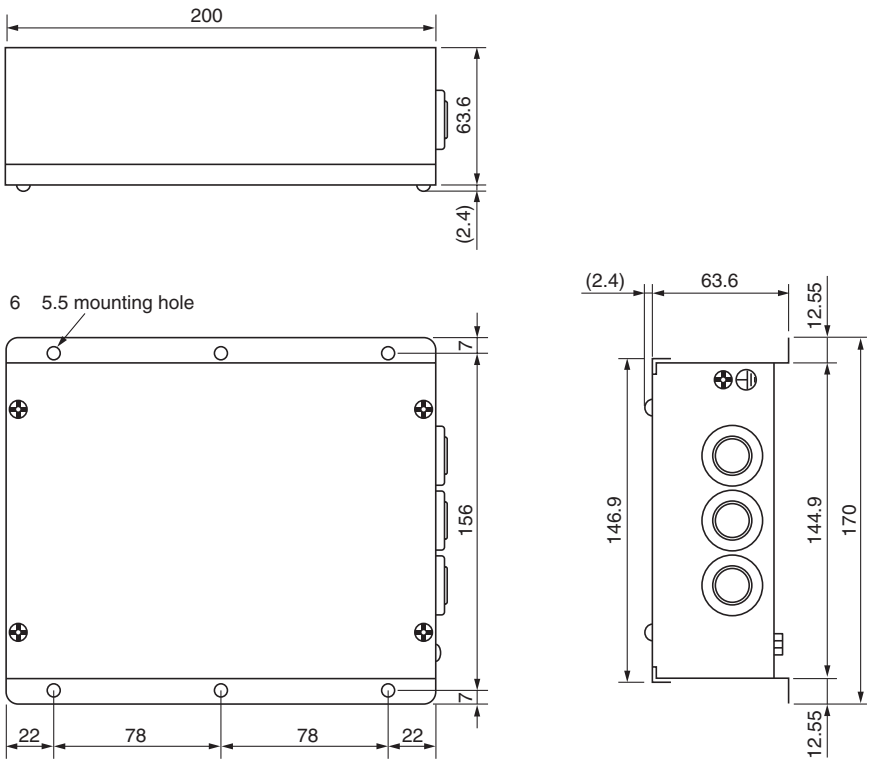
• LON Gateway

TCB-IFLN



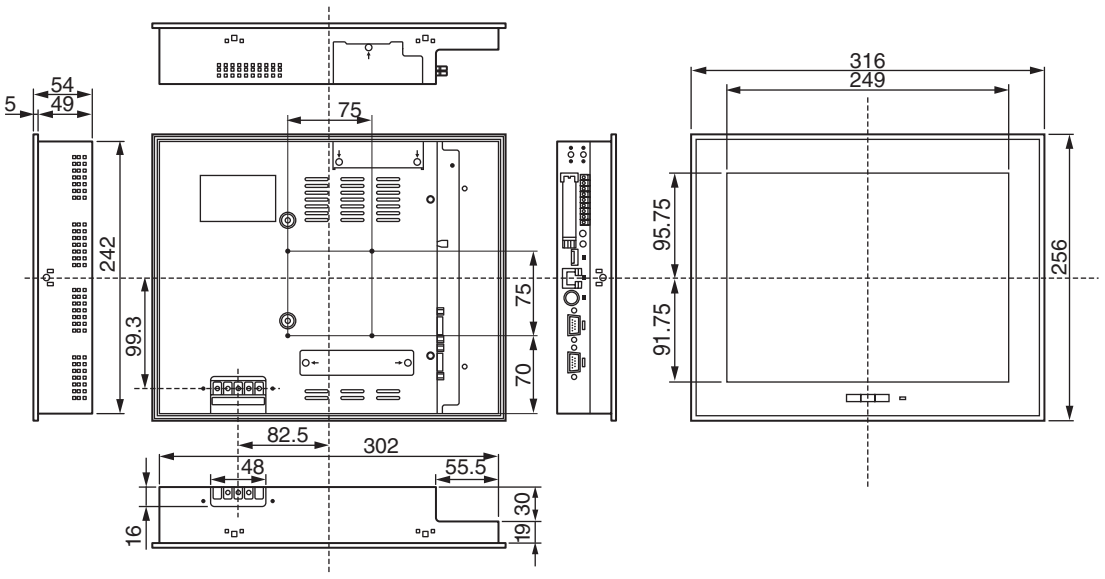
• TCS-Net relay interface

BMS-IFLSV1E



• Touch screen controller

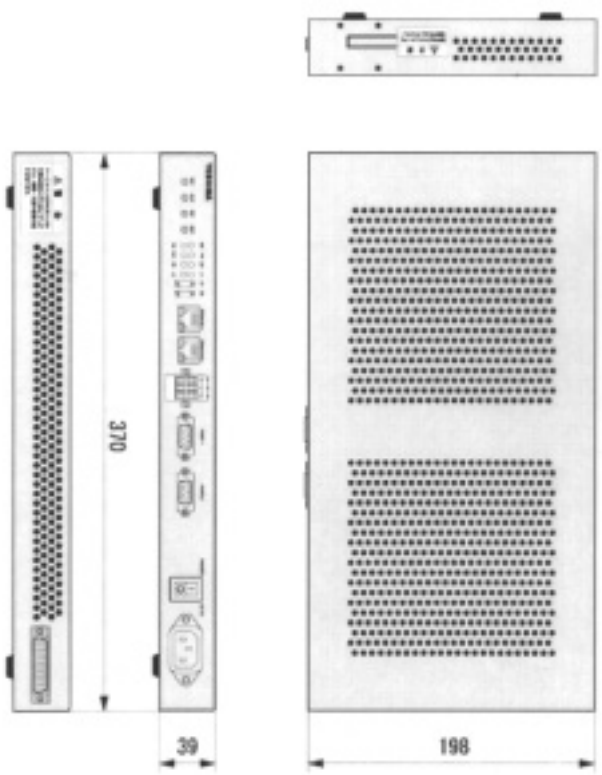
BMS-TP5120ACE



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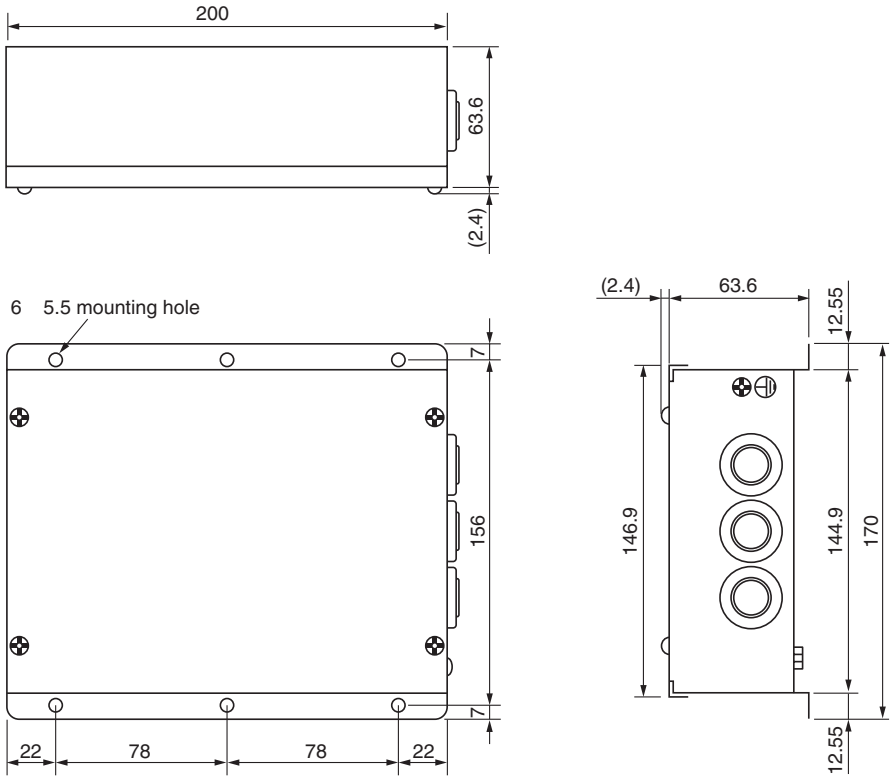
• Intelligent server

BMS-LSV2E



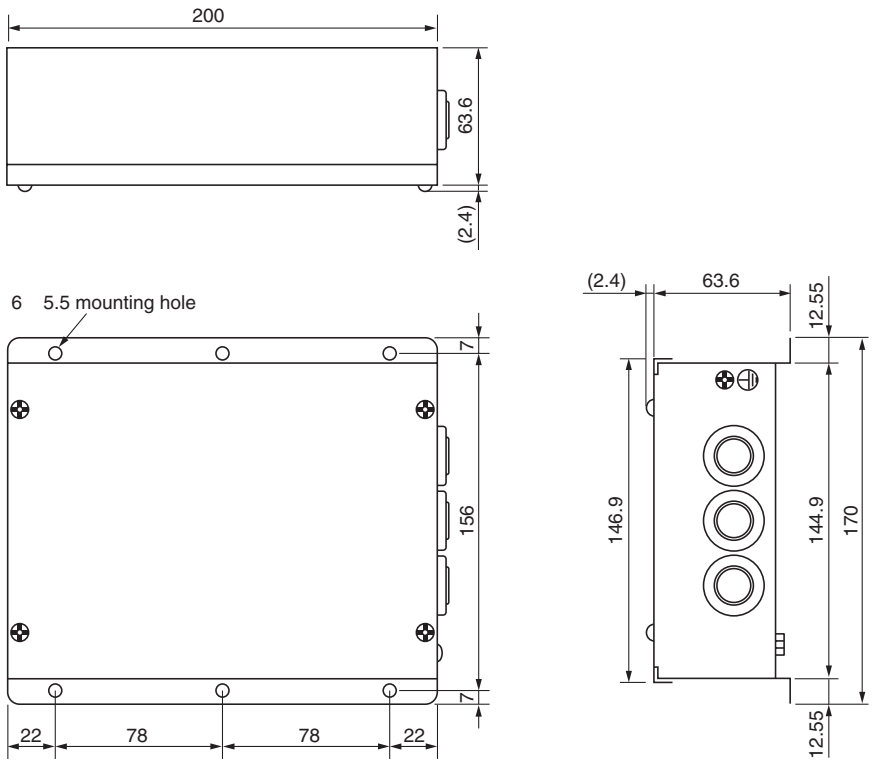
• Energy mountoring relay interface

BMS-IFWH3E



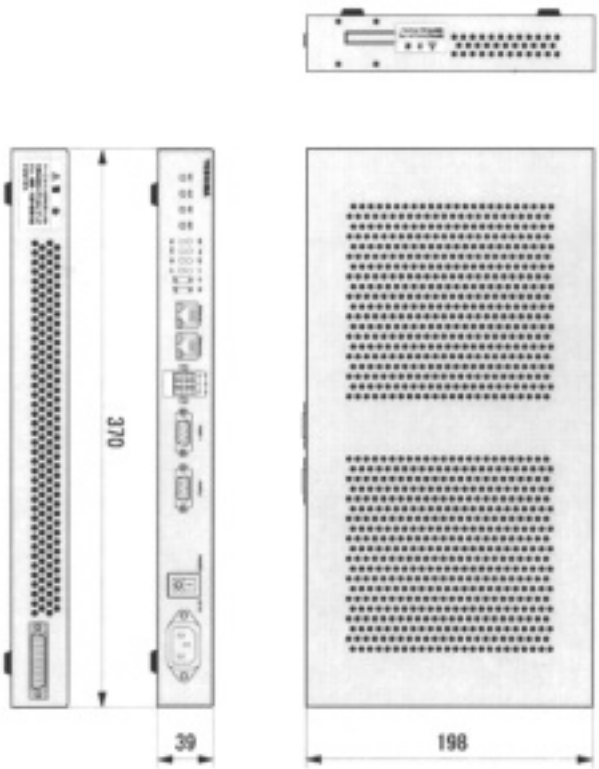
• Digital I/O relay interface

BMS-IFDDCIE



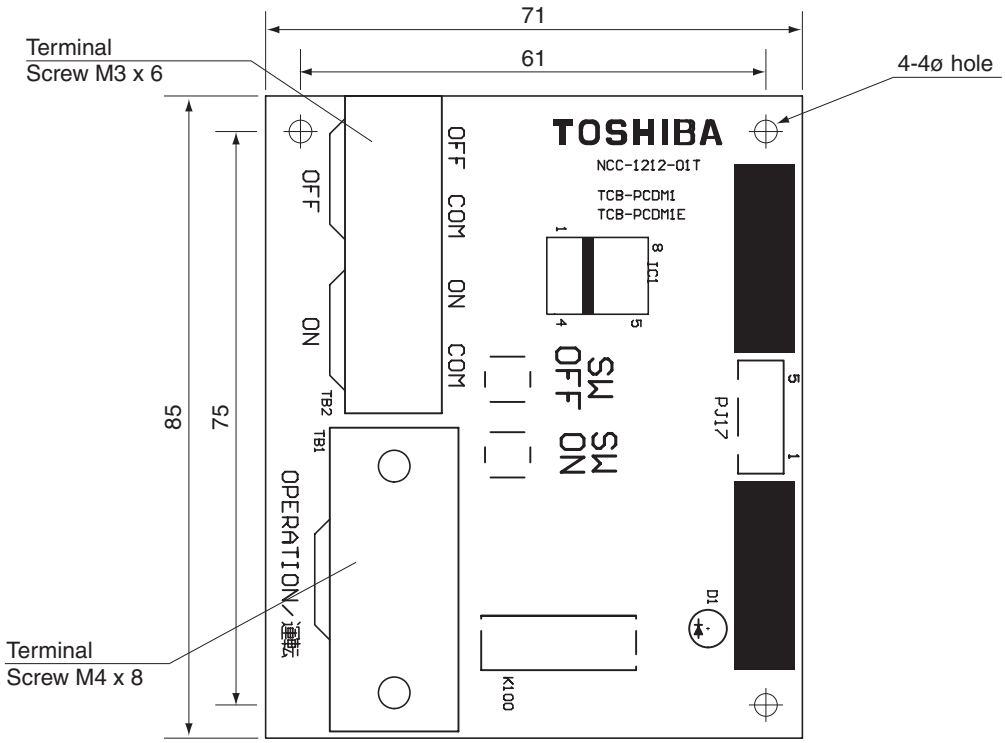
• WINDOWS based central controller

BMS-LSV**

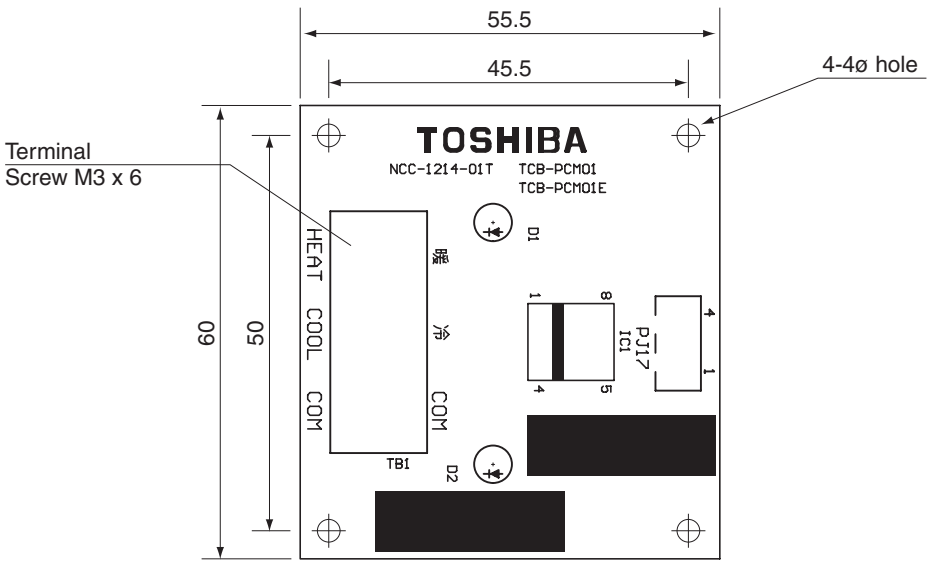


Dimension

TCB-PCDM2E



TCB-PCNO2E



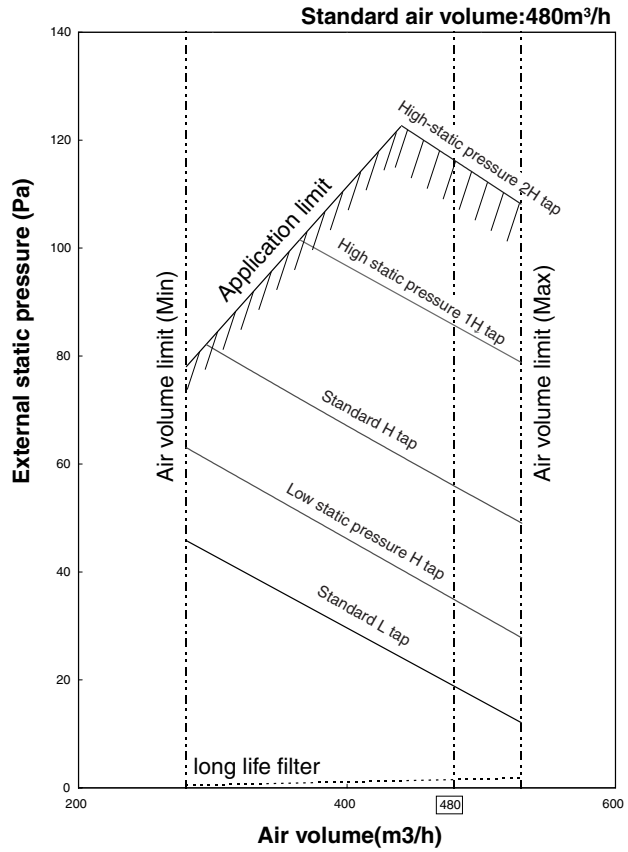
13

Fan characteristics

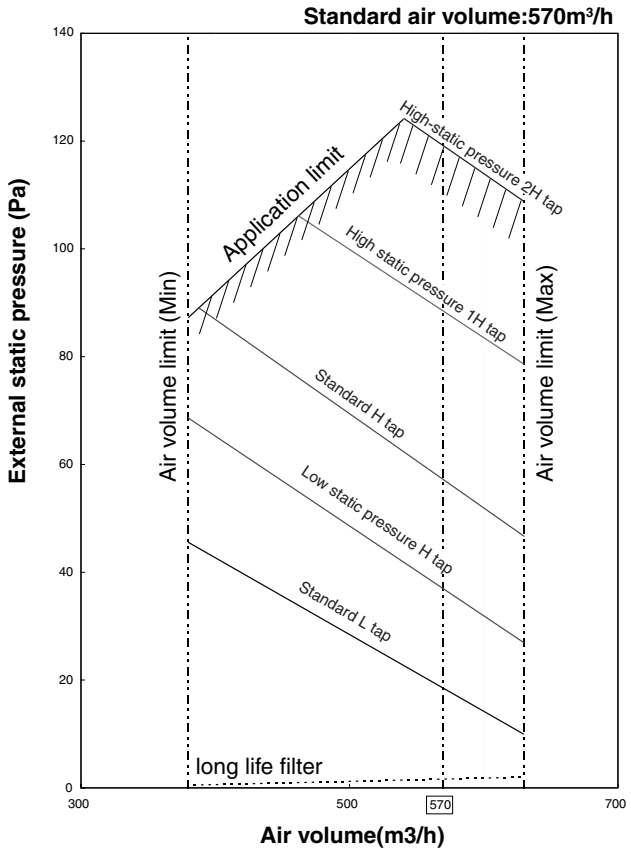
13 Fan characteristics

A

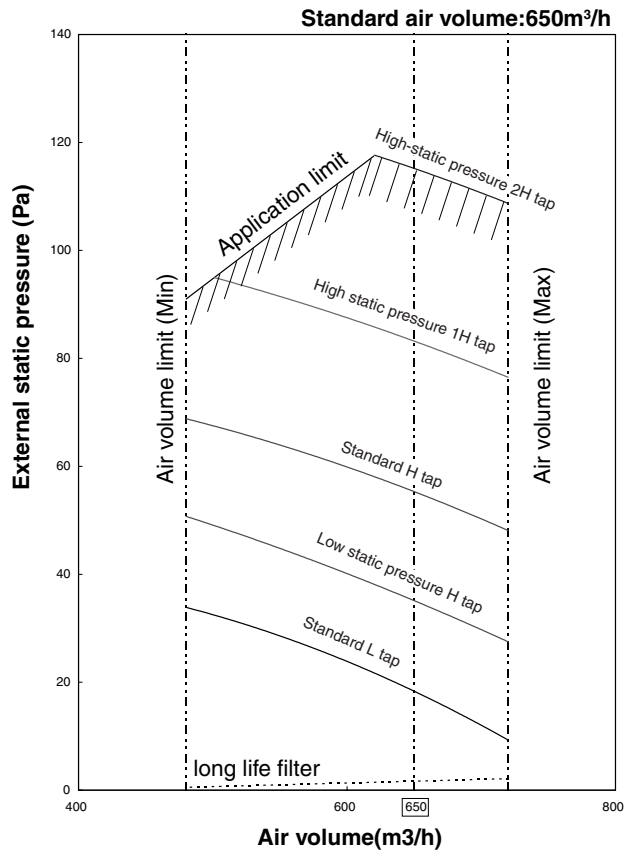
MMD-AP0071BH, AP0091BH



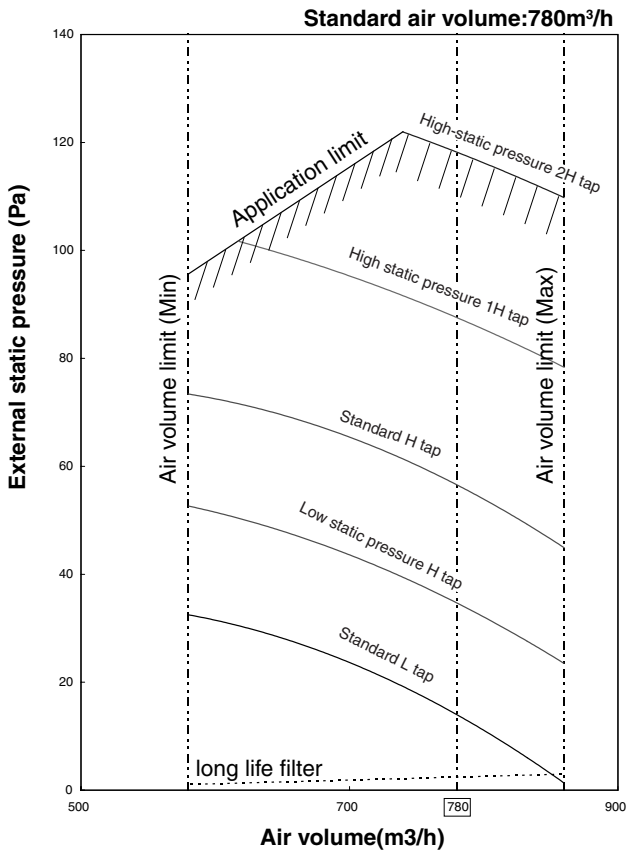
MMD-AP0121BH



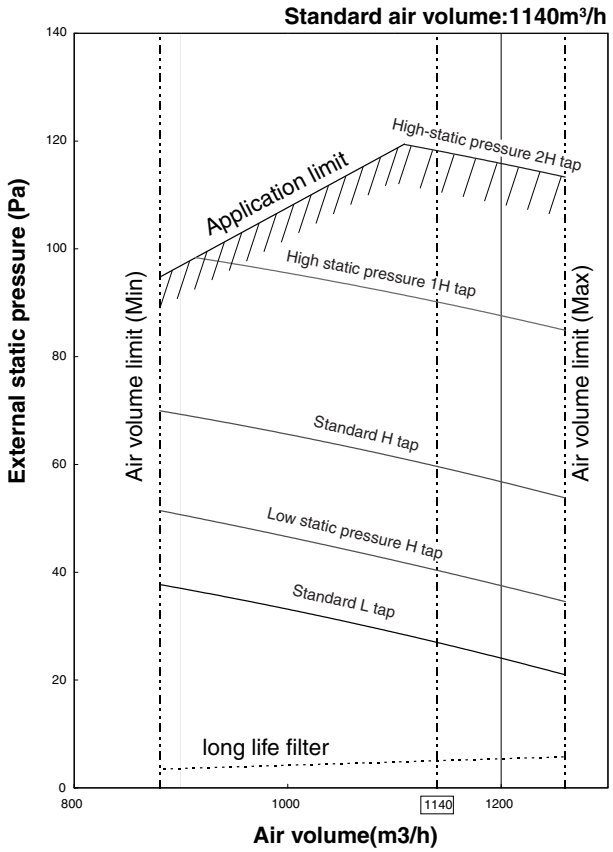
MMD-AP0151BH



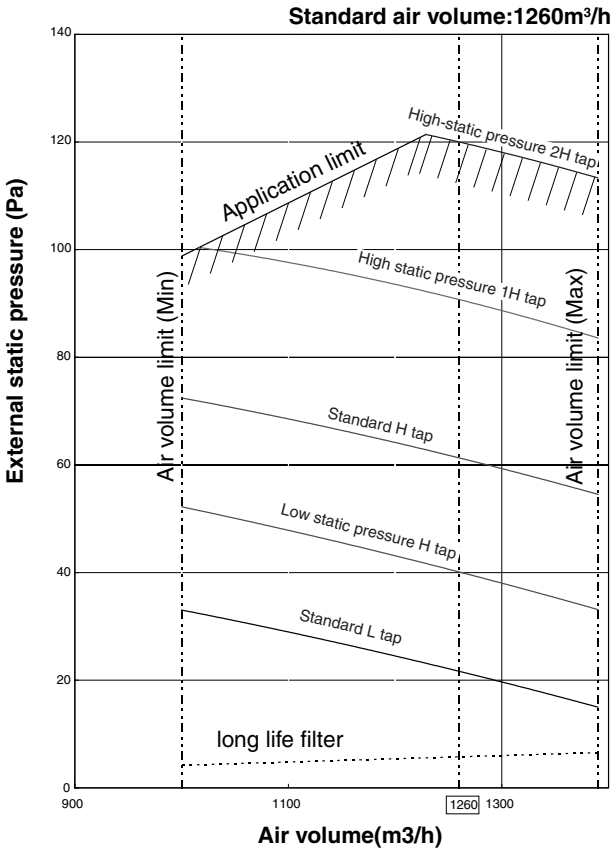
MMD-AP0181BH



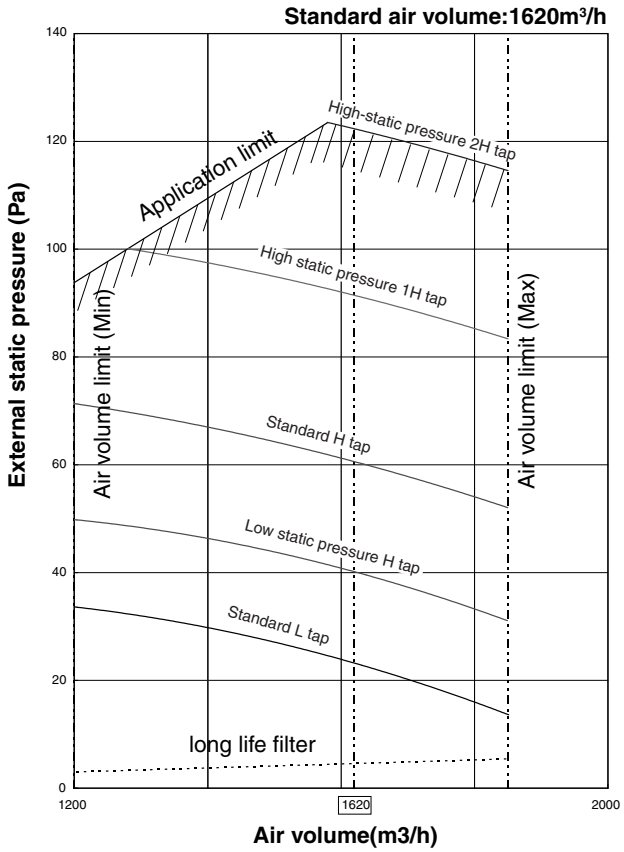
MMD-AP0241BH, AP0271BH



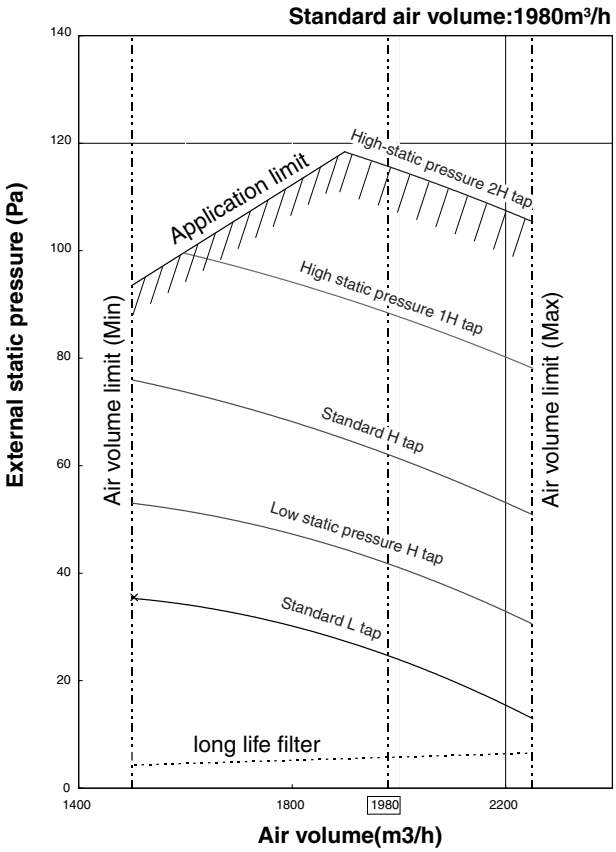
MMD-AP0301BH



MMD-AP0361BH

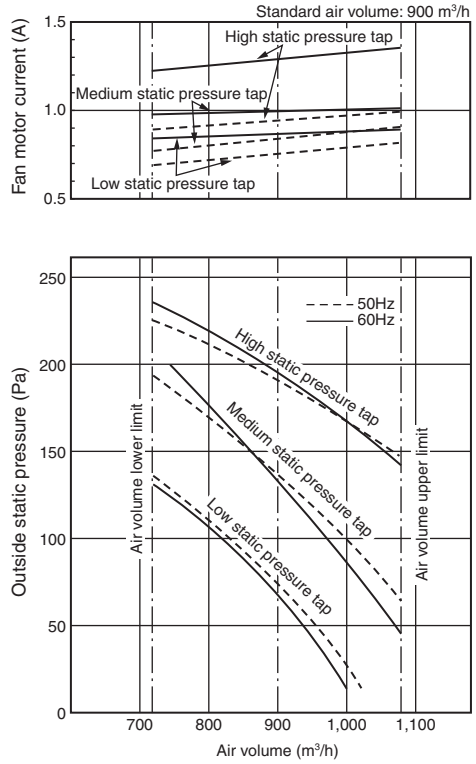


MMD-AP0481BH, AP0561BH

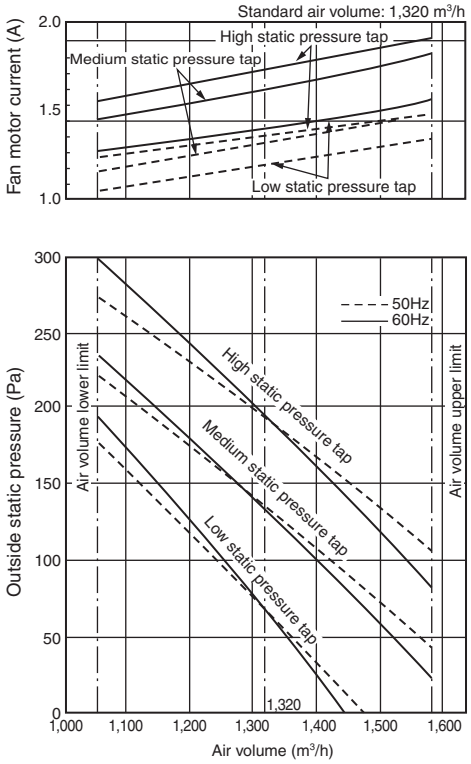


• Concealed Duct High Static Pressure type

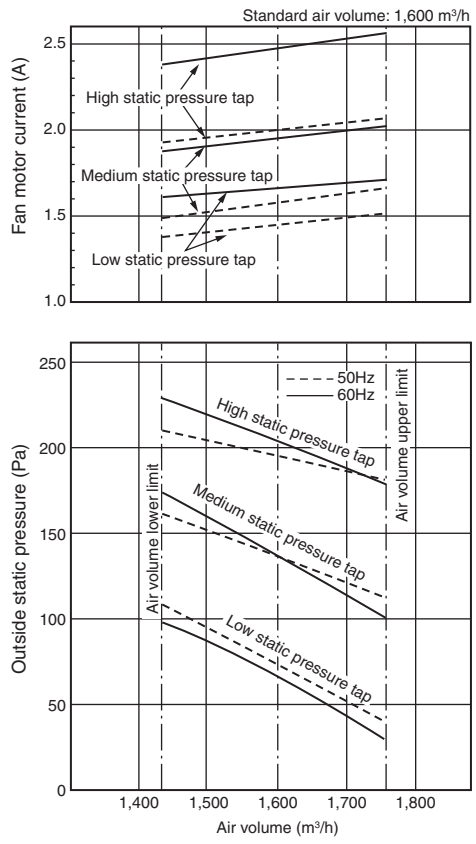
MMD-AP0181H



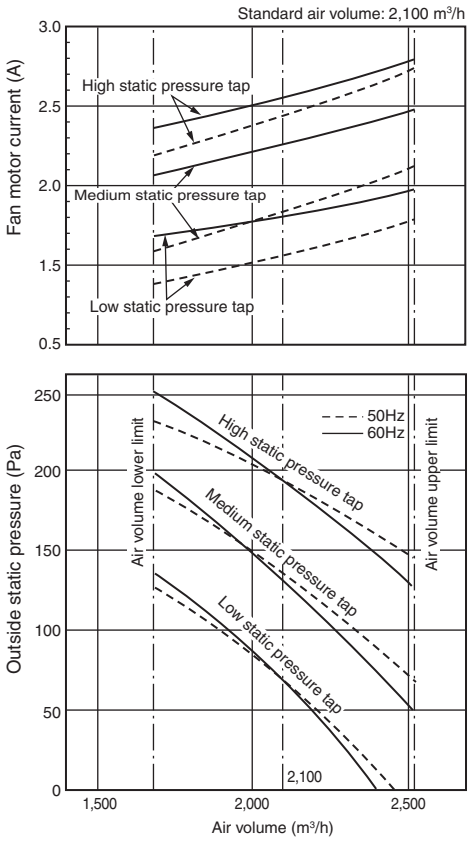
MMD-AP0241H, AP0271H



MMD-AP0361H

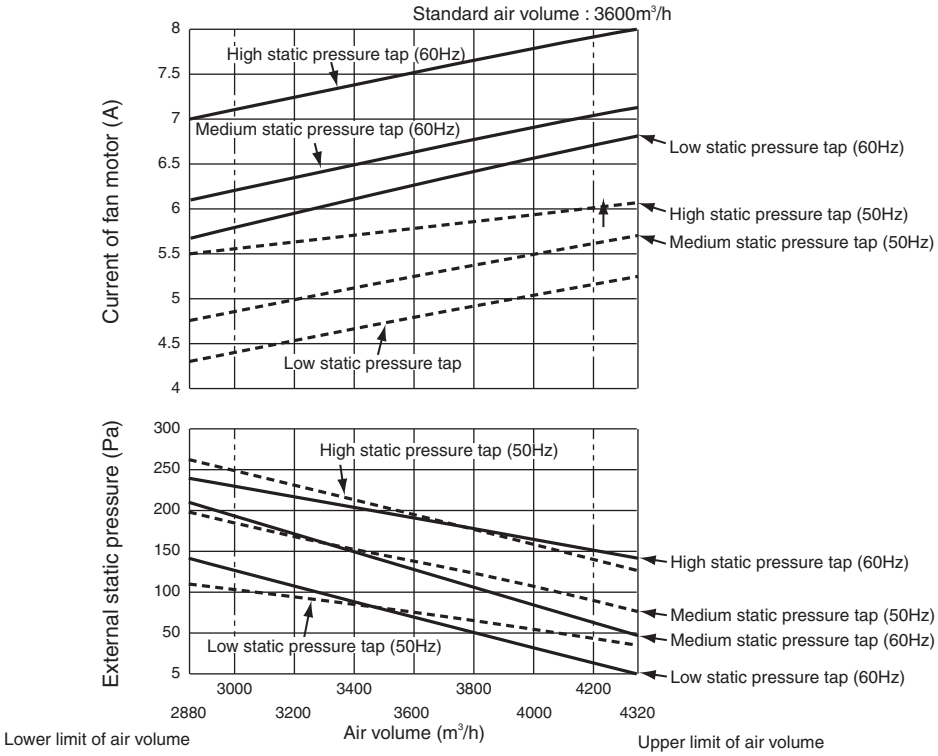


MMD-AP0481H

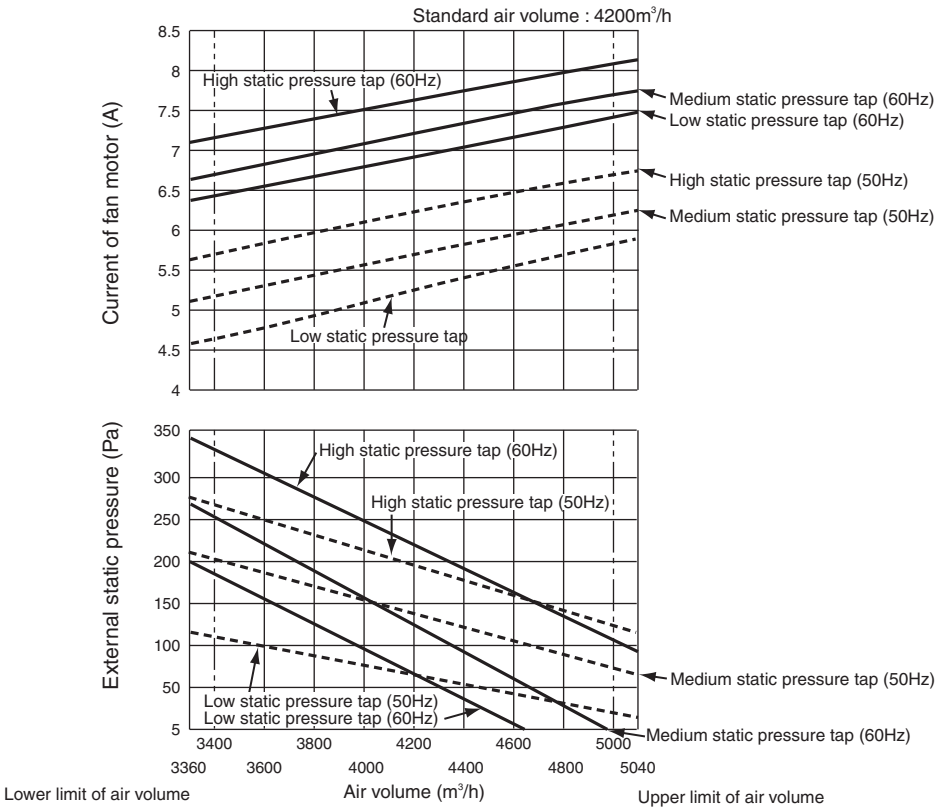


13

MMD-AP0721H



MMD-AP0961H



REQUIREMENT

Add a air volume damper to the air supply duct, and adjust the air volume in the range from 80% to 120% of the standard air volume.

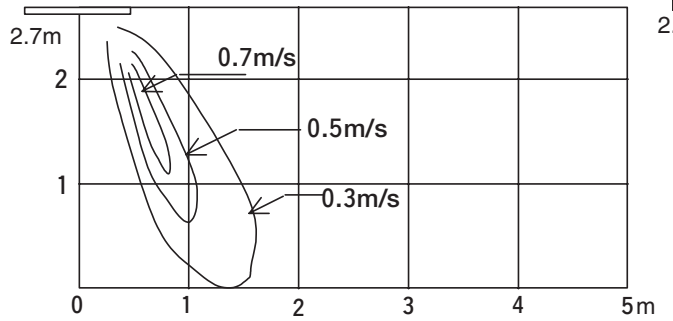
AIR SPEED CHARACTERISTICS

Air Speed Distribution

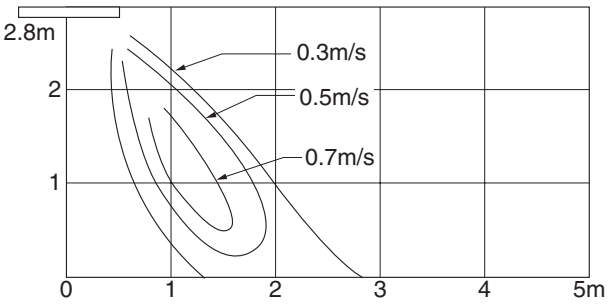
B

4-way air discharge cassette type

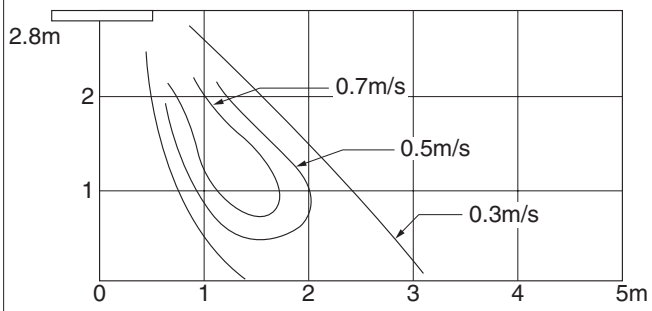
MMU-AP0091H, AP0121H



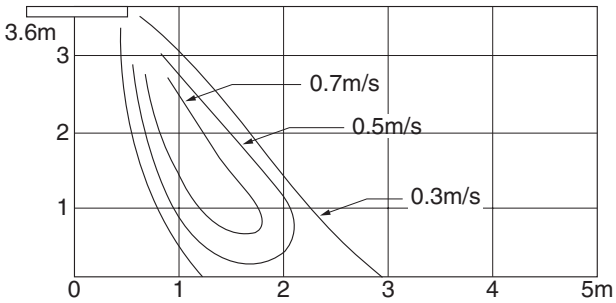
MMU-AP0151H



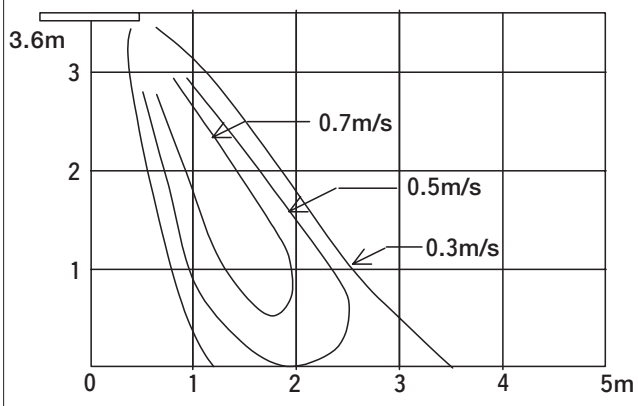
MMU-AP0181H



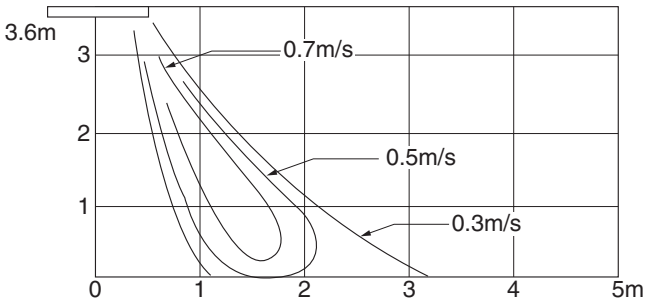
MMU-AP0241H,AP0271H



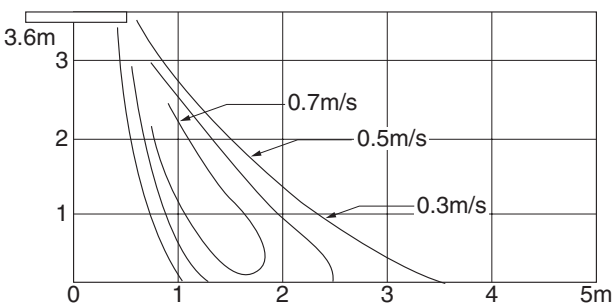
MMU-AP0301H



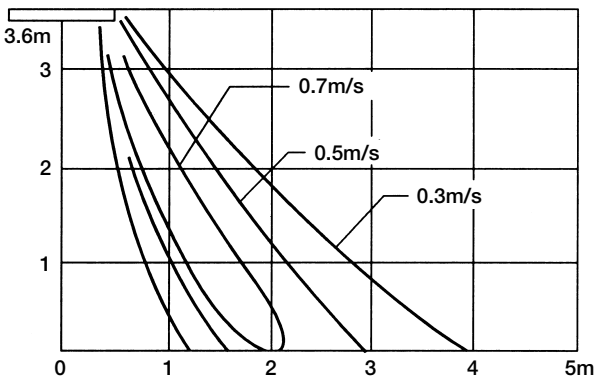
MMU-A0361H



MMU-A0481H



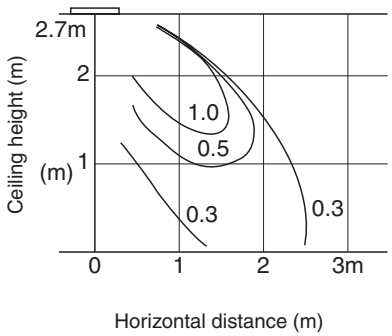
MMU-AP0561H



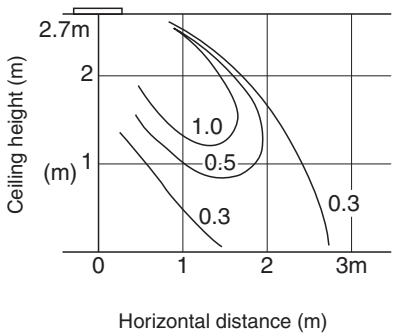
Air Speed Distribution

2-way air discharge cassette type

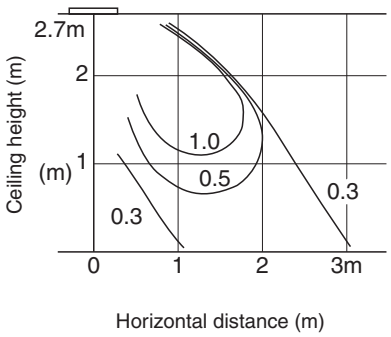
MMU-
AP0071WH, AP0091WH, AP0121WH



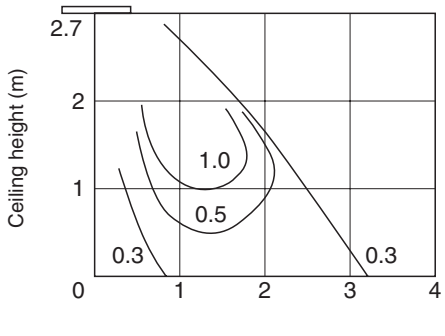
MMU-
AP0151WH, AP0181WH



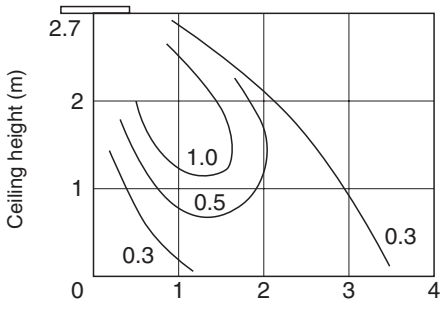
MMU-AP0241WH, AP0271WH



MMU-AP0301WH



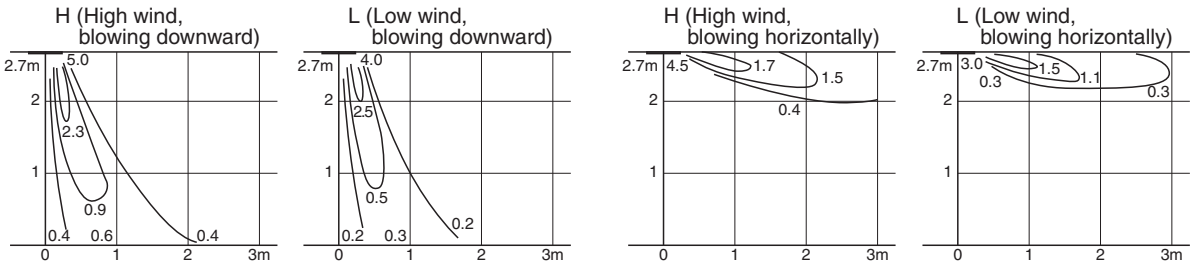
MMU-AP0481WH



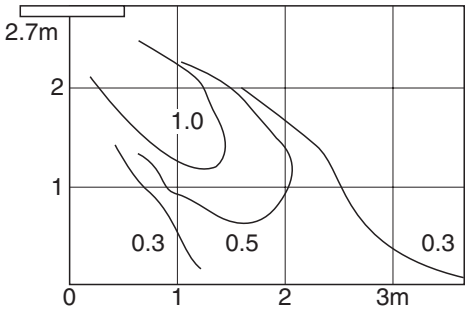
Air Speed Distribution

1-way air discharge cassette type

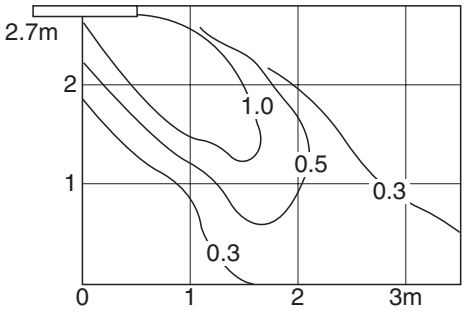
MMU-AP0071YH, AP0091YH, AP0121YH



MMU-AP0151SH,AP0181SH

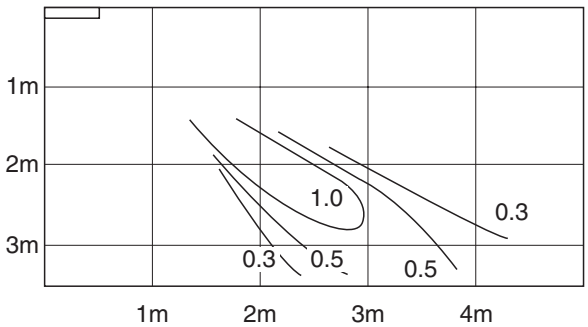


MMU-AP0241SH

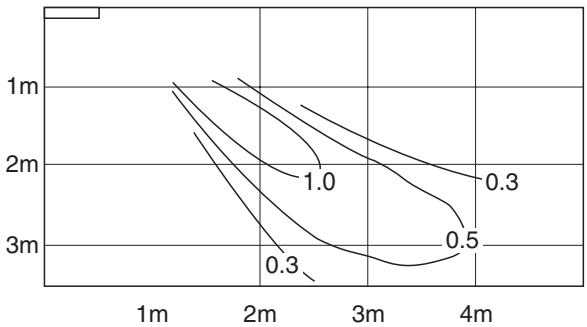


Under ceiling type

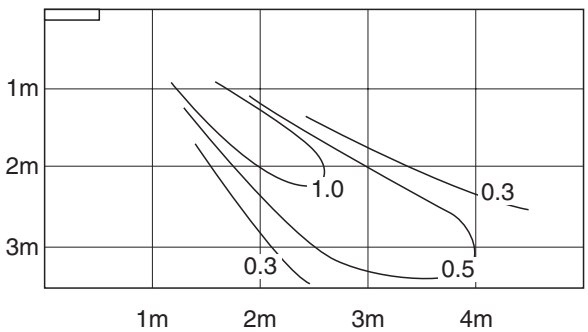
MMC-AP0181H,AP0481H



MMC-AP0361H



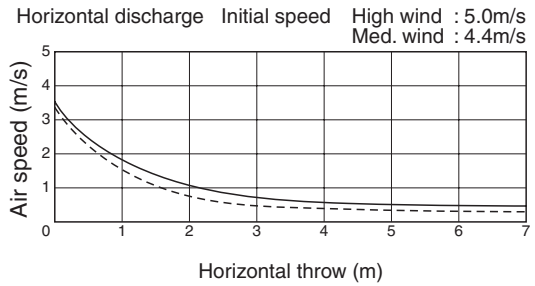
MMC-AP015H,AP0241H,AP0271H



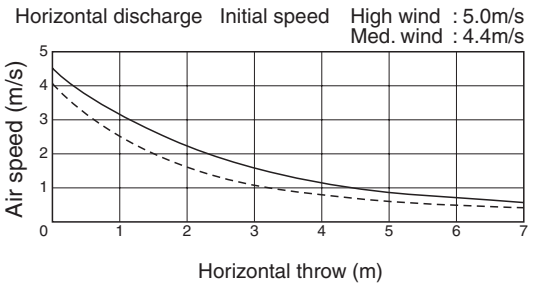
Discharge Air Speed and Air Throw

High wall type

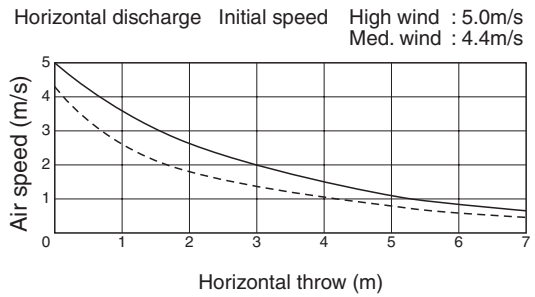
MMK-AP0071H, AP0091H, AP0121H



MMK-AP0151H, AP0181H

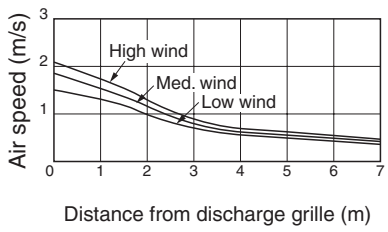


MMK-AP0241H

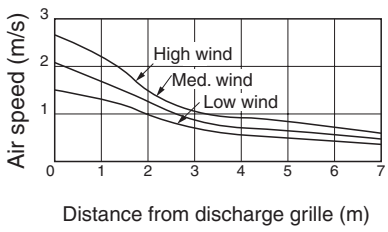


Floor standing cabinet type

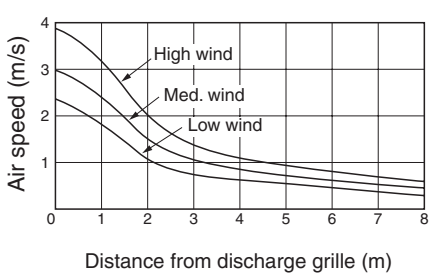
MML-AP0071H, AP0091H



MML-AP0121H, AP0151H



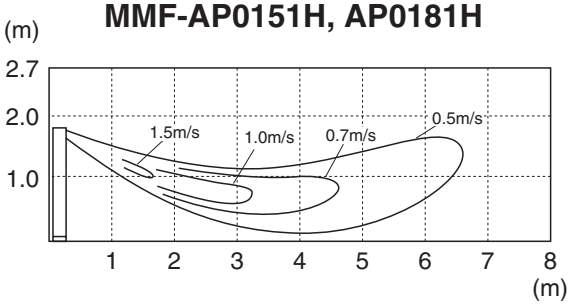
MML-AP0181H, AP0241H



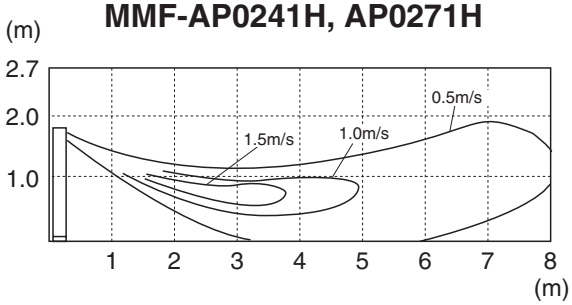
Air Speed Distribution

Floor standing type

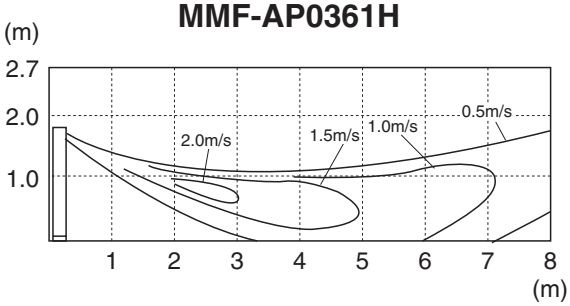
MMF-AP0151H, AP0181H



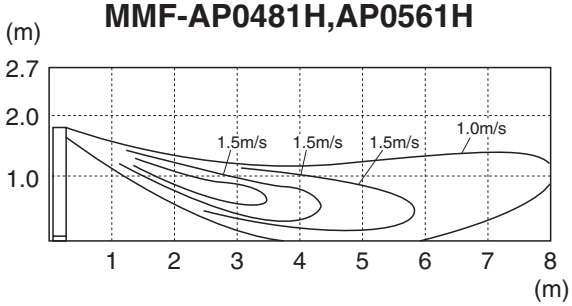
MMF-AP0241H, AP0271H



MMF-AP0361H



MMF-AP0481H,AP0561H



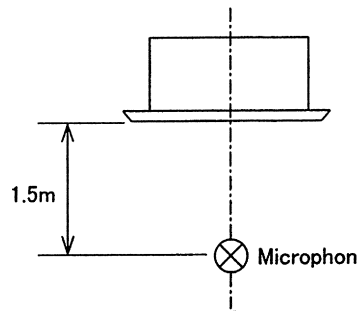
14

Sound characteristics (NC CURVE)

14 Sound characteristics (NC CURVE)

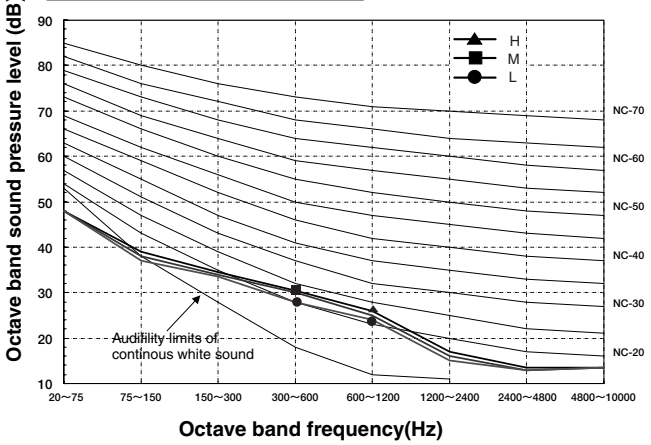
Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.



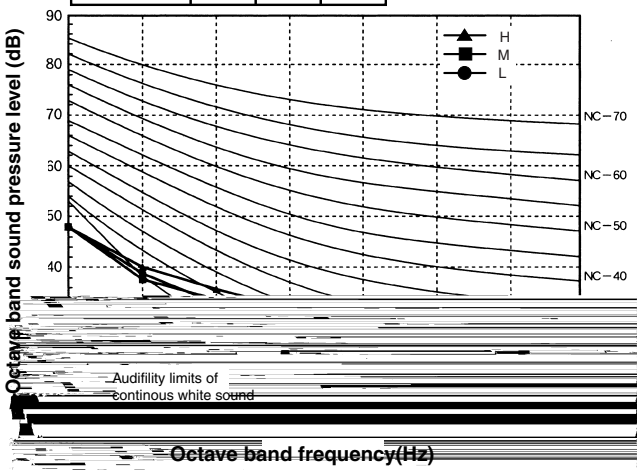
MMU-AP0091H, AP0121H

Fan Tap	H	M	L
Sound pressure level(dB(A))	30	29	27



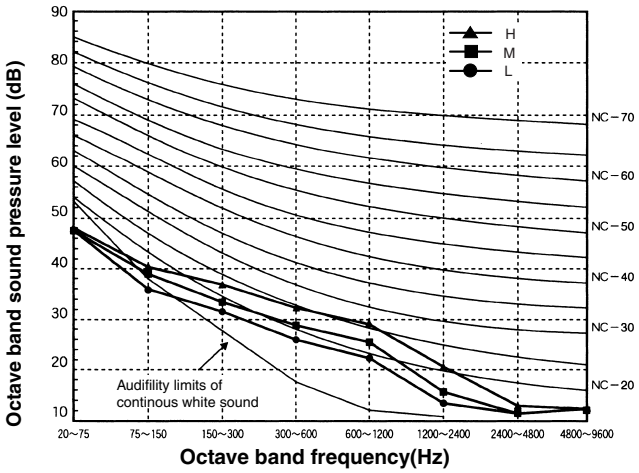
MMU-AP0151H

Fan Tap	H	M	L
Sound pressure level(dB(A))	31	29	27



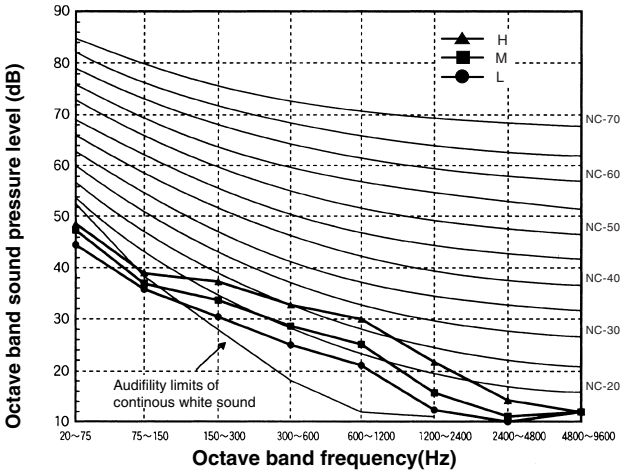
MMU-AP0181H

Fan Tap	H	M	L
Sound pressure level(dB(A))	32	29	28



MMU-AP0241H, AP0271H

Fan Tap	H	M	L
Sound pressure level(dB(A))	34	31	28

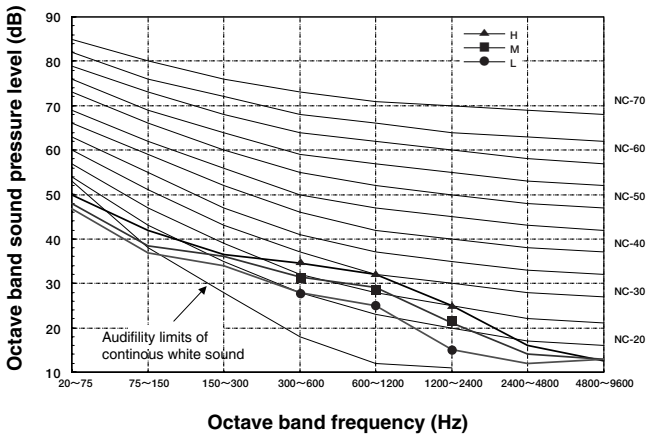


Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

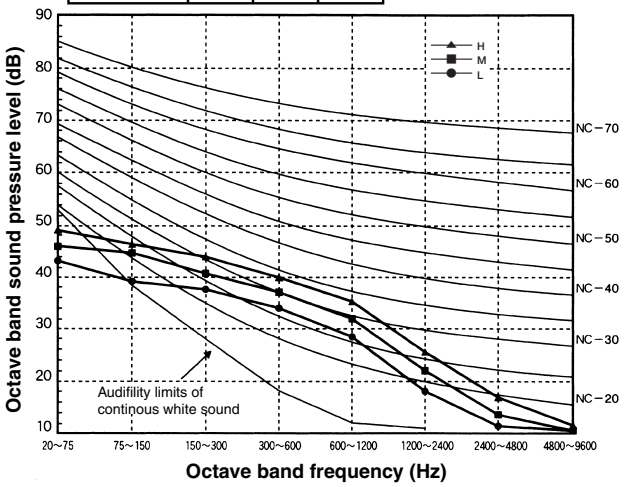
MMU-AP0301H

Fan Tap	H	M	L
Sound pressure level(dB(A))	37	33	30



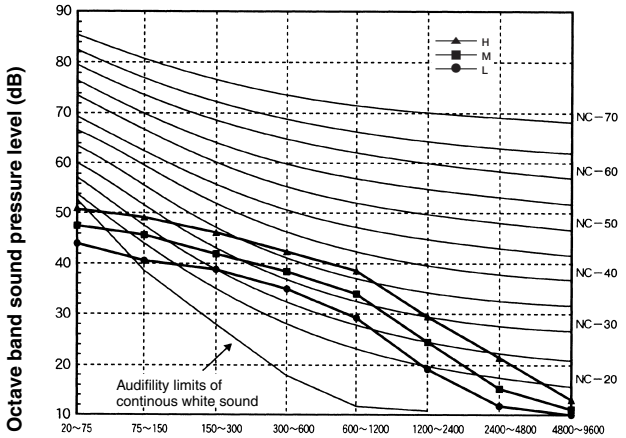
MMU-AP0361H

Fan Tap	H	M	L
Sound pressure level(dB(A))	40	36	33



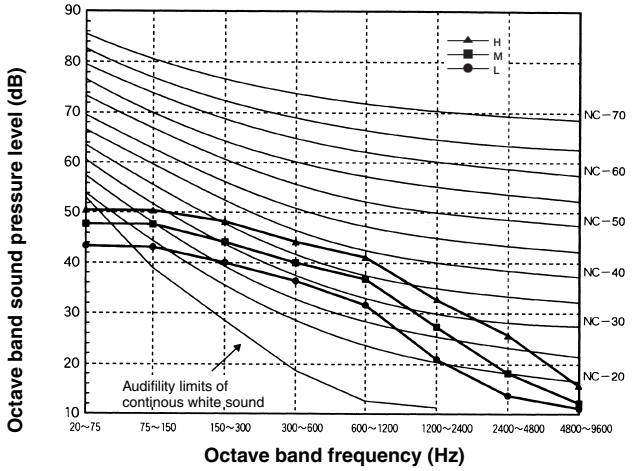
MMU-AP0481H

Fan Tap	H	M	L
Sound pressure level(dB(A))	44	38	34



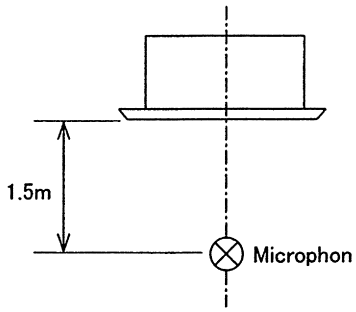
MMU-AP0561H

Fan Tap	H	M	L
Sound pressure level(dB(A))	45	48	34



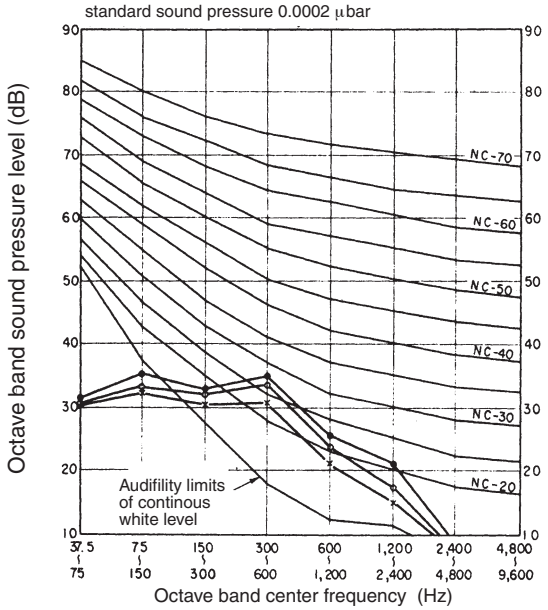
Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.



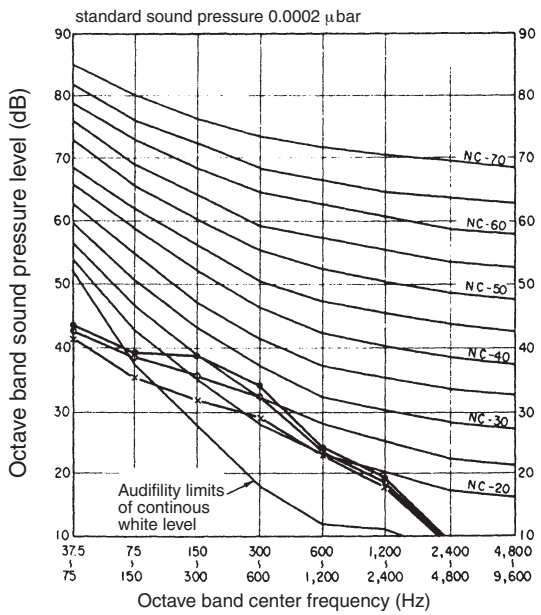
MMU-AP0071WH, AP0091WH, AP0121WH

Fan Tap	H	M	L
Sound pressure level(dB(A))	34	32	30



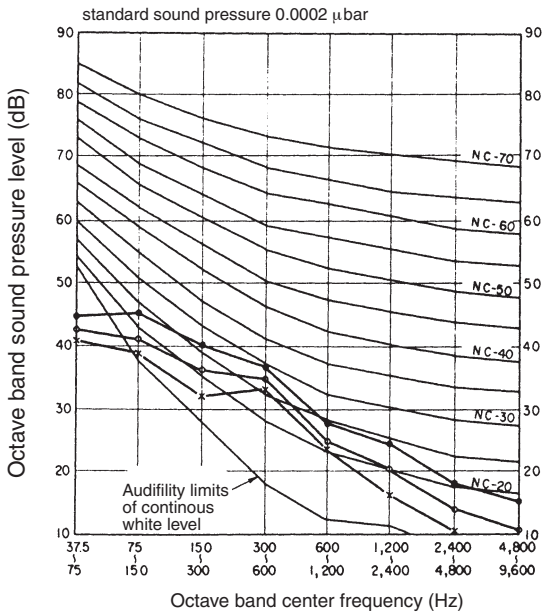
MMU-AP0151WH, AP0181WH

Fan Tap	H	M	L
Sound pressure level(dB(A))	35	33	30



MMU-AP0241WH, AP0271WH

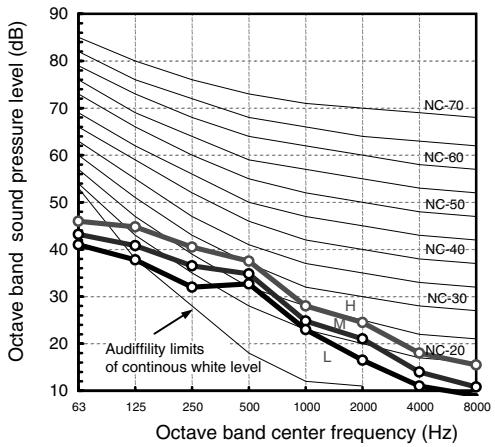
Fan Tap	H	M	L
Sound pressure level(dB(A))	38	35	33



Sound level data (NC CURVE)

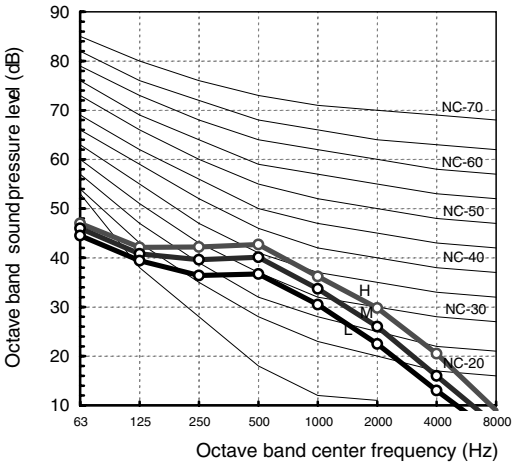
MMU-AP0301WH

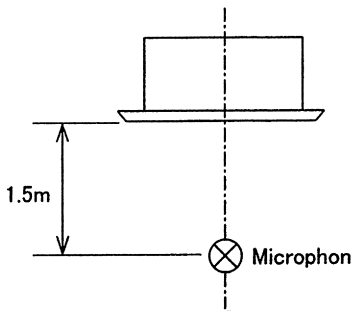
Fan Tap	H	M	L
Sound pressure level(dB(A))	40	37	34



MMU-AP0481WH

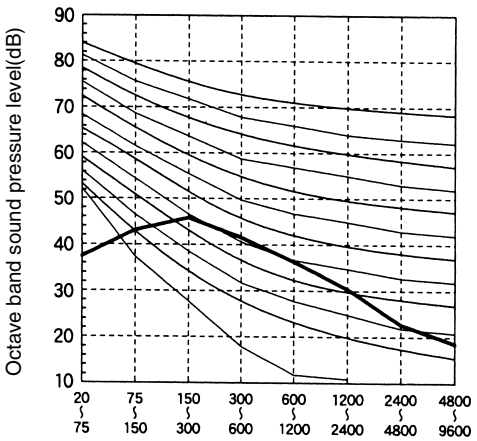
Fan Tap	H	M	L
Sound pressure level(dB(A))	45	42	39





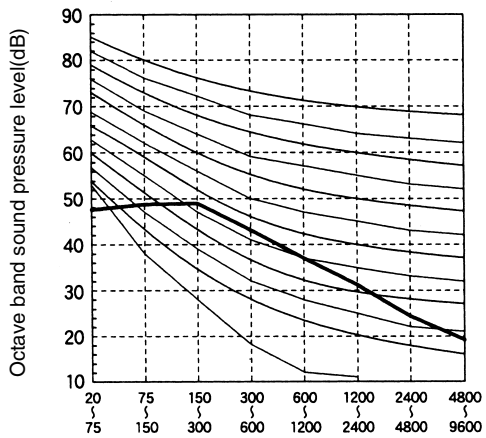
MMU-AP0151SH, AP0181SH

Fan Tap	H	M	L
Sound pressure level(dB(A))	42	39	36

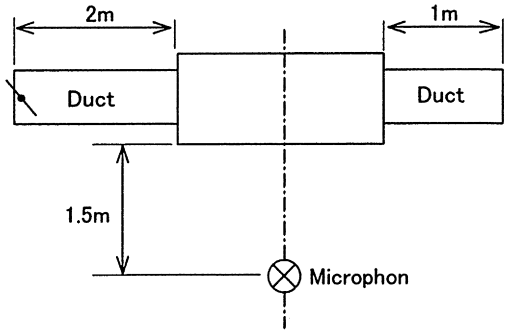


MMU-AP0241SH

Fan Tap	H	M	L
Sound pressure level(dB(A))	43	41	37

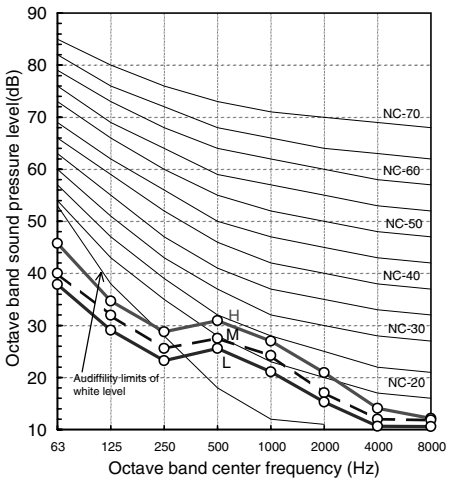


Sound level data (NC CURVE)



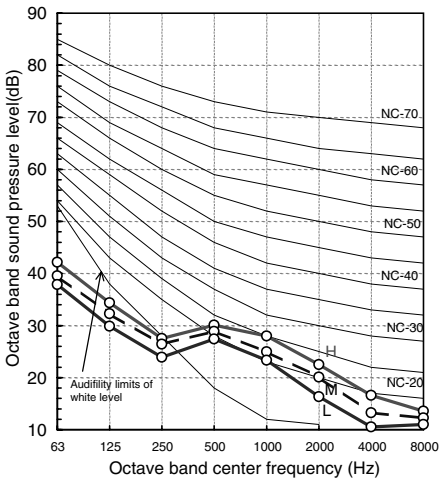
MMD-AP0071BH, AP0091BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	30	28	26



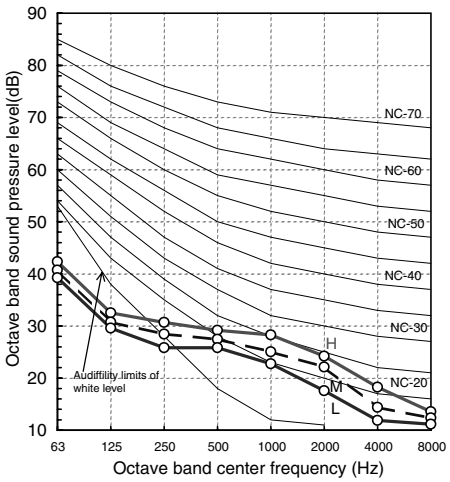
MMD-AP0121BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	31	29	27



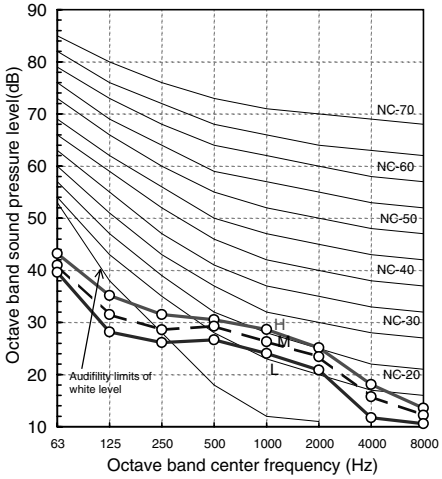
MMD-AP0151BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	31	29	27



MMD-AP0181BH

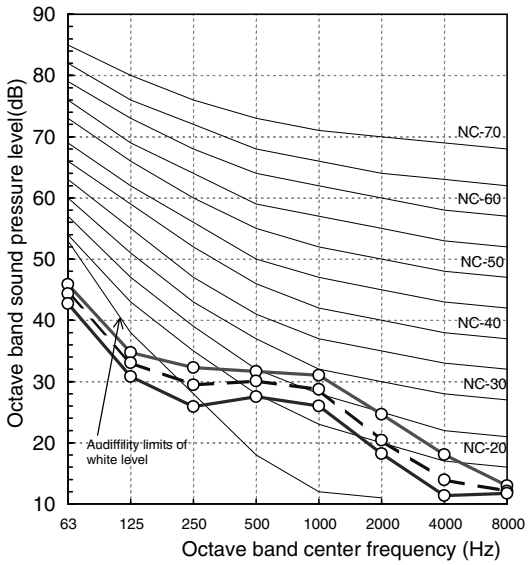
Fan Tap	H	M	L
Overall level dB(A)	32	30	28



Sound level data (NC CURVE)

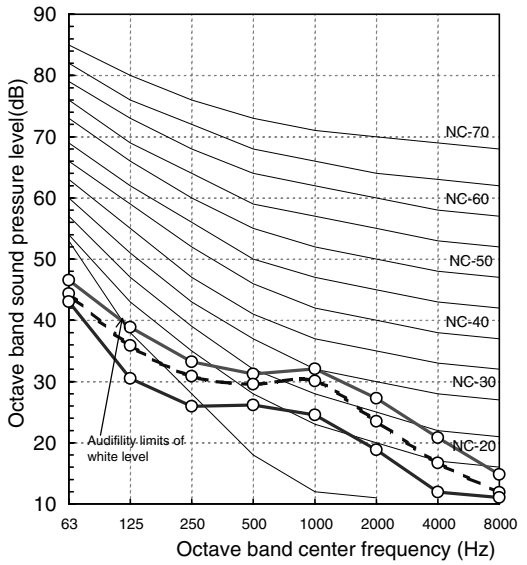
MMD-AP0241BH, AP0271BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	33	31	29



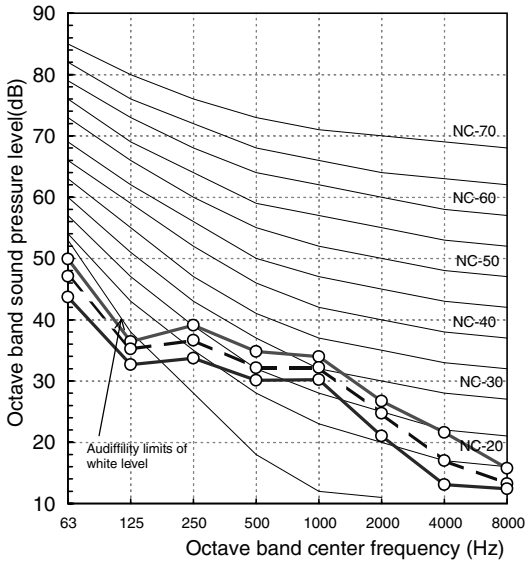
MMD-AP0301BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	34	32	29



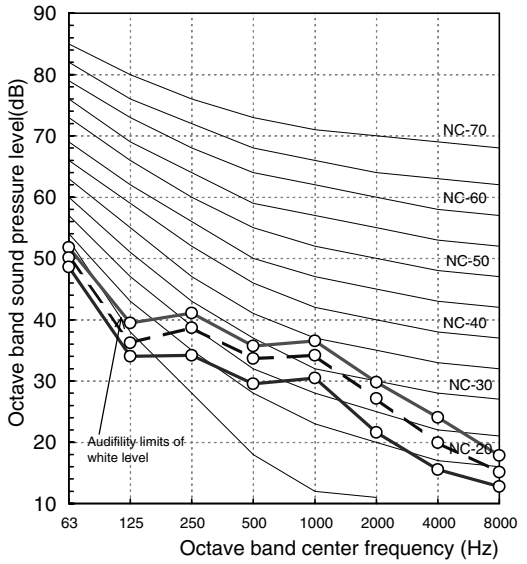
MMD-AP0361BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	36	34	32



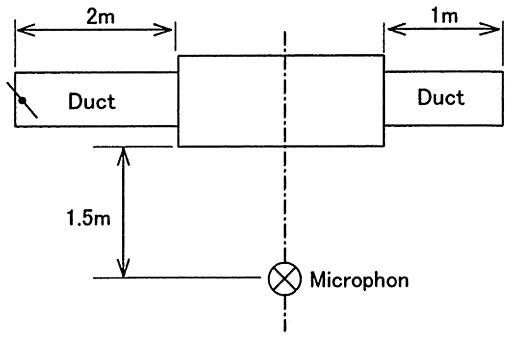
MMD-AP0481BH, AP0561BH

Fan Tap	H	M	L
Sound pressure level (dB(A))	38	36	32



Sound level data (NC CURVE)

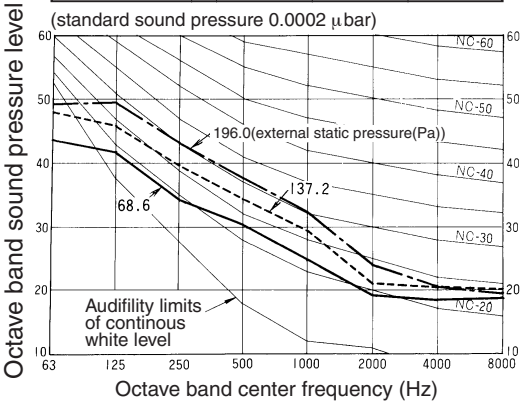
Sound level value the value at the case of measuring in non-resound room.



MMD-AP0181H

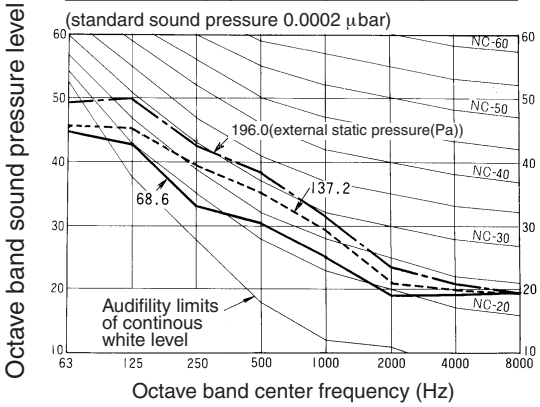
(dB)

Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	33	37	40
	C	46	51	53



(dB)

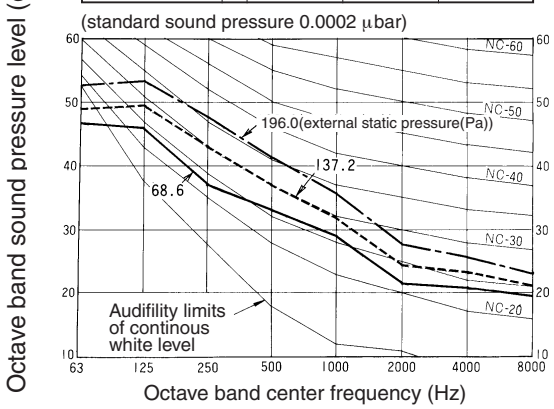
Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	33	37	40
	C	47	49	53



MMD-AP0241H, AP0271H

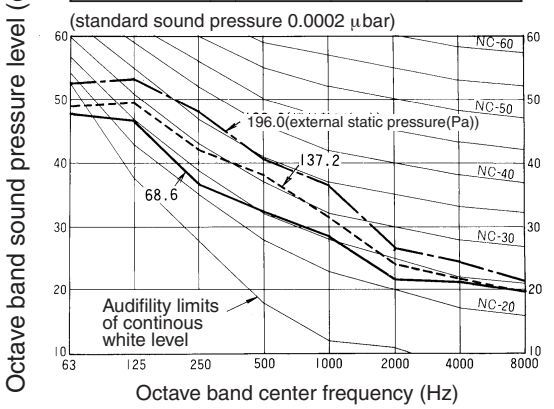
(dB)

Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	50	53	57



(dB)

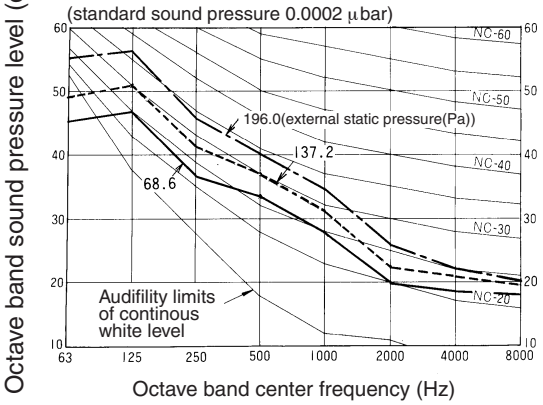
Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	50.5	53	57



MMD-AP0361H

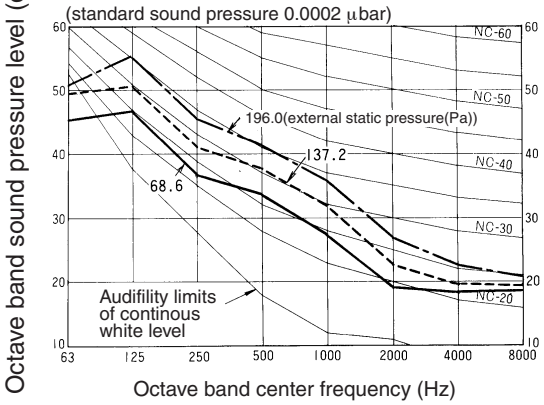
(dB)

Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	49.5	54	59



(dB)

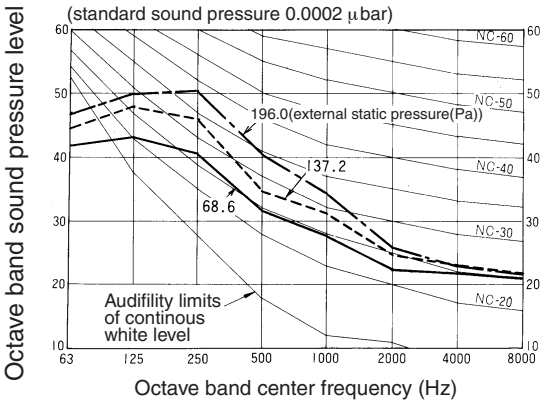
Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	49	53.5	57



MMD-AP0481H

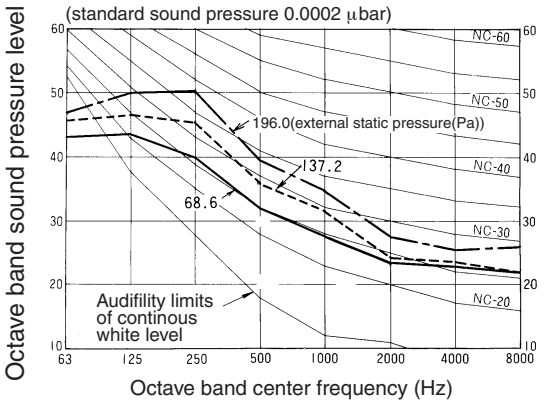
(dB)

Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	47	51	54



(dB)

Outside still pressure		68.6 (Pa)	137.2 (Pa)	196.0 (Pa)
Overall level (dB)	A	36	40	44
	C	47	51	54



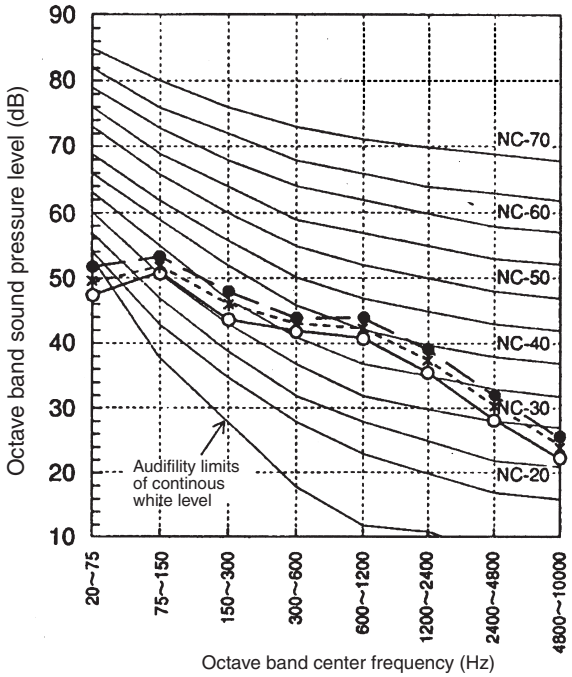
Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

MMD-AP0721H

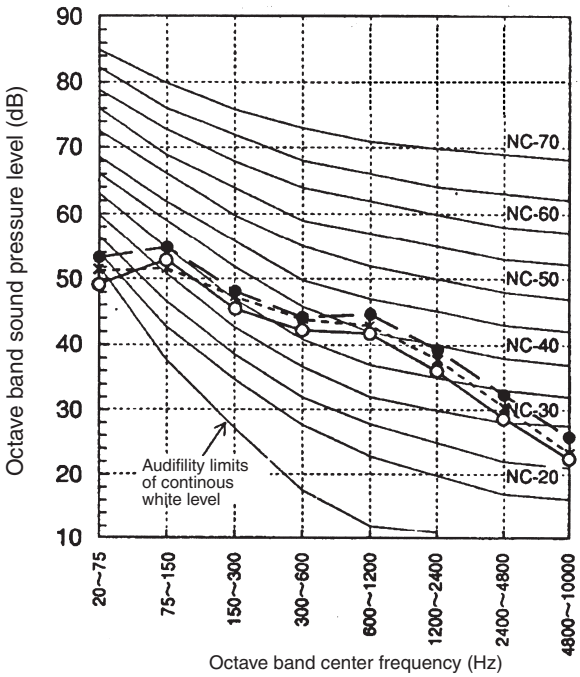
(50Hz)

Outside still pressure		69 (Pa)	137 (Pa)	196 (Pa)
Overall level (dB)	A	48	49	50.5
	C	54	55	57



(60Hz)

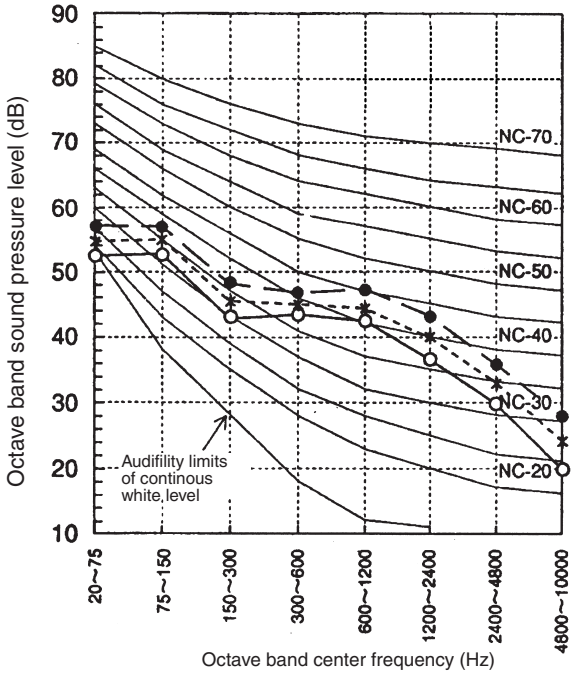
Outside still pressure		69 (Pa)	137 (Pa)	196 (Pa)
Overall level (dB)	A	48	49	50.5
	C	55	50	58



MMD-AP0961H

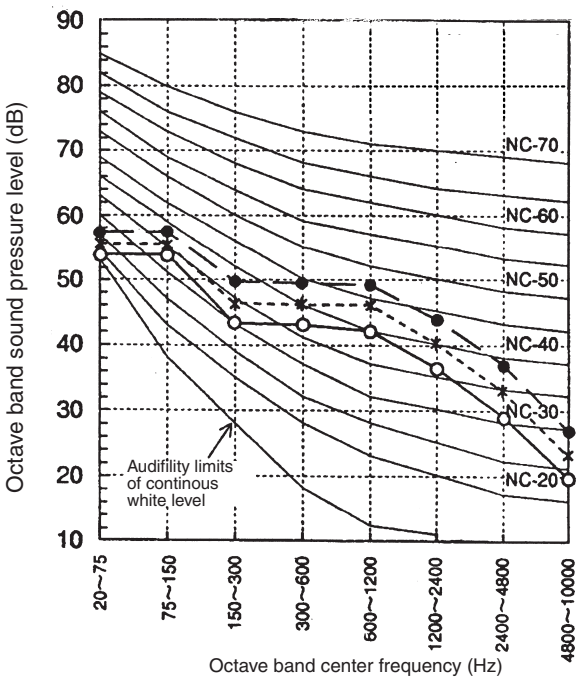
(50Hz)

Outside still pressure		69 (Pa)	137 (Pa)	196 (Pa)
Overall level (dB)	A	49	50	51.5
	C	56	59	61



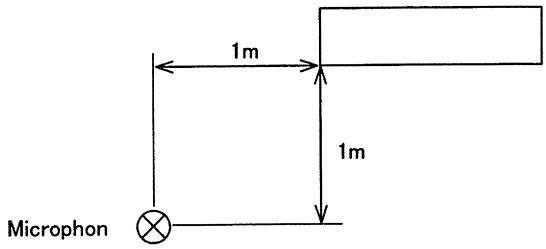
(60Hz)

Outside still pressure		69 (Pa)	137 (Pa)	196 (Pa)
Overall level (dB)	A	49	50	51.5
	C	57	59	61



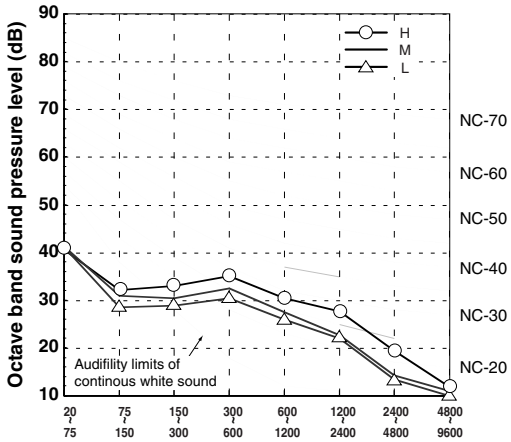
Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.



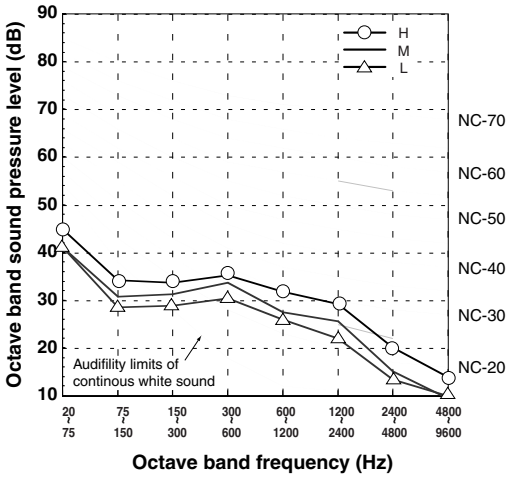
MMC-AP0151H

Fan Tap	H	M	L
Sound pressure level(dB(A))	35	32	30



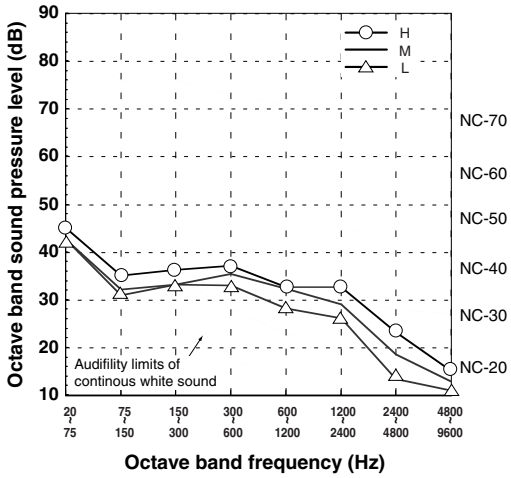
MMC-AP0181H

Fan Tap	H	M	L
Sound pressure level(dB(A))	36	33	30



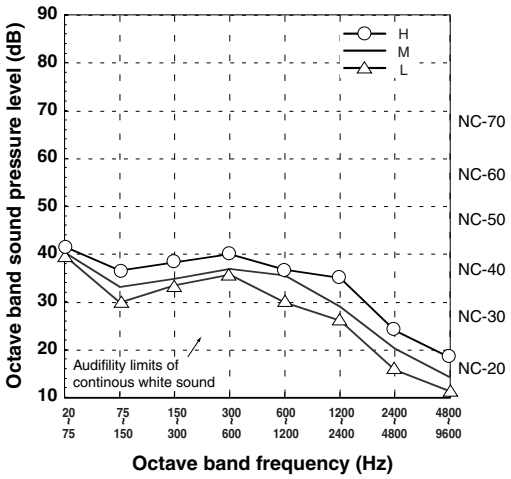
MMC-AP0241H, AP0271H

Fan Tap	H	M	L
Sound pressure level(dB(A))	38	36	33



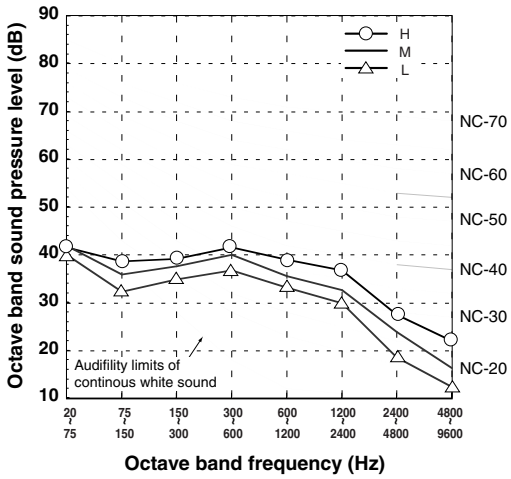
MMC-AP0361H

Fan Tap	H	M	L
Sound pressure level(dB(A))	41	38	35

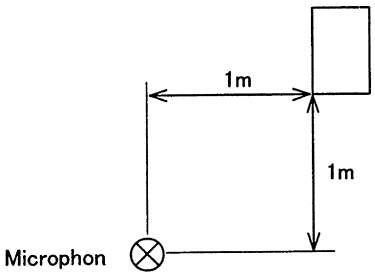


MMC-AP0481H

Fan Tap	H	M	L
Sound pressure level(dB(A))	43	40	37

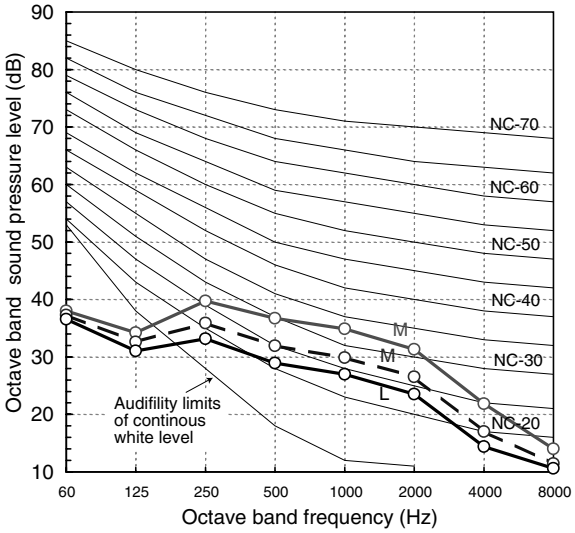


Sound level data (NC CURVE)



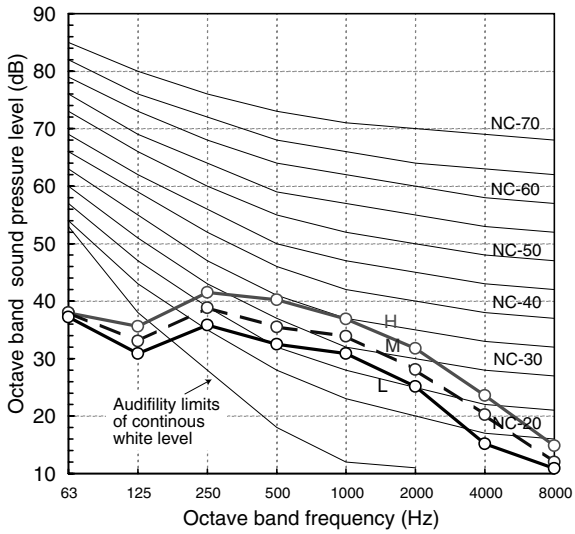
MMK-AP0071H, AP0091H, AP0121H

Fan tap	H	M	L
Sound pressure level (dB(A))	39	34	31



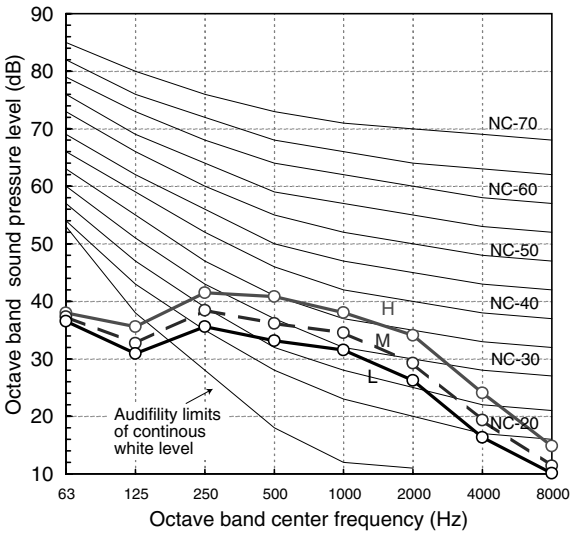
MMK-AP0151H, AP0181H

Fan tap	H	M	L
Sound pressure level (dB(A))	42	38	35



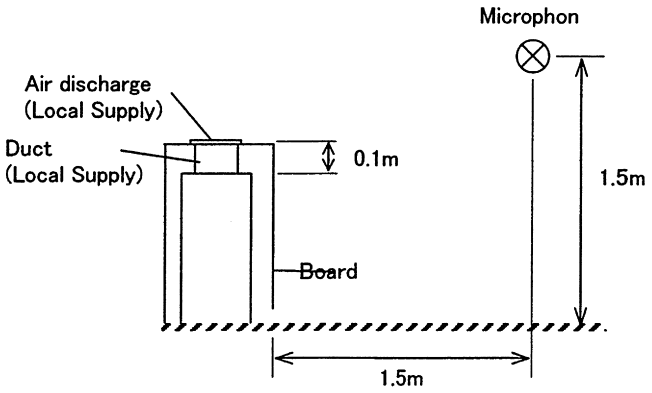
MMK-AP0241H

Fan tap	H	M	L
Sound pressure level (dB(A))	42	38	35



Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

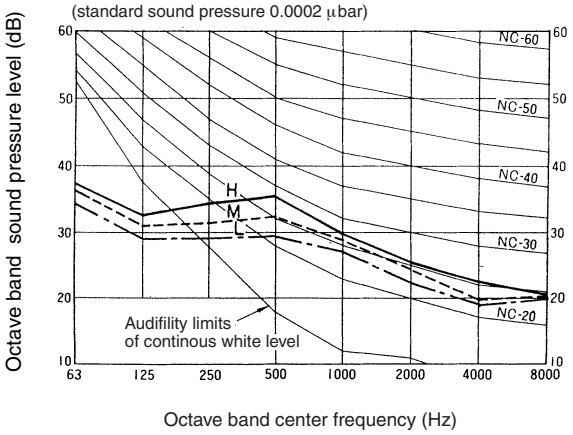


MML-AP0071BH, AP0091BH, AP0121BH

50 Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.7	40.2	37.9

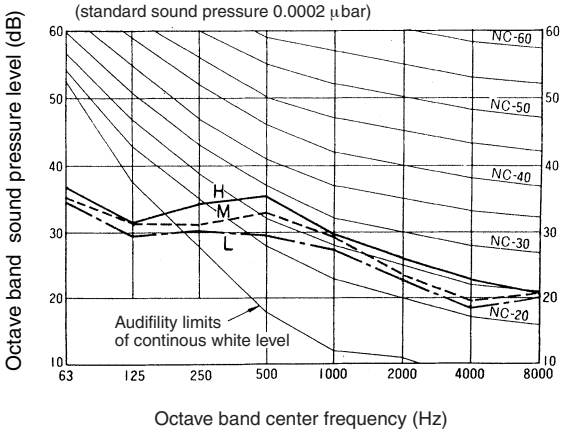
(standard sound pressure 0.0002 μbar)



60 Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.6	39.8	38.1

(standard sound pressure 0.0002 μbar)

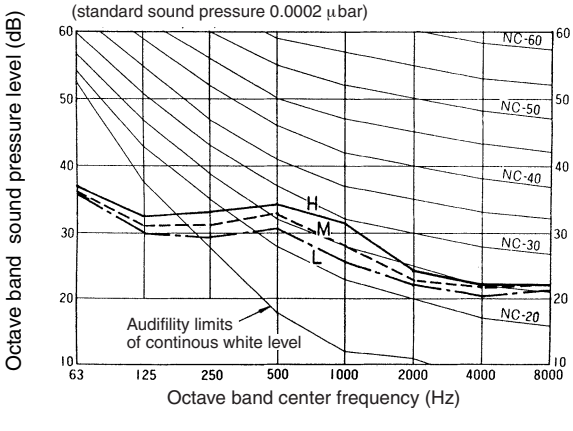


MML-AP0151BH, AP0181BH

50 Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.4	40.0	38.8

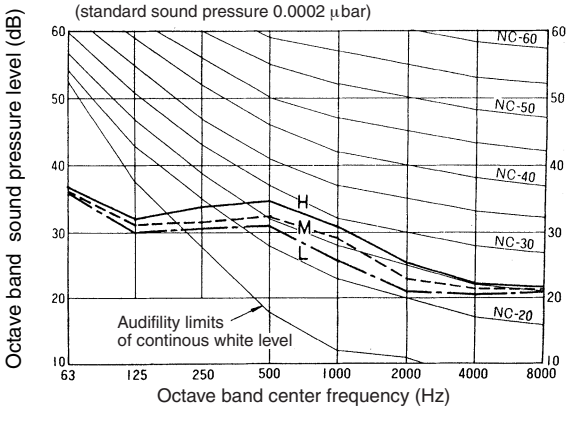
(standard sound pressure 0.0002 μbar)



60 Hz

Fan Tap		H	M	L
Overall level (dB)	A	36.0	34.0	32.0
	C	41.4	40.0	39.0

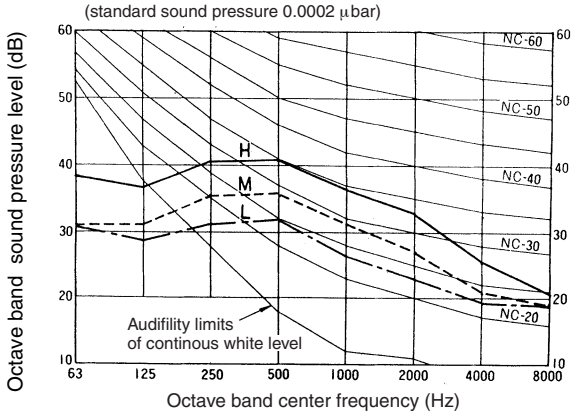
(standard sound pressure 0.0002 μbar)



MML-AP0241BH

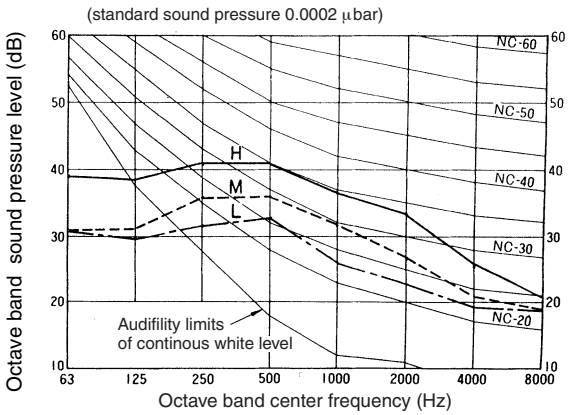
50 Hz

Fan Tap		H	M	L
Overall level (dB)	A	42.0	37.0	33.0
	C	46.4	41.0	37.7



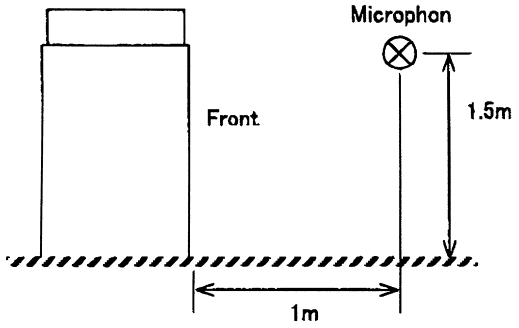
60 Hz

Fan Tap		H	M	L
Overall level (dB)	A	42.0	37.0	33.0
	C	46.6	41.0	38.0



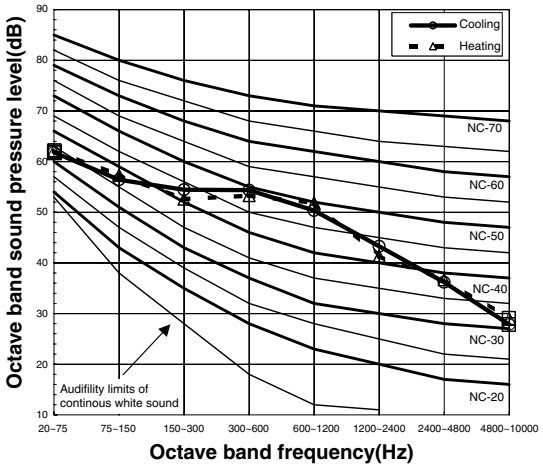
Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.



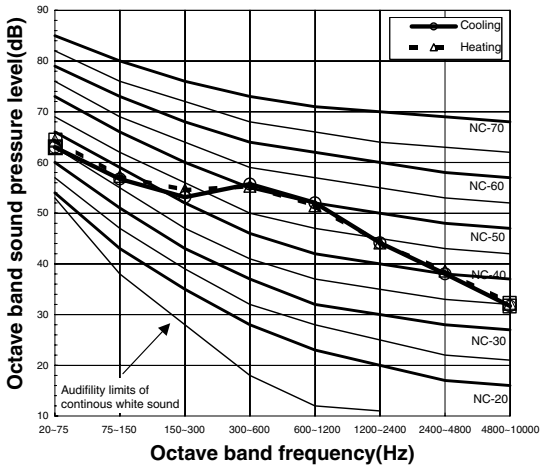
MMY-MAP0501HT8, MAP0501HT7, MAP0501T8

Sound pressure Level (dB(A))	55



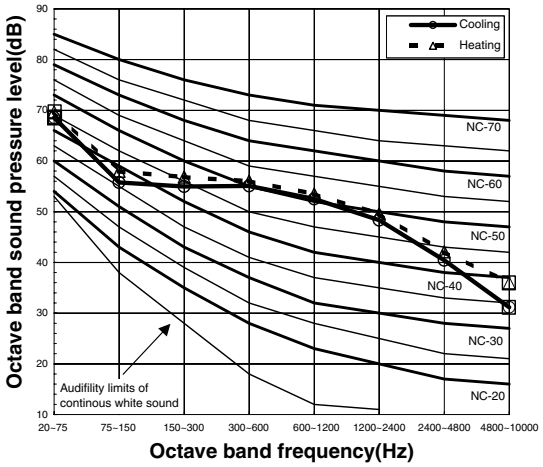
MMY-MAP0601HT8, MAP0601HT7, MAP0601T8

Sound pressure Level (dB(A))	56



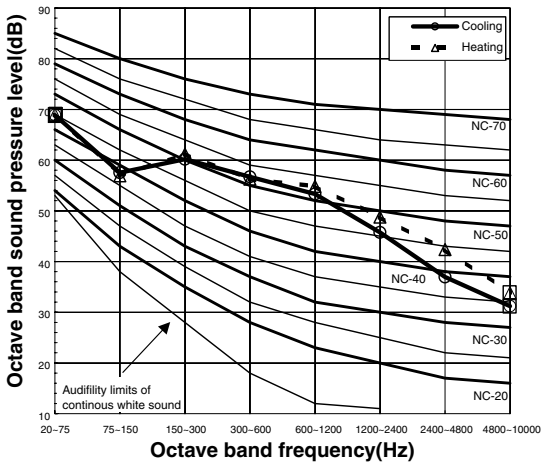
MMY-MAP0801HT8, MAP0801HT7, MAP0801T8

Sound pressure Level (dB(A))	57



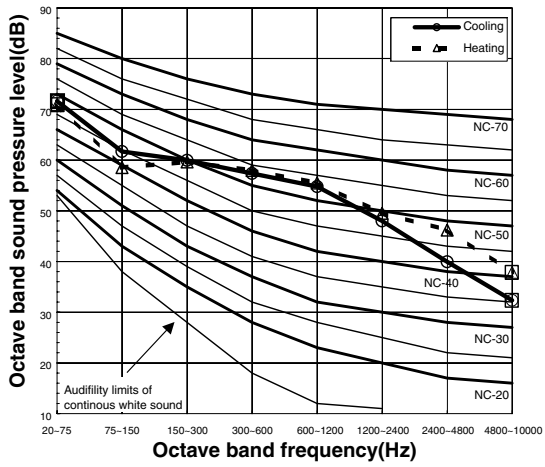
MMY-MAP1001HT8, MAP1001HT7, MAP1001T8

Sound pressure Level (dB(A))	58



MMY-MAP1201HT8, MAP1201HT7, MAP1201T8

Sound pressure Level (dB(A))	59

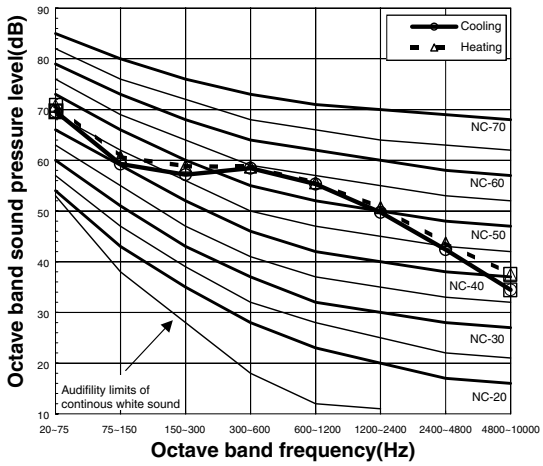


Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

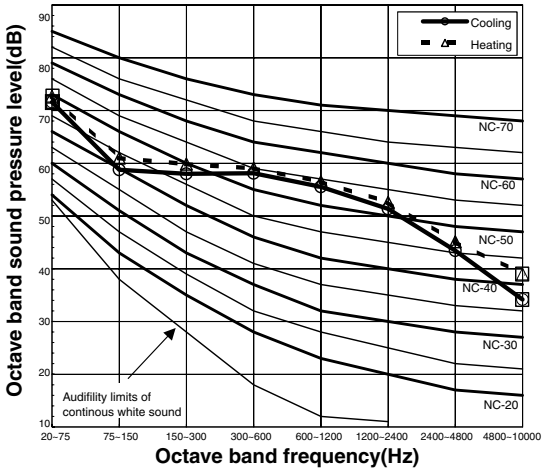
MMY-AP1401HT8, AP1401HT7, AP1401T8

Sound pressure Level (dB(A))	59.5



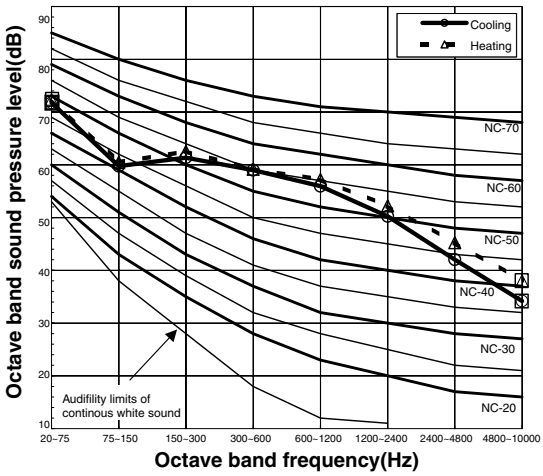
MMY-AP1601HT8, AP1601HT7, AP1601T8

Sound pressure Level (dB(A))	60



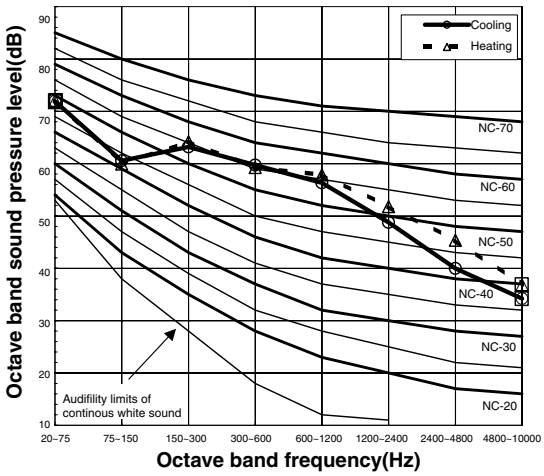
MMY-AP1801HT8, AP1801HT7, MAP1801T8

Sound pressure Level (dB(A))	60.5



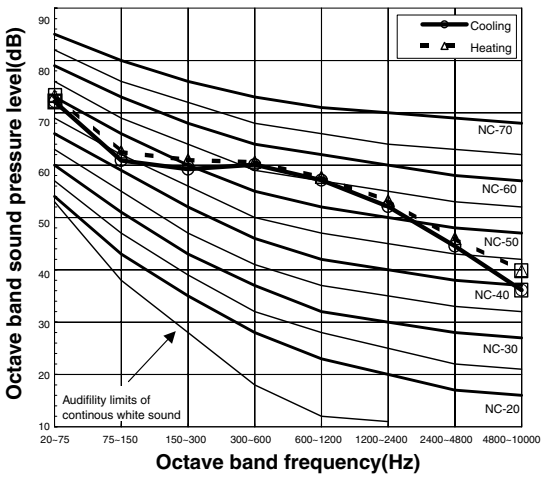
MMY-AP2001HT8, AP2001HT7, AP2001T8

Sound pressure Level (dB(A))	61



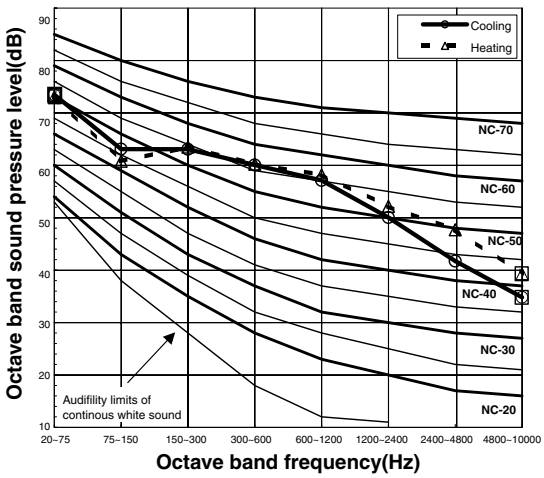
MMY-AP2201HT8, AP2201HT7, AP2201T8

Sound pressure Level (dB(A))	61.5



MMY-AP2211HT8, AP2211HT7, AP2211T8

Sound pressure Level (dB(A))	61.5

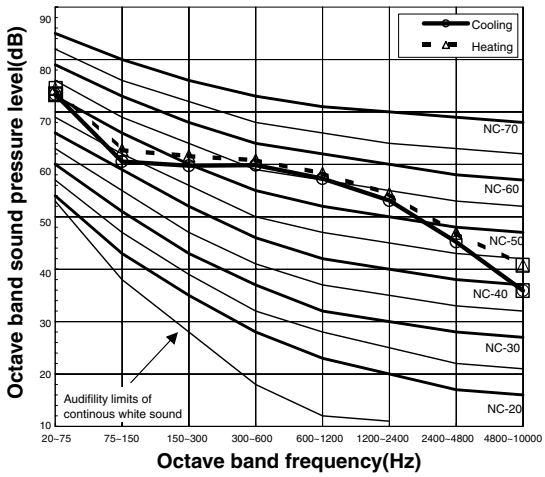


Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

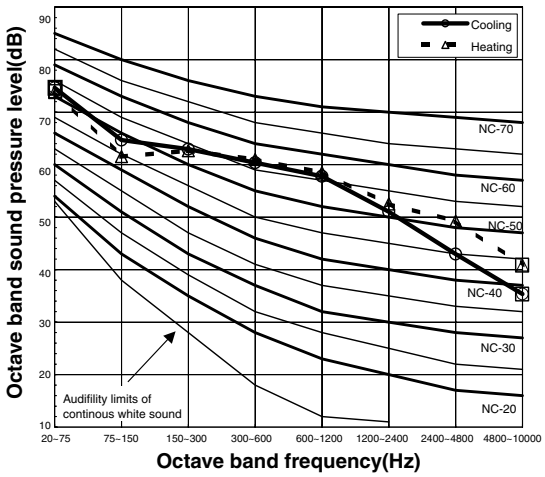
MMY-AP2401HT8, AP2401HT7, AP2401T8

Sound pressure Level (dB)A))	62



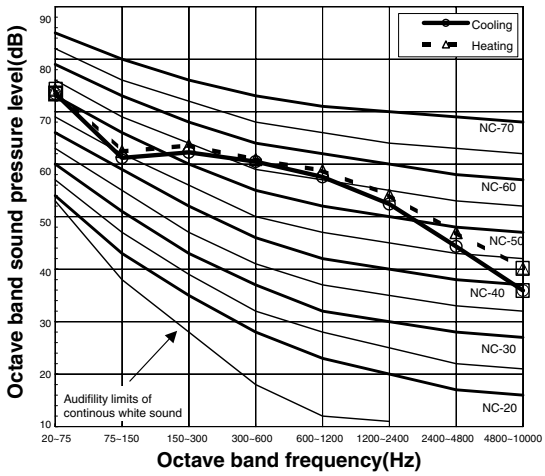
MMY-AP2411HT8, AP2411HT7, AP2411T8

Sound pressure Level (dB(A))	62



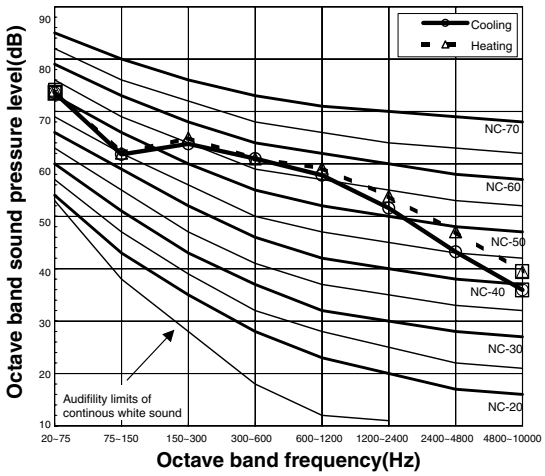
MMY-AP2601HT8, AP2601HT7, AP2601T8

Sound pressure Level (dB(A))	62



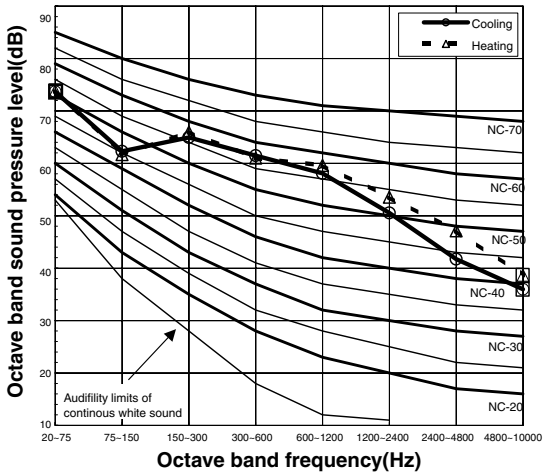
MMY-AP2801HT8, AP2801HT7, AP2801T8

Sound pressure Level (dB(A))	62.5



MMY-AP3001HT8, AP3001HT7, AP3001T8

Sound pressure Level (dB(A))	63

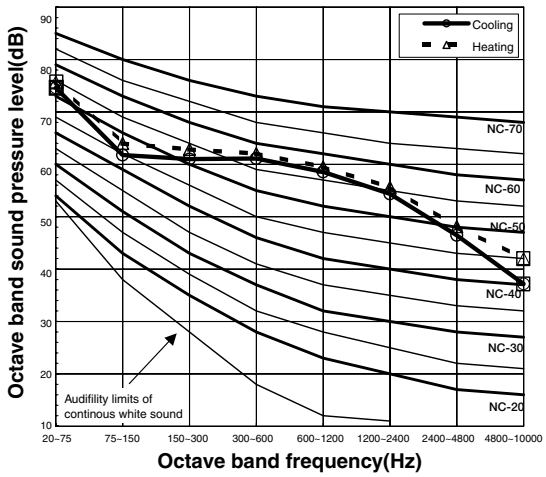


Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

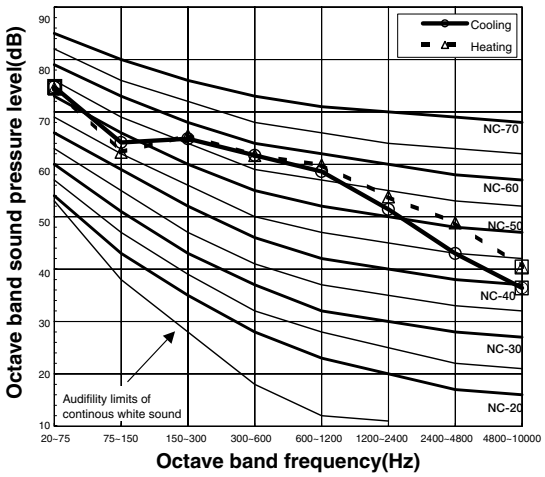
MMY-AP3201HT8, AP3201HT7, AP3201T8

Sound pressure Level (dB(A))	63



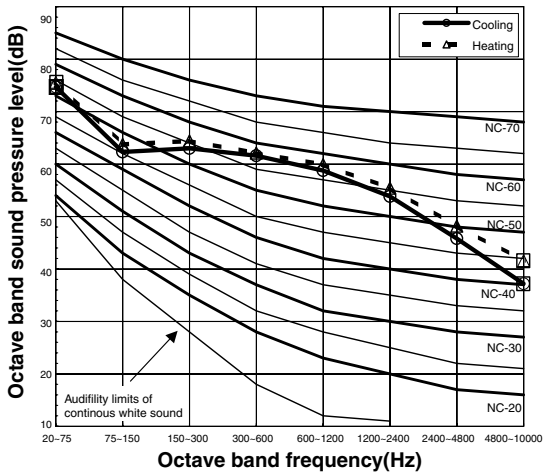
MMY-AP3211HT8, AP3211HT7, AP3211T8

Sound pressure Level (dB(A))	63



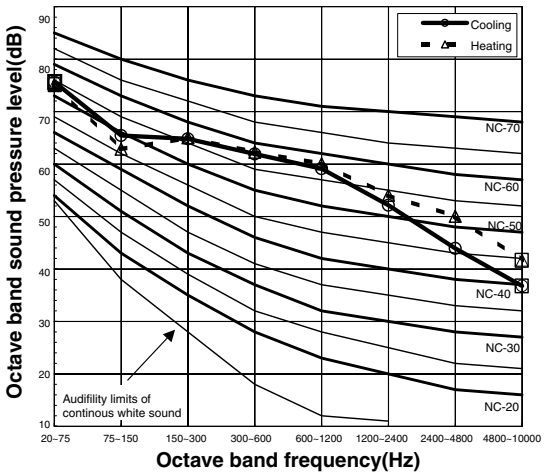
MMY-AP3401HT8, AP3401HT7, AP3401T8

Sound pressure Level (dB(A))	63.5



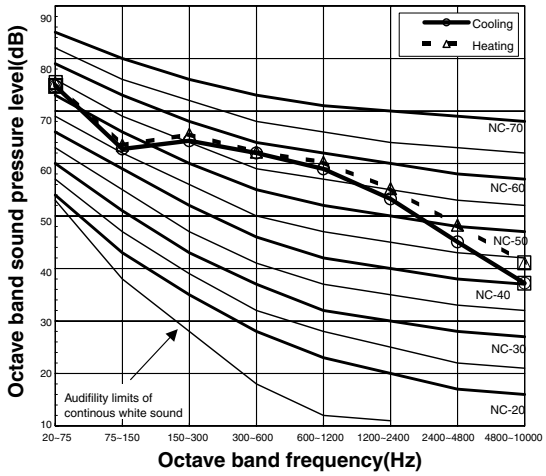
MMY-AP3411HT8, AP3411HT7, AP3411T8

Sound pressure Level (dB(A))	63.5



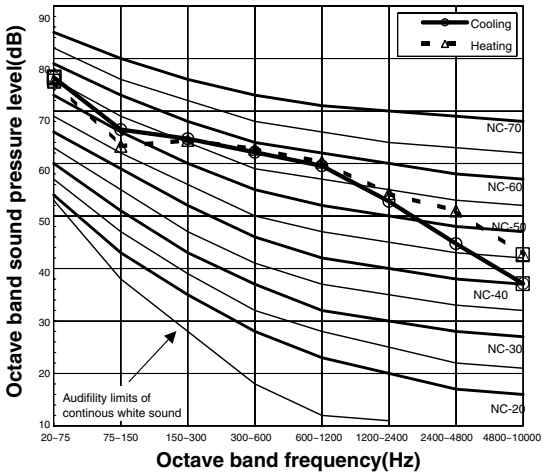
MMY-AP3601HT8, AP3601HT7, AP3601T8

Sound pressure Level (dB(A))	63.5



MMY-AP3611HT8, AP3611HT7, AP3611T8

Sound pressure Level (dB(A))	64

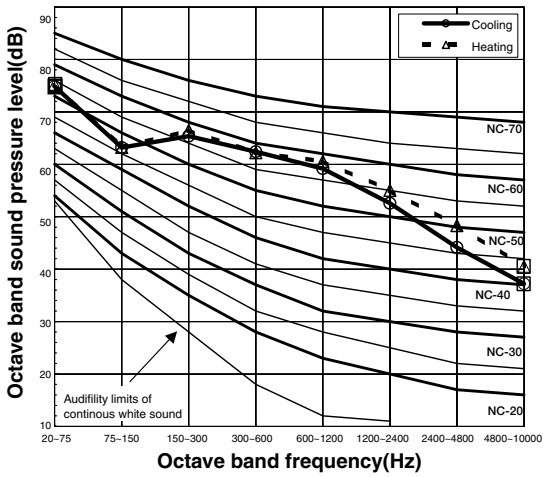


Sound level data (NC CURVE)

Sound level value the value at the case of measuring in non-resound room.

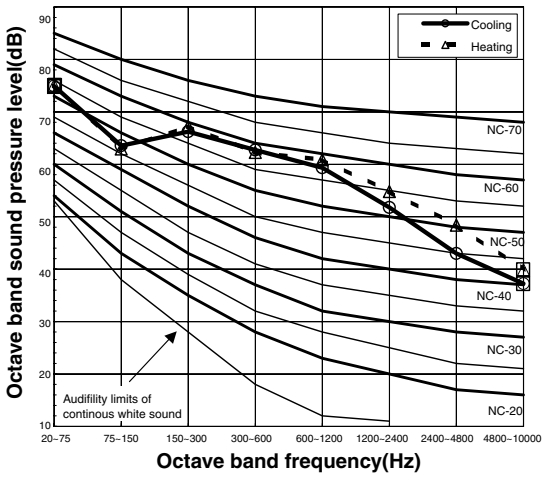
MMY-AP3801HT8, AP3801HT7, AP3801T8

Sound pressure Level (dB(A))	64



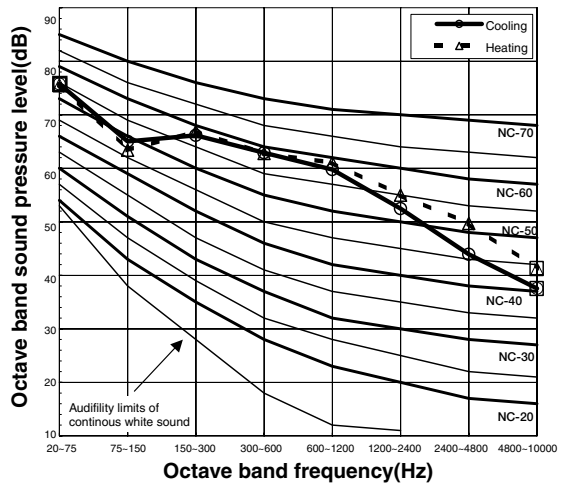
MMY-AP4001HT8, AP4001HT7, AP4001T8

Sound pressure Level (dB(A))	64



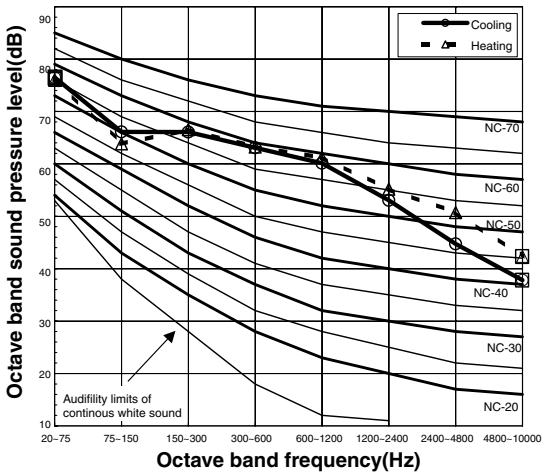
MMY-AP4201HT8, AP4201HT7, AP4201T8

Sound pressure Level (dB(A))	64.5



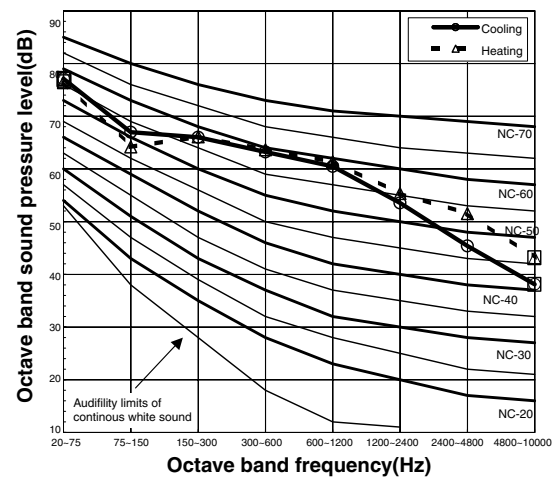
MMY-AP4401HT8, AP4401HT7, AP4401T8

Sound pressure Level (dB(A))	64.5



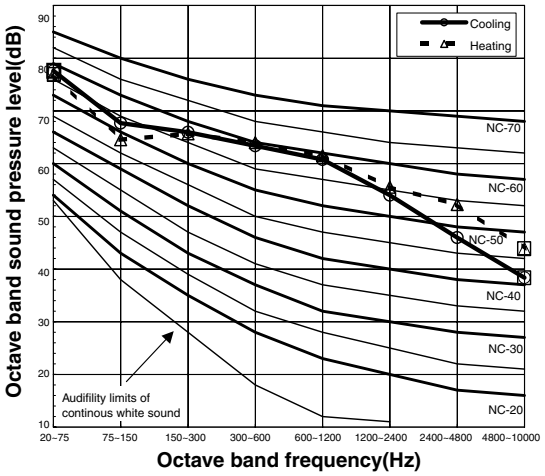
MMY-AP4601HT8, AP4601HT7, AP4601T8

Sound pressure Level (dB(A))	65



MMY-AP4801HT8, AP4801HT7, AP4801T8

Sound pressure Level (dB(A))	65



15

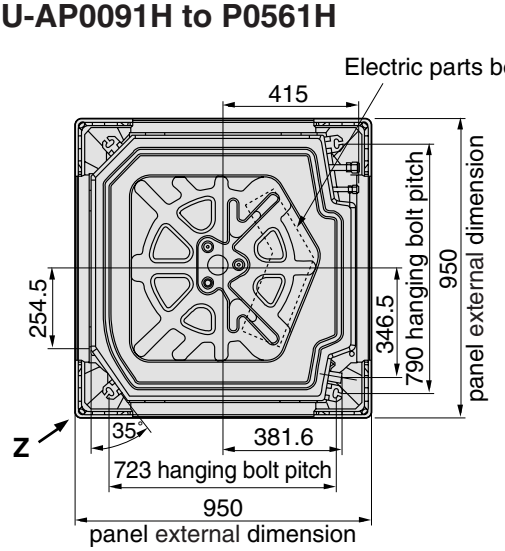
Dimensional drawing

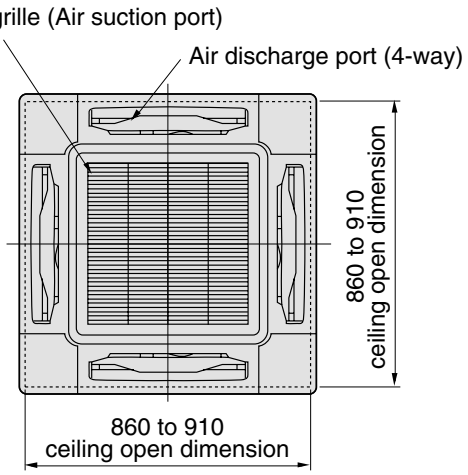
15 Dimensional drawing

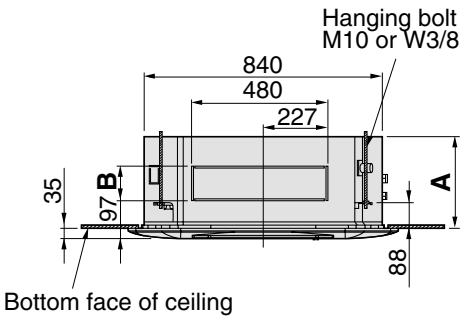
Indoor unit

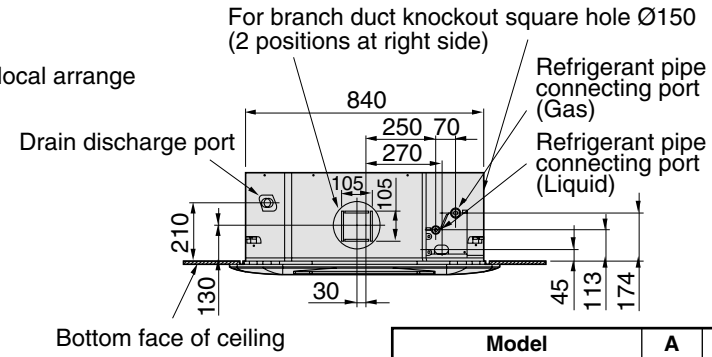
• 4-way Air Discharge Cassette Type

MMU-AP0091H to P0561H



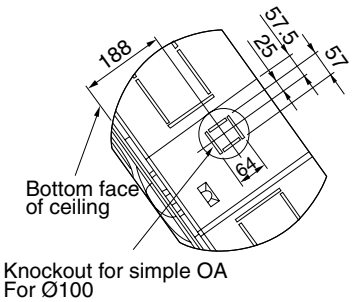




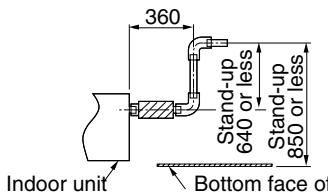


mm

Model	A	B
AP0091H to AP0301H	250	120
AP0361H to AP0561H	319	183

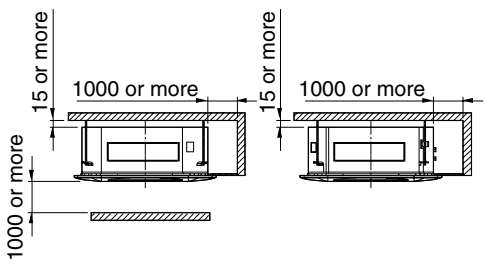


Z view



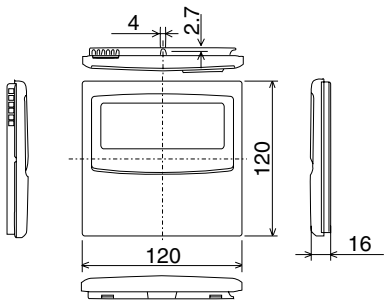
(NOTE)
As ABS is used for the drain discharge port of the main unit, the vinyl chloride paste cannot be used.
Use the flexible hose (Band fix) included in the package.

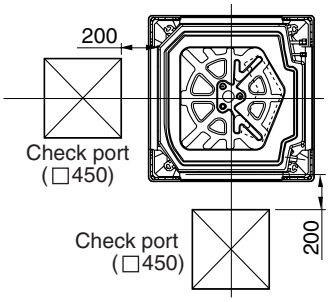
Drain-up standing-up size



Space required for installation and servicing

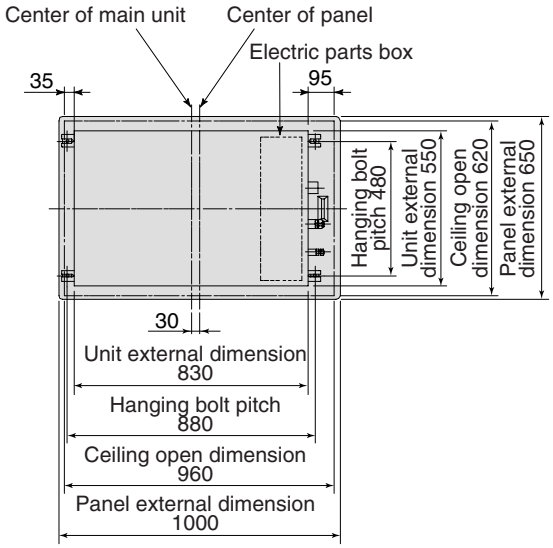
• Wired remote controller (RBC-AMT21E)



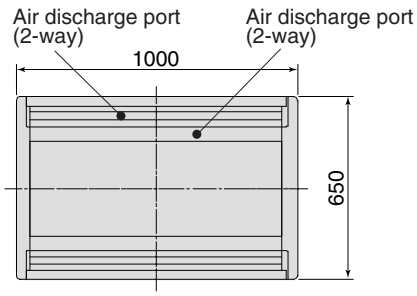


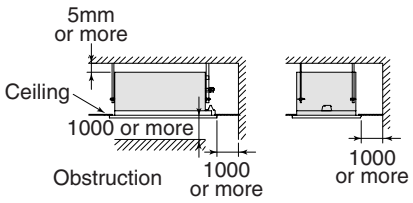
• 2-way Air Discharge Cassette Type

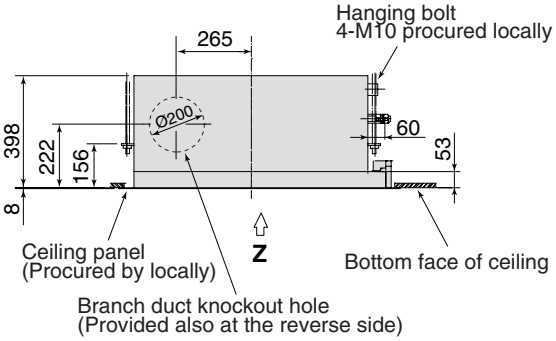
MMU-AP0071WH, AP0091WH, AP0121WH



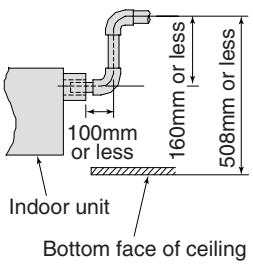
Z view

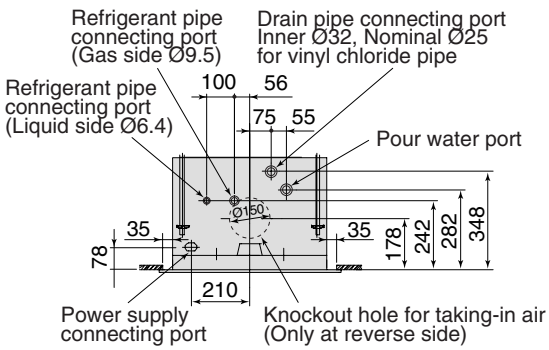




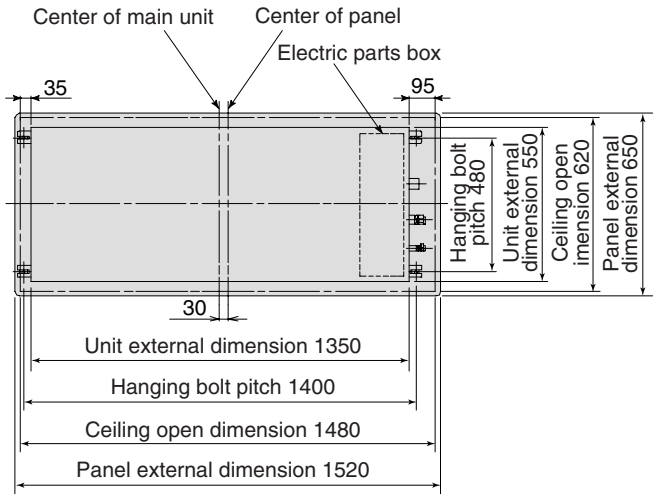


Space required for installation and servicing

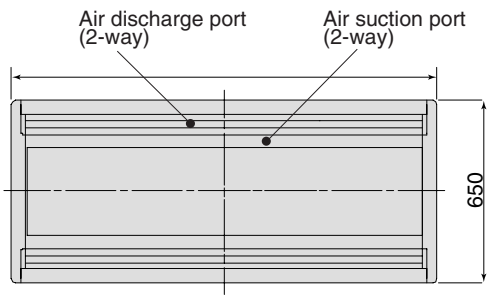


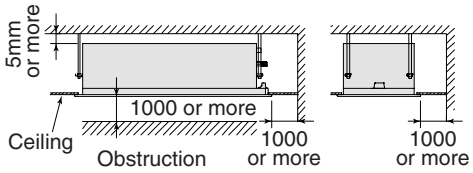


MMU-AP0151WH, AP0181WH, AP0241WH, AP0271WH. AP0301WH

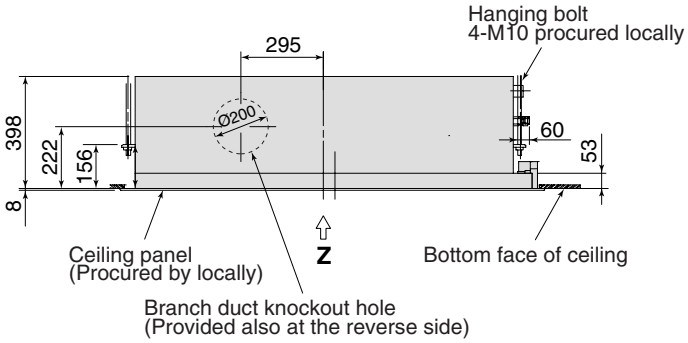


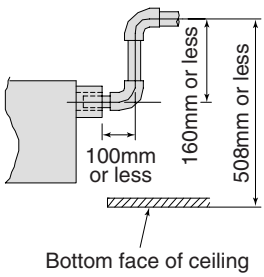
Z view

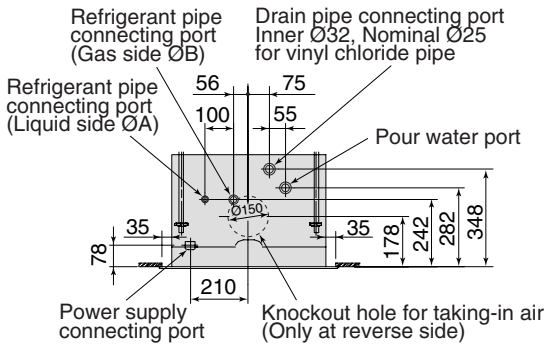




Space required for installation and servicing

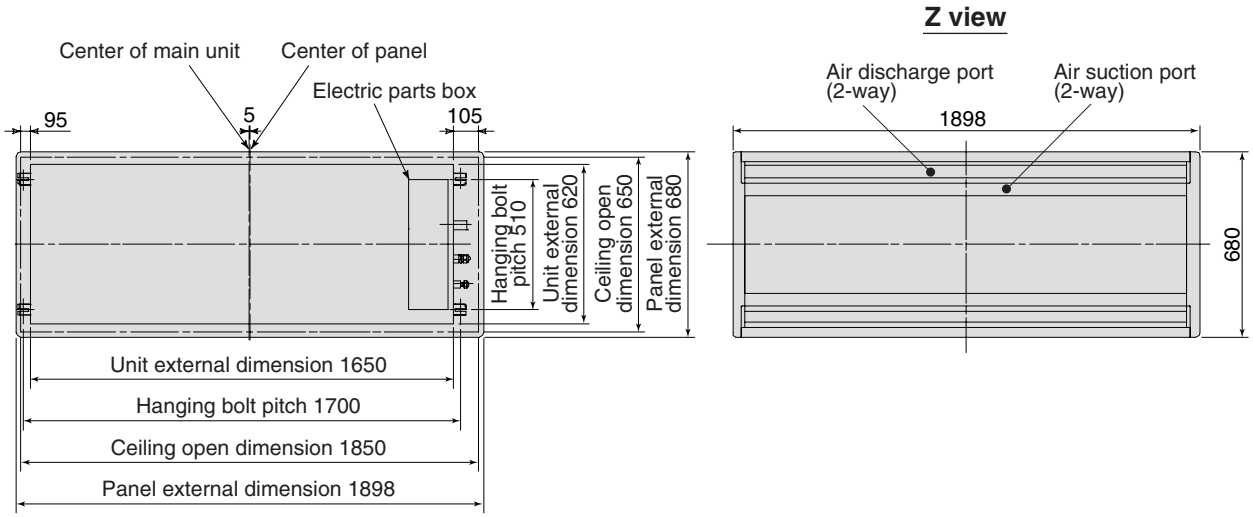


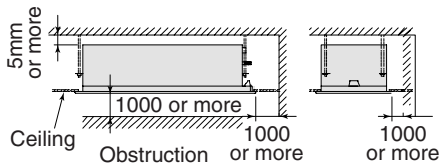




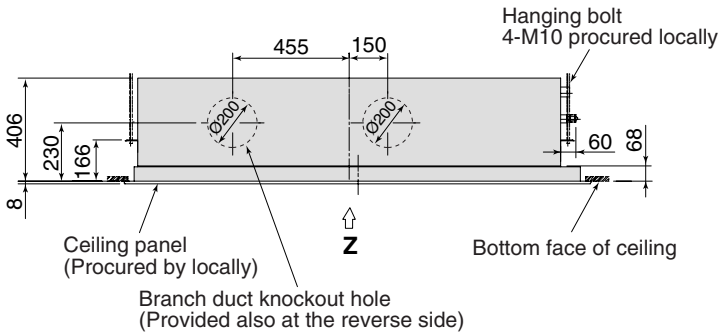
Model	A	B
MMU-AP0151WH to AP0181WH	Ø6.4	Ø12.7
MMU-AP0241WH to AP0301WH	Ø9.5	Ø15.9

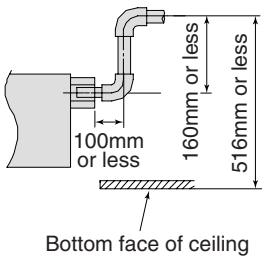
MMU-AP0481WH

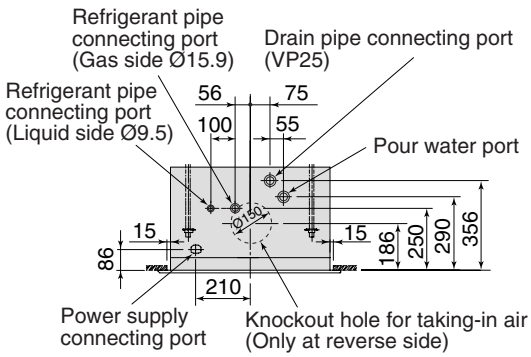




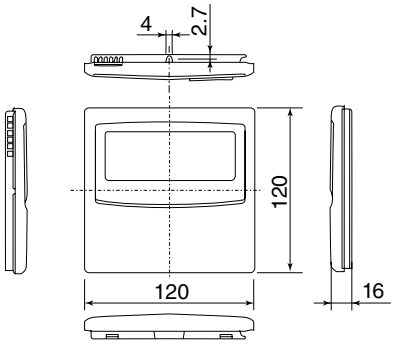
Space required for installation and servicing





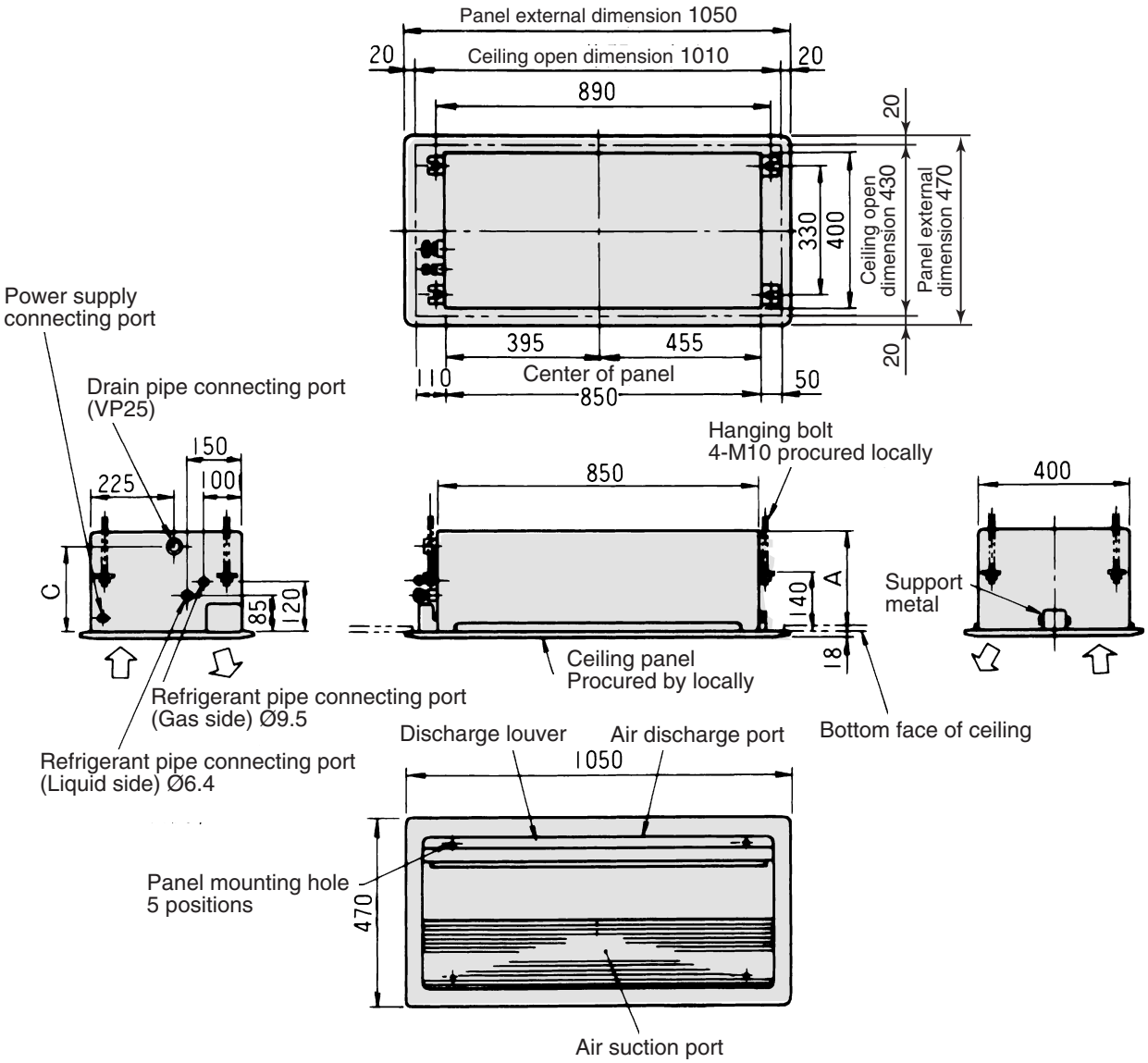


- **Wired remote controller (RBC-AMT21E)**



• 1-way Air Discharge Cassette Type

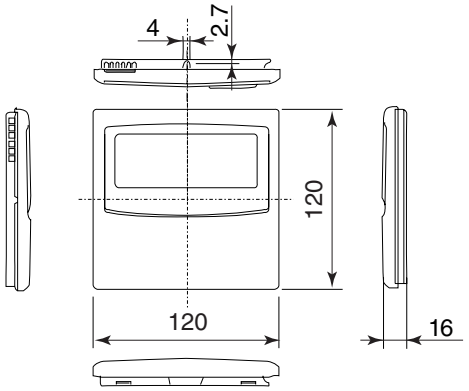
MMU-AP0071YH, AP0091YH, AP0121YH

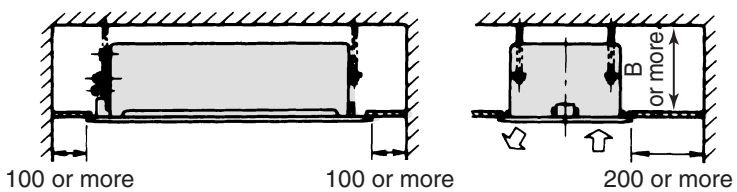


Dimensions

Model MMU-	A	B	C
AP0071YH, AP0091YH, AP0121YH	235	245	200

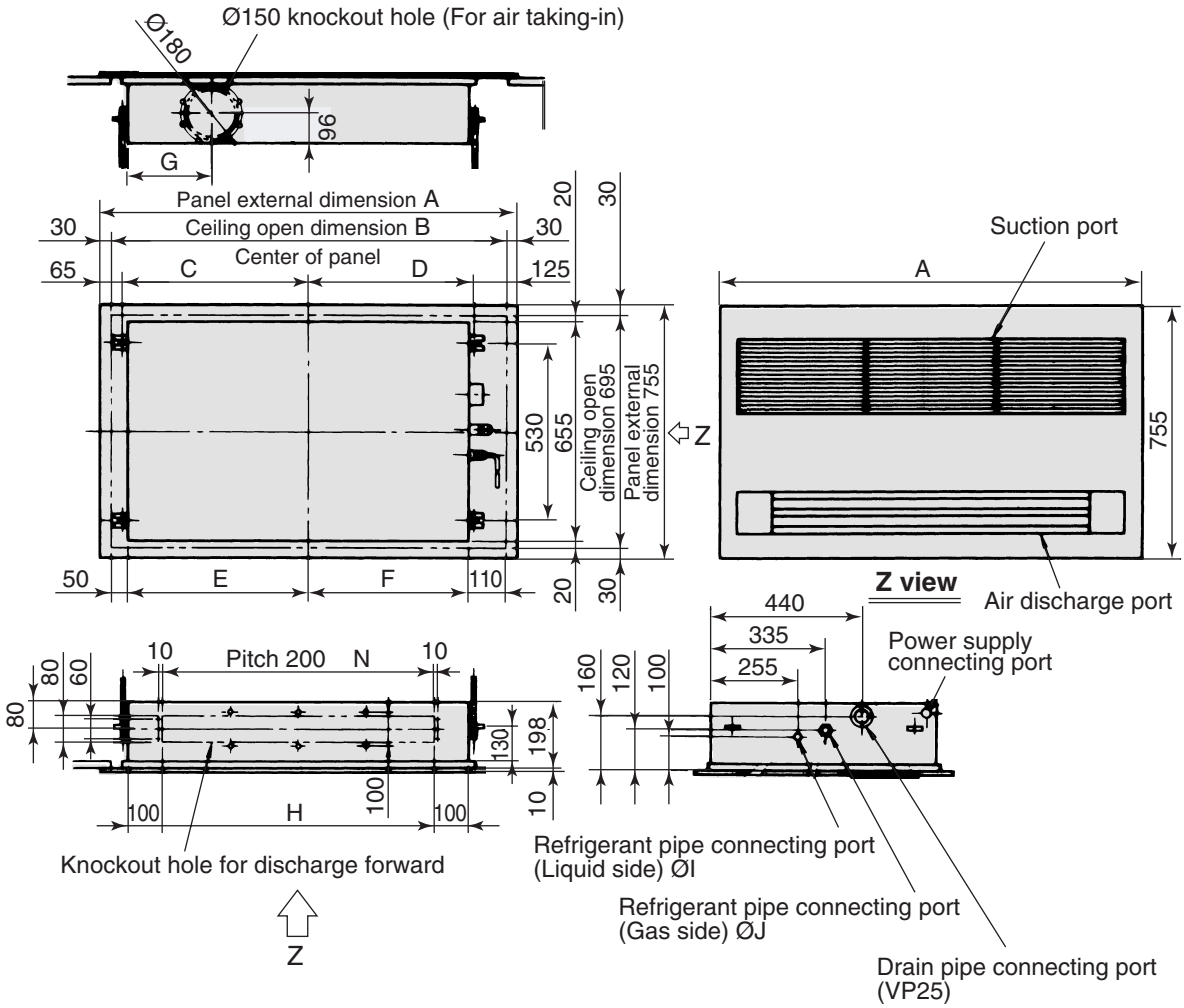
• Wired remote controller (RBC-AMT21E)





Space required for installation and servicing

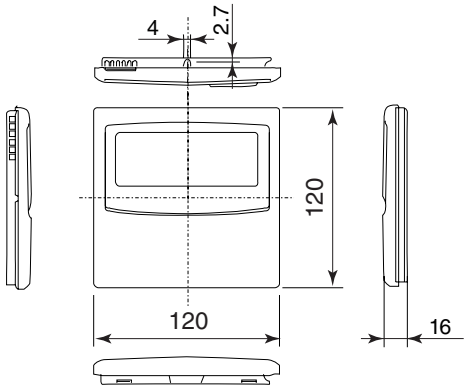
MMU-AP0151SH, AP0181SH, AP0241SH

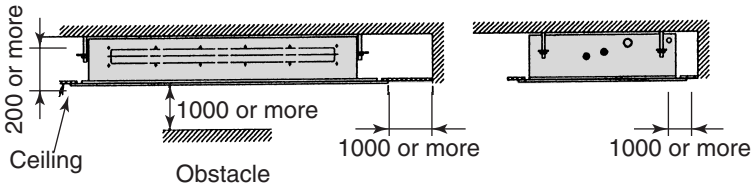


Dimensions

Model MMU-	A	B	C	D	E	F	G	H	I	J	N
AP0151SH,AP0181SH	1220	1160	545	485	530	470	254	800	6.4	12.7	4
AP0241SH	1420	1360	645	585	630	570	460	1000	9.5	15.9	5

- **Wired remote controller (RBC-AMT21E)**

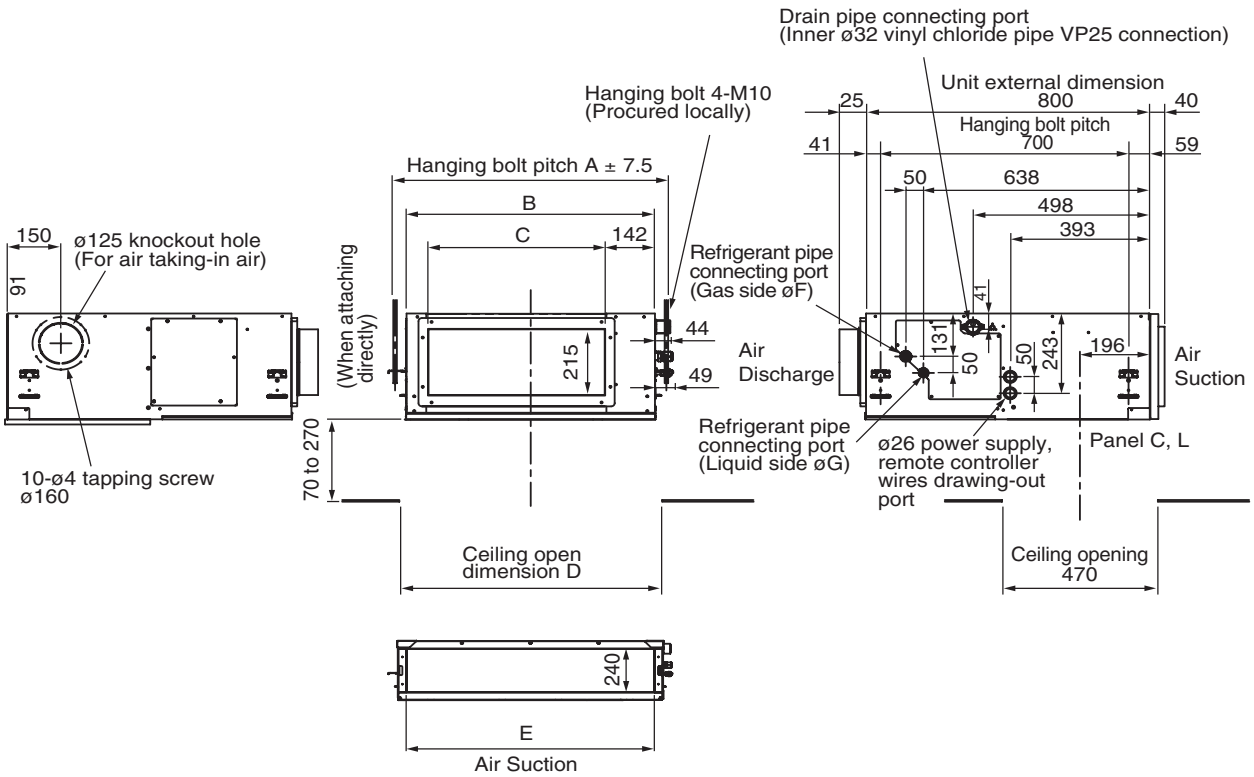




Space required for installation and servicing

• Concealed Duct Standard Type

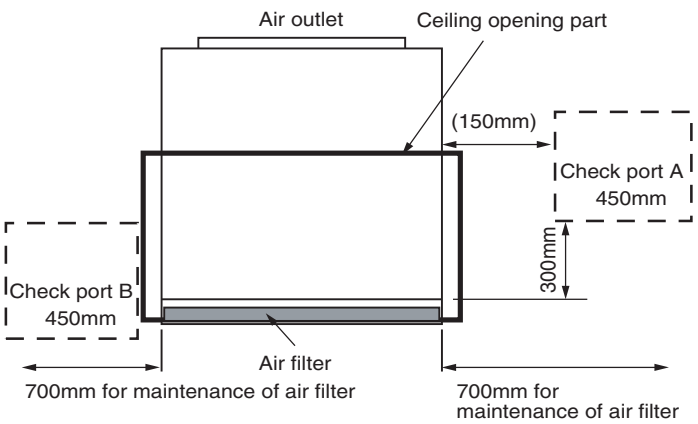
MMD-AP0071BH, AP0091BH, AP0121BH, AP0151BH, AP0181BH, AP0241BH, AP0271BH, AP0301BH, AP0361BH, AP0481BH, AP0561BH

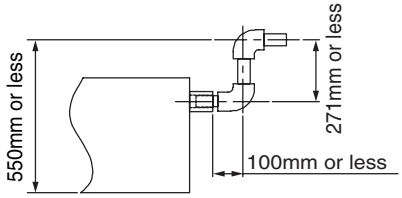


Model MMD-	A	B	C	D	D	E	F	G
AP0071BH, AP0091BH, AP0121BH	616	550	350	600	600	470	9.5	6.4
AP0151BH, AP0181BH	766	700	500	750	750	620	12.7	9.4
AP0241BH, AP0271BH, AP0301BH	1066	1000	800	1050	1050	920	15.9	9.5
AP0361BH, AP0481BH, AP0561BH	1416	1350	1150	1400	1400	1270	15.9	9.5

(Note)
Two of high efficiency filter and deodorant filter cannot applied.

(Note)
Be sure to place a check port A at the position indicated in the following figure for maintenance of the equipment.



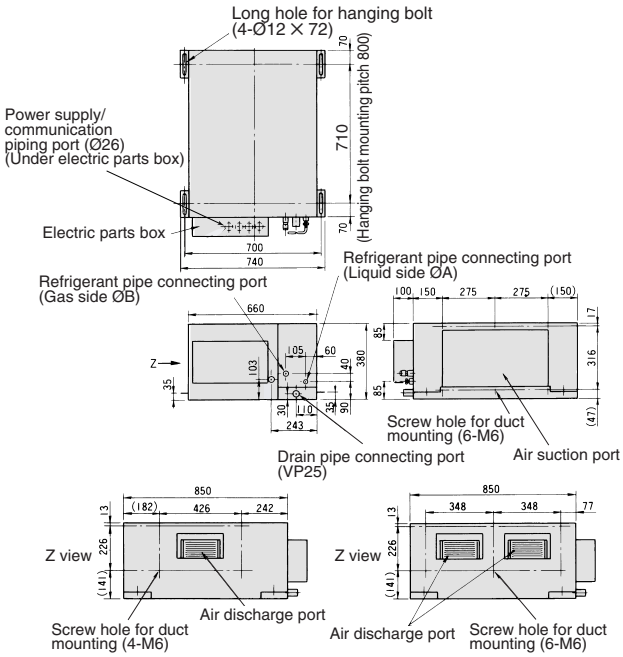


Drain-up piping

• Concealed Duct High Static Pressure Type

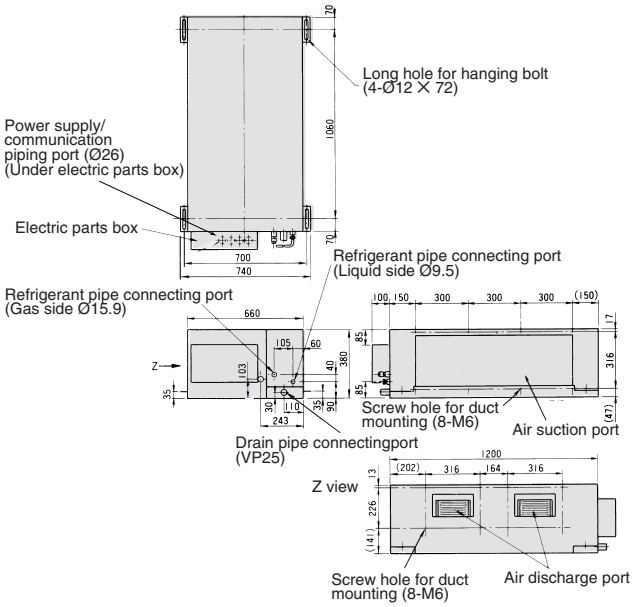
MMD-AP0181H, AP0241H, AP0271H, AP0361H, AP0481H, AP0721H, AP0961H

MMD-AP0181H to AP0361H



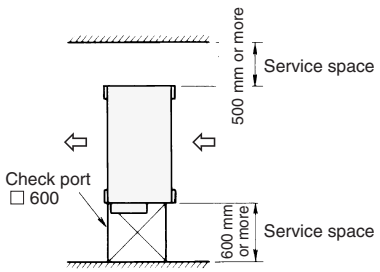
AP0181H to AP0271H type AP0361H type

MMD-AP0481H



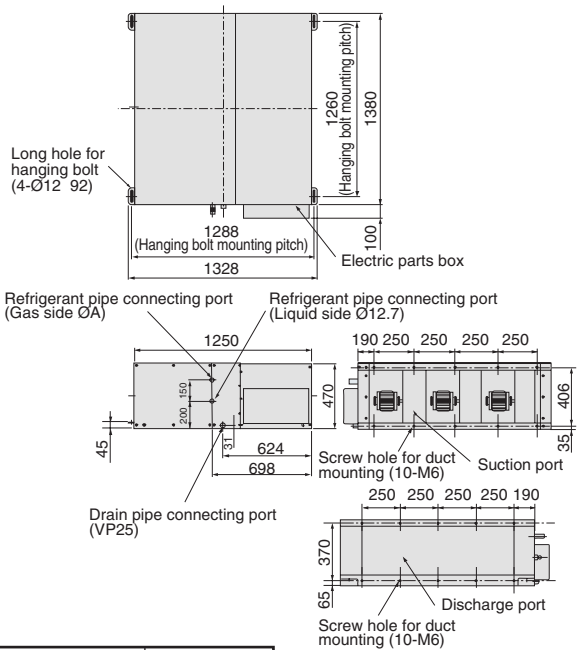
Model MMD-	A	B
AP0181H	6.4	12.7
AP0241H, AP0271H, AP0361H, AP0481H	9.5	15.9

Space required for installation and servicing *1



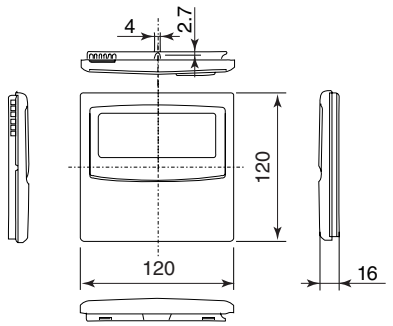
*1 Service spaces for MMD-AP0721H and AP0961H are different from those in the above figure. For inquiries please contact us separately.

MMD-AP0721H, AP0961H



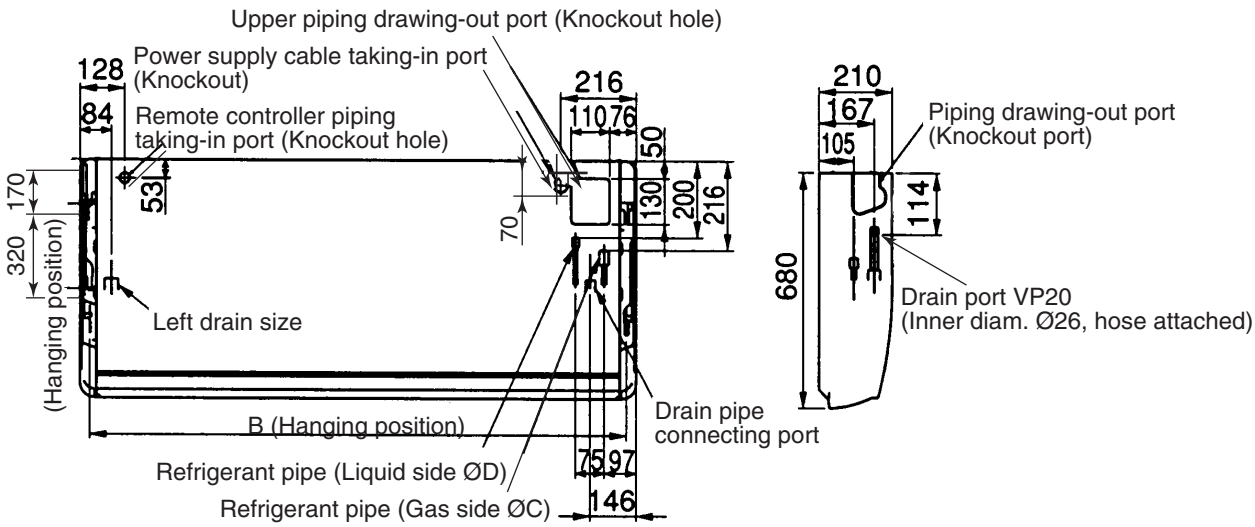
Model MMD-	Gas pipe ØA
AP0721H	Ø22.2
AP0961H	Ø22.2

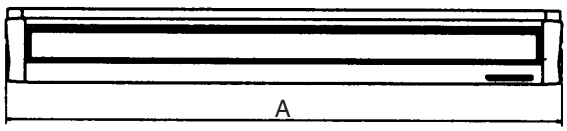
- **Wired remote controller (RBC-AMT21E)**



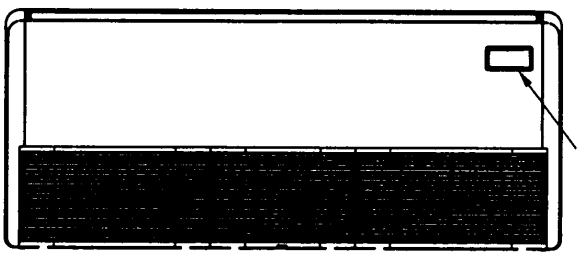
• Under Ceiling Type

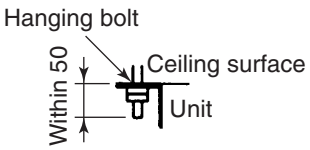
MMC-AP0151H, AP0181H, AP0241H, AP0271H, AP0361H, AP0481H

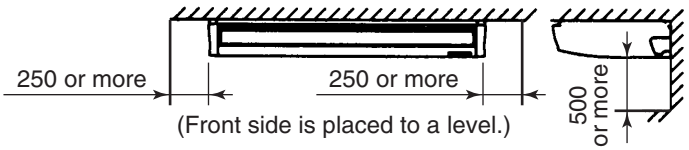




Model MMC-	A	B	C	D
AP0151H, AP0181H	910	855	12.7	6.4
AP0241H to AP0271H	1180	1125	15.9	9.5
AP0361H, AP0481H	1595	1540	15.9	9.5

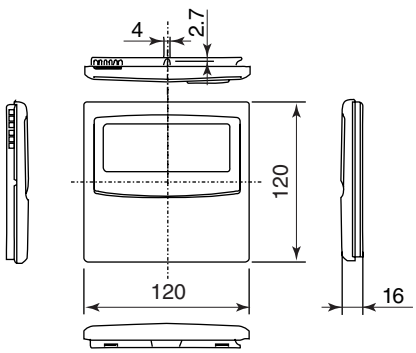


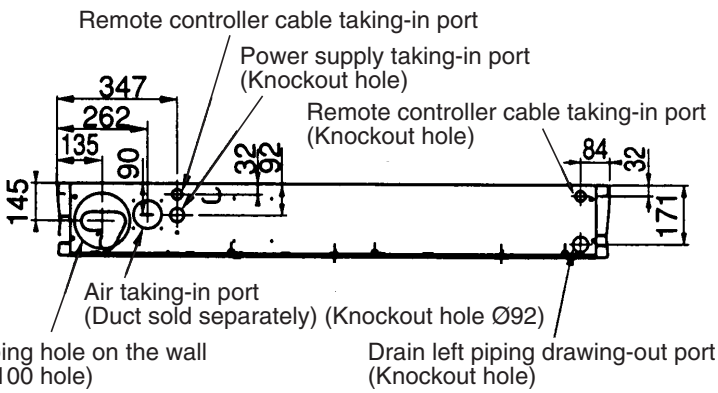




Space required for installation and servicing

- **Wired remote controller (RBC-AMT21E)**

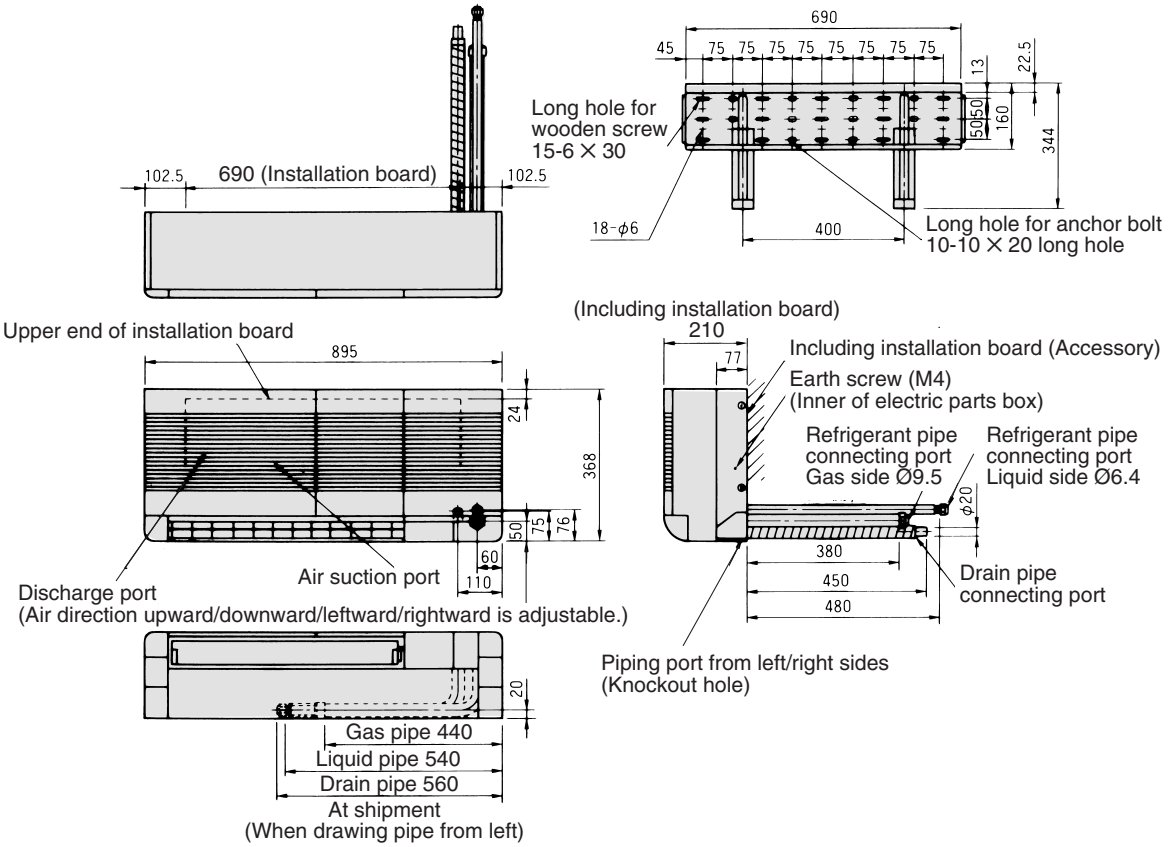


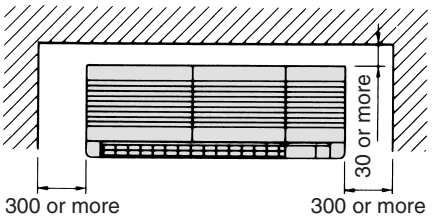


• High Wall Type

MMK-AP0071H, AP0091H, AP0121H

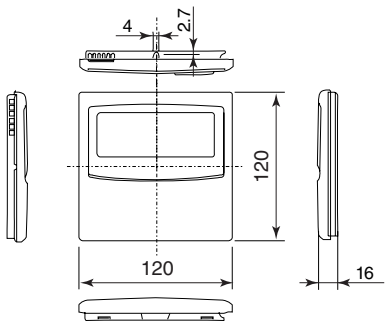
Position of installation board hole



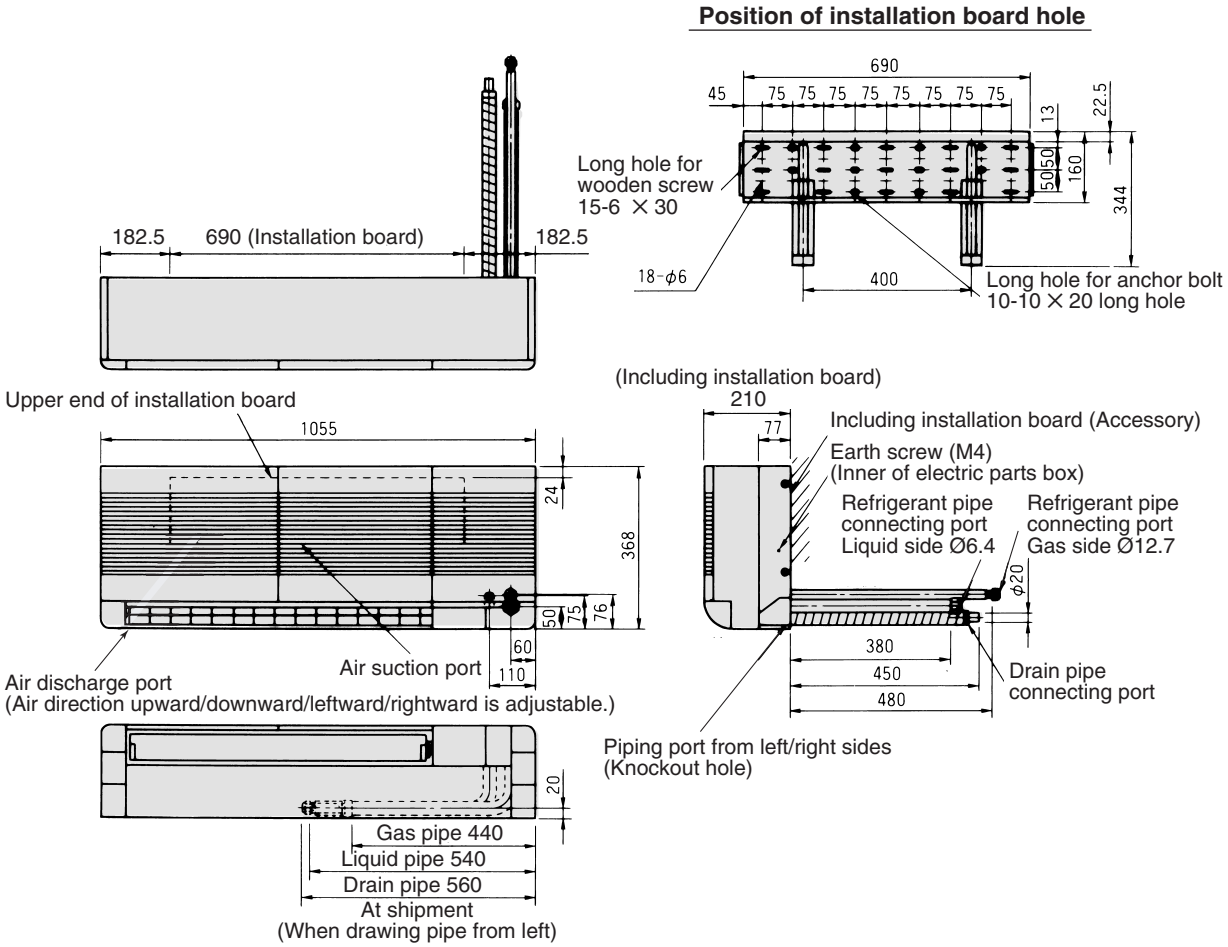


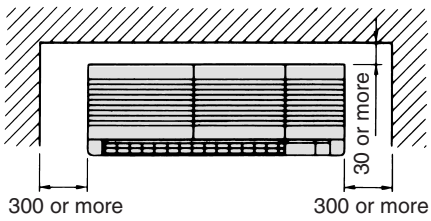
Space required for service

• **Wired remote controller (RBC-AMT21E)**



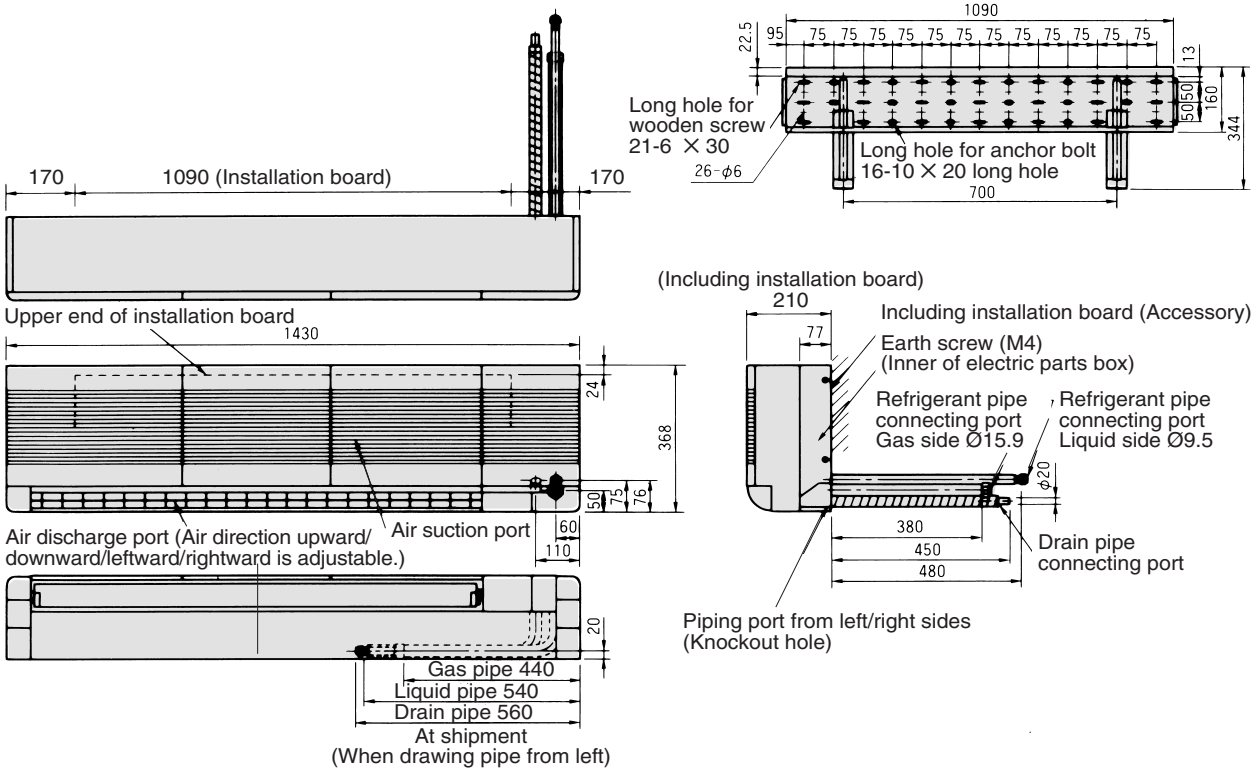
MMK-AP0151H, AP0181H

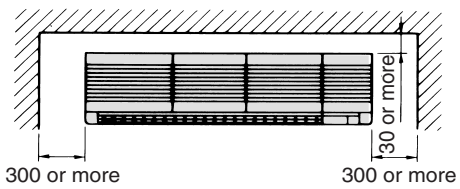




Space required for service

MMK-AP0241H

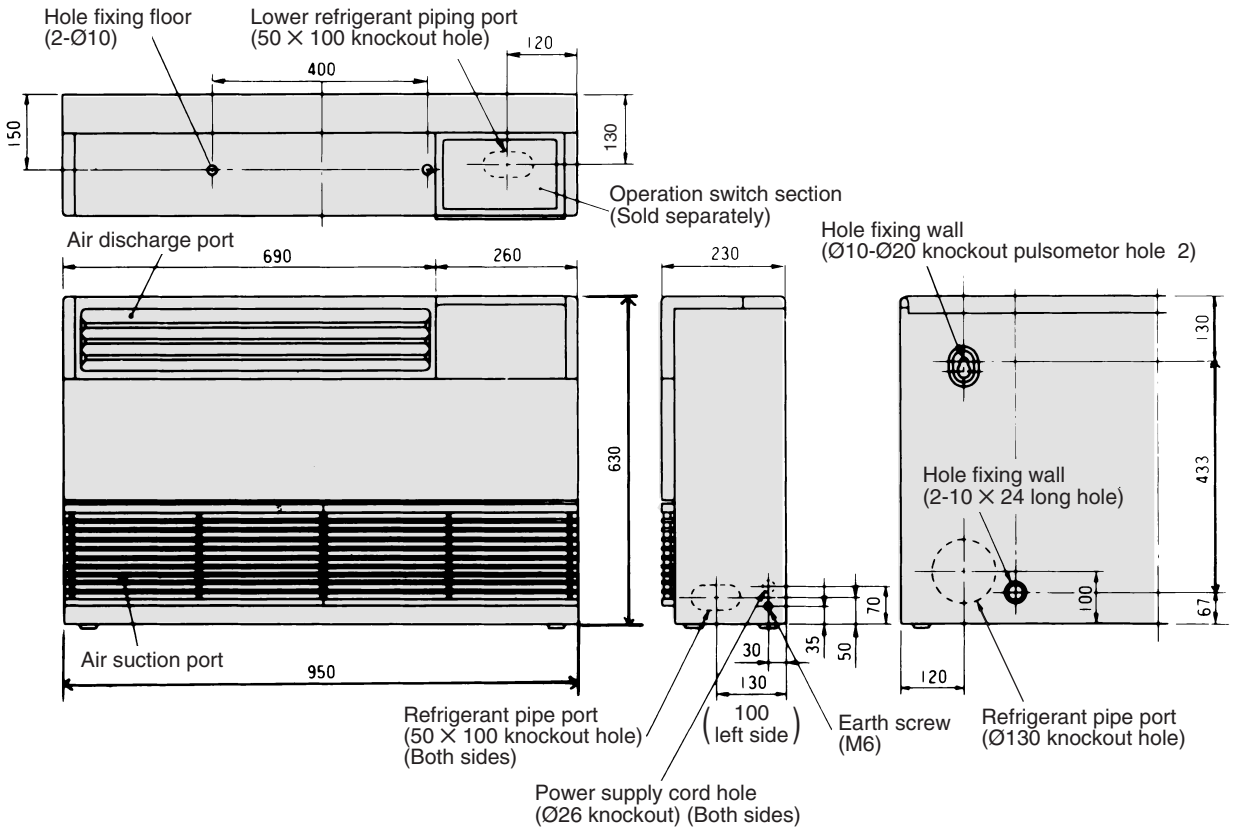




Space required for service

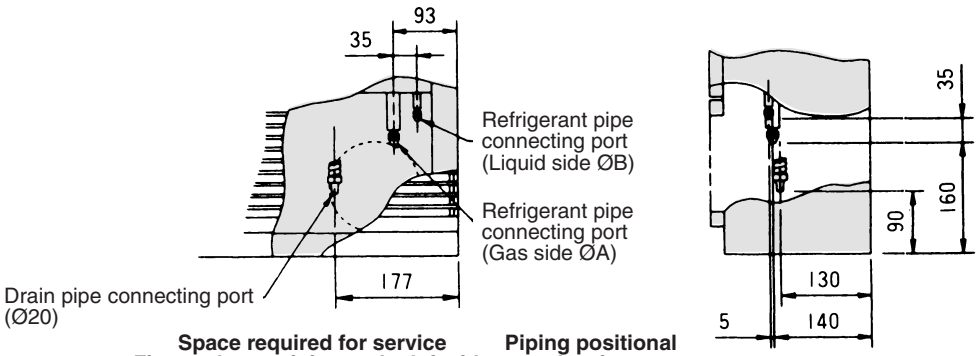
• Floor Standing Cabinet Type

MML-AP0071H, AP0091H, AP0121H, AP0151H, AP0181H, AP0241H



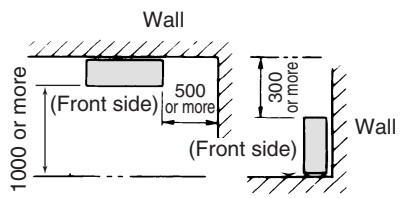
Dimensions

Model MML-	A	B
AP0071H, AP0091H, AP0121H	Ø9.5	Ø6.4
AP0151H, AP0181H	Ø12.7	Ø6.4
AP0241H	Ø15.9	Ø9.5



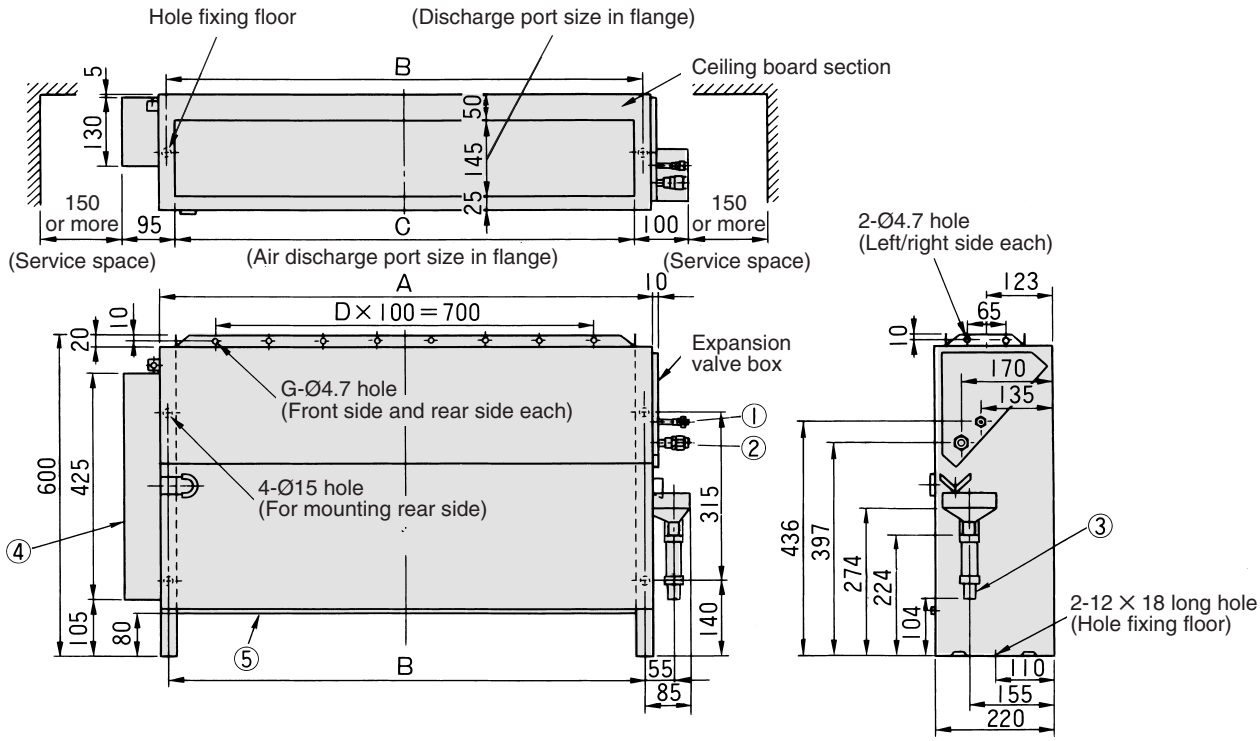
Space required for service
Figure shows piping at the left side

Piping positional drawing



• Floor Standing Concealed Type

MML-AP0071BH, AP0091BH, AP0121BH, AP0151BH, AP0181BH, AP0241BH

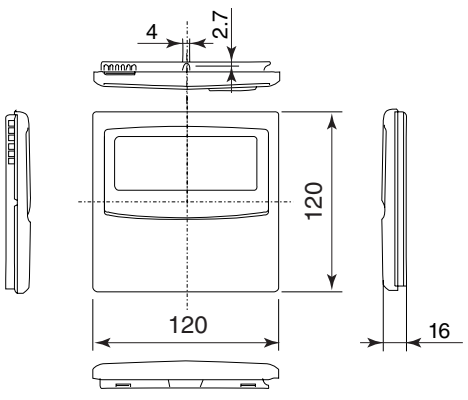


No.	Name
①	Pipe connecting port at liquid side (ØE)
②	Pipe connecting port at gas side (ØF)
③	Drain pipe connecting port (20A)
④	Electric parts box (Earth terminal is provided in inner side.)
⑤	Air filter

Dimensions

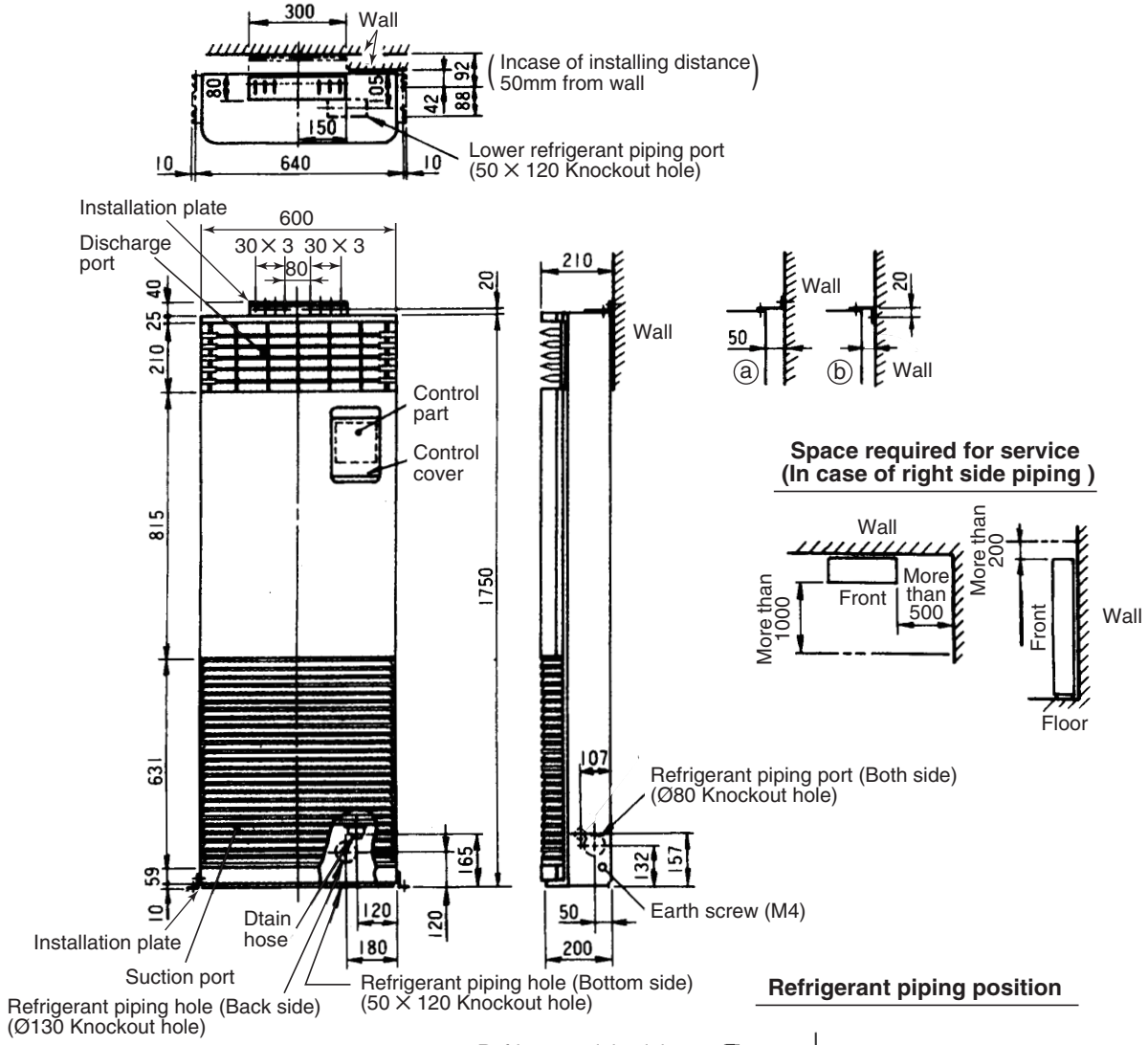
Model MML-	A	B	C	D	E	F	G
AP0071BH, AP0091BH, AP0121BH	610	580	550	4	6.4	9.5	5
AP0151BH, AP0181BH	910	880	850	7		12.7	8
AP0241BH					9.5	15.9	

• Wired remote controller (RBC-AMT21E)



• Floor Standing Type

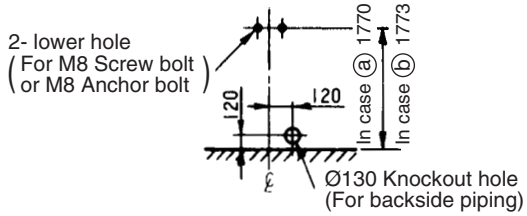
MMF-AP0151H, AP0181H, AP0241H, AP0271H



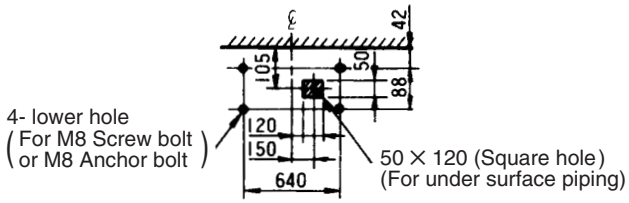
Dimensions

Model	A	B
MMF-AP0151H, AP0181H	Ø12.7	Ø6.4
MMF-AP0241H, AP0271H	Ø15.7	Ø9.5

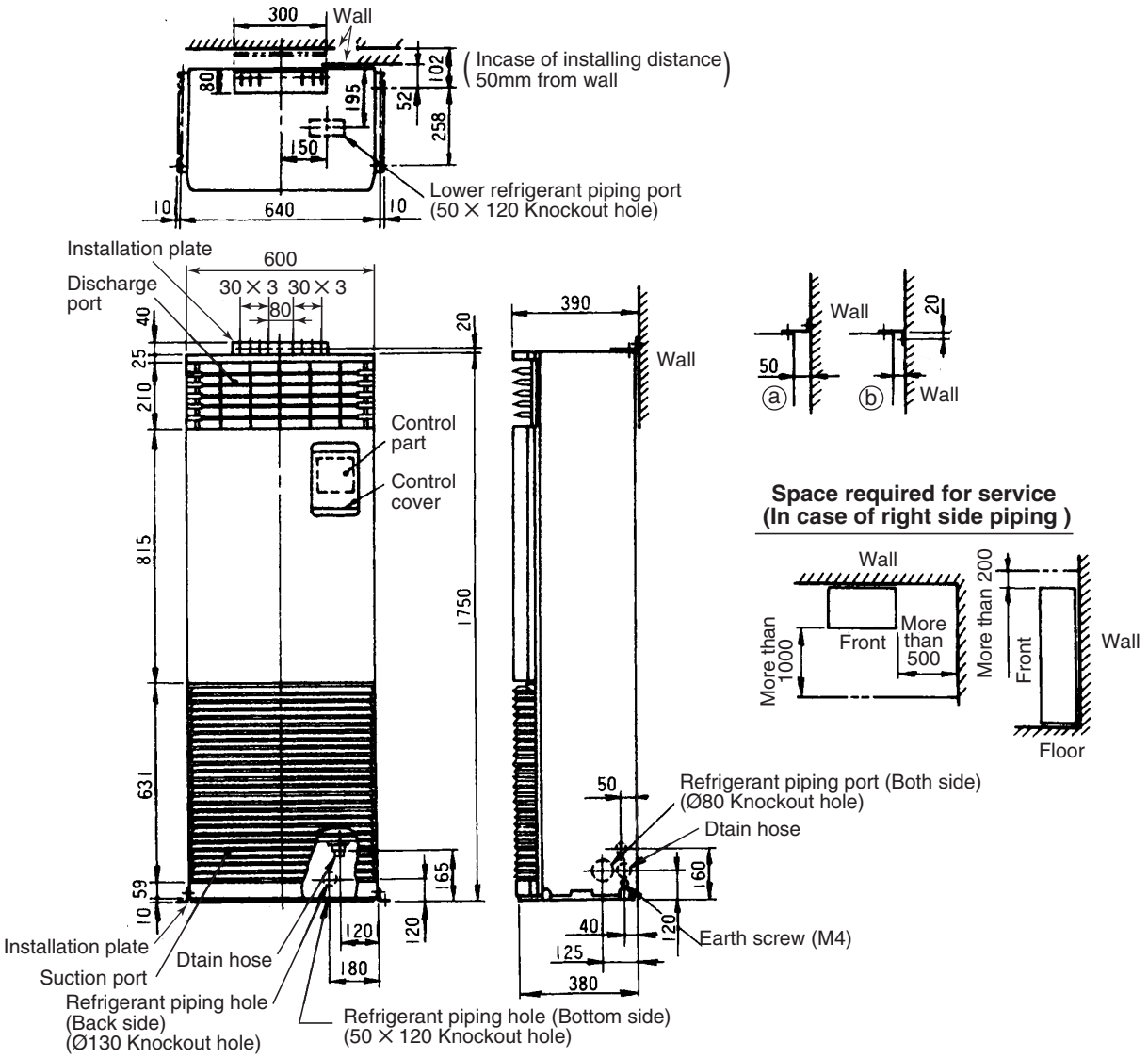
Details of hole for back side piping



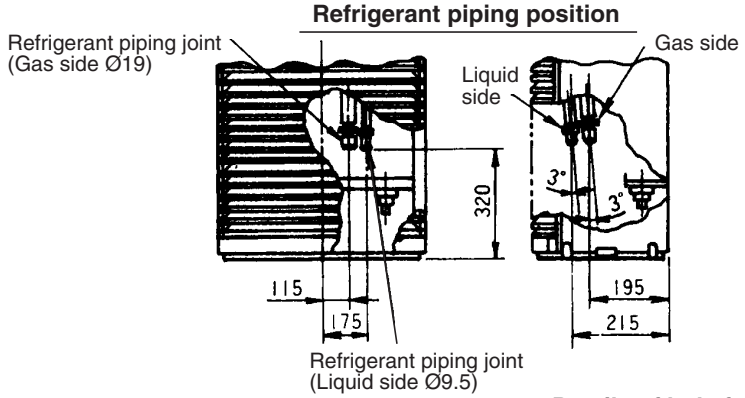
Details of hole for lower side piping



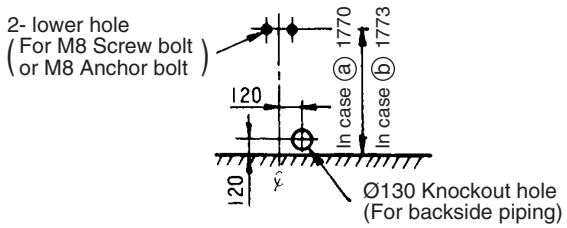
MMF-AP0361H, AP0481H, AP0561H



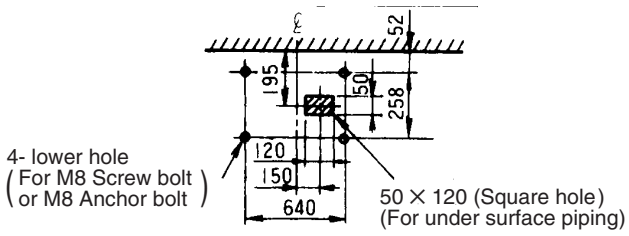
Refrigerant piping position



Details of hole for back side piping

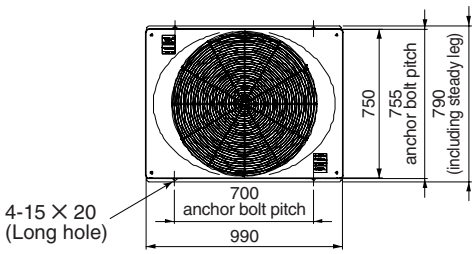


Details of hole for lower side piping



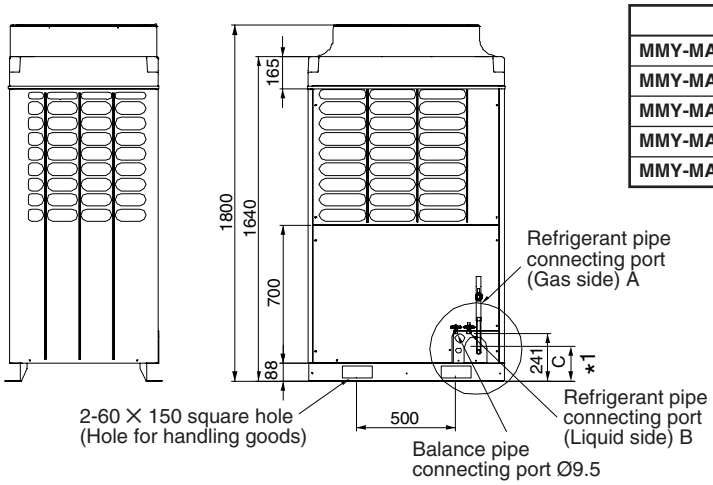
Outdoor module

MMY-MAP0501T8, MAP0601T8, MAP0801T8, MAP1001T8, MAP1201T8
MMY-MAP0501HT8, MAP0601HT8, MAP0801HT8, MAP1001HT8, MAP1201HT8
MMY-MAP0501HT7, MAP0601HT7, MAP0801HT7, MAP1001HT7, MAP1201HT7



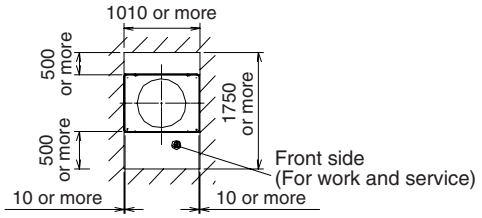
(NOTES)

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.

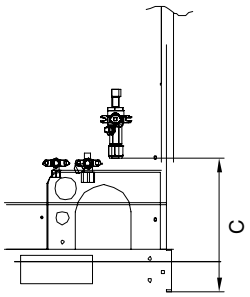


Applied model	A	B	C
MMY-MAP0501T8, MAP0501HT8, MAP0501HT7	Ø15.9	Ø9.5	280
MMY-MAP0601T8, MAP0601HT8, MAP0601HT7	Ø19.1	Ø9.5	280
MMY-MAP0801T8, MAP0801HT8, MAP0801HT7	Ø22.2	Ø12.7	(205)
MMY-MAP1001T8, MAP1001HT8, MAP1001HT7	Ø22.2	Ø12.7	(205)
MMY-MAP1201T8, MAP1201HT8, MAP1201HT7	Ø28.6	Ø12.7	(205)

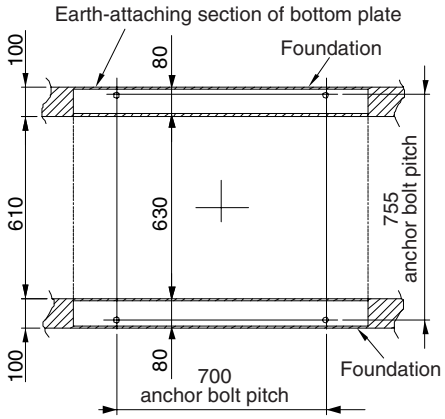
*1 Cutting position of L-shape pipe when pipe at gas side is connected (Recommended pipe connecting position)

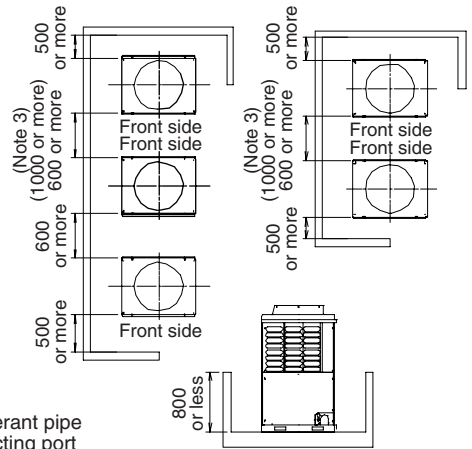


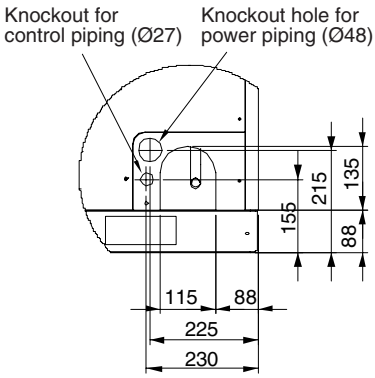
Space required for service



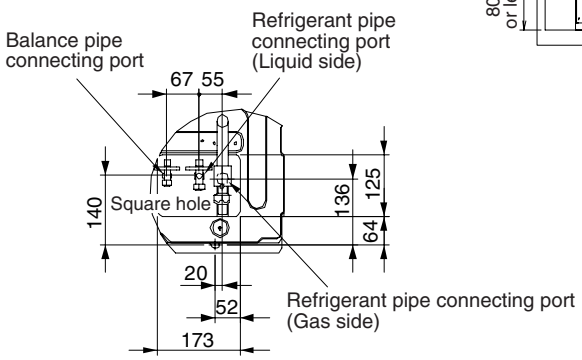
MMY-MAP0501T8
MMY-MAP0501T8
MMY-MAP0501HT8
MMY-MAP0601HT8
MMY-MAP0601HT7
MMY-MAP0601HT7







Details of front pipe/cabling holes



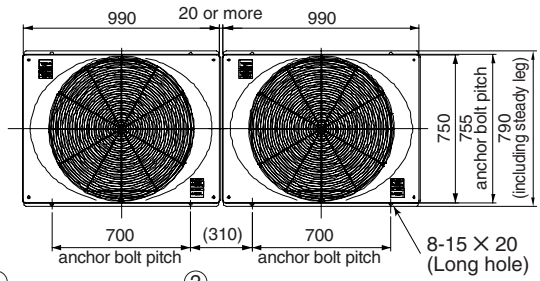
Details of hole for piping at lower side (Plane view)

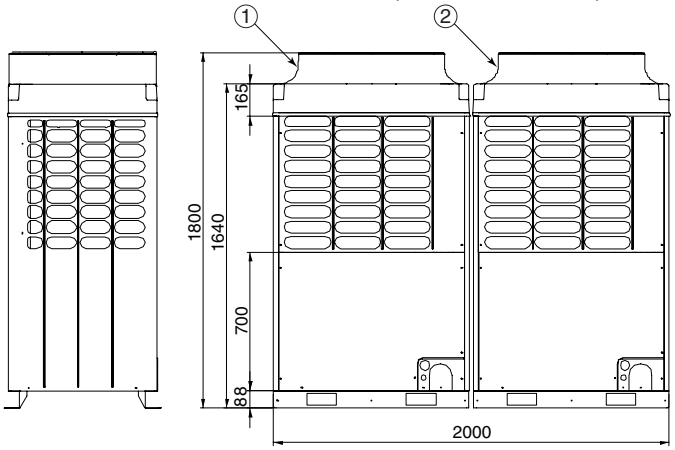
<Two units connected>

MMY-AP1401T8, AP1601T8, AP1801T8, AP2001T8, AP2211T8, AP2411T8
MMY-AP1401HT8, AP1601HT8, AP1801HT8, AP2001HT8, AP2211HT8, AP2411HT8
MMY-AP1401HT7, AP1601HT7, AP1801HT7, AP2001HT7, AP2211HT7, AP2411HT7

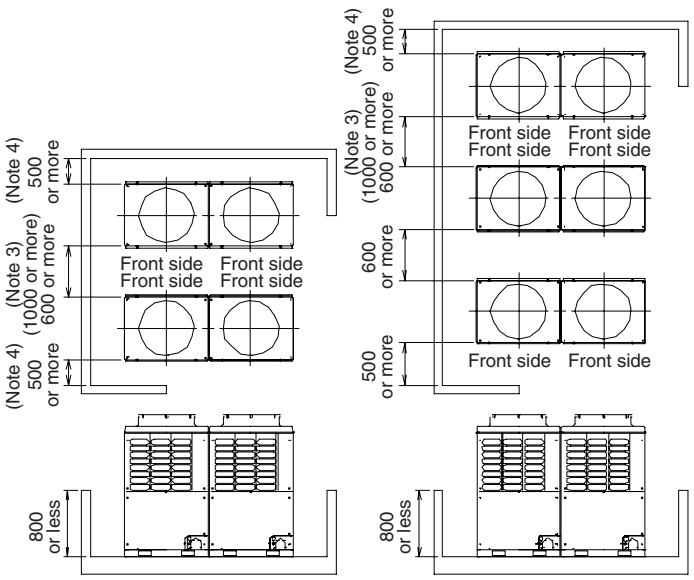
(NOTES)

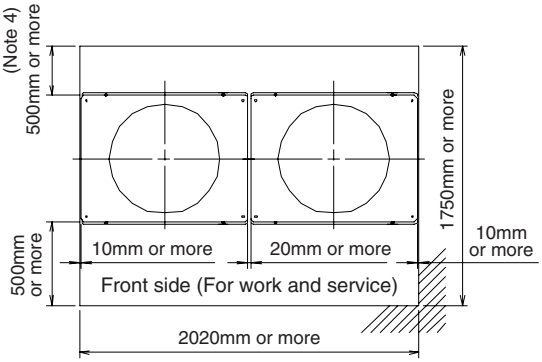
1. If there is an obstacle at the upper side of the outdoor unit, set the top end of the outdoor unit 2000mm apart from the obstacle.
2. Limit the height of the obstacle surrounding the outdoor unit to 800mm or less from the bottom end of the outdoor unit.
3. Draw out the pipe procured locally to the 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. (Head unit ≥ Follower)





Combination unit	Combination outdoor unit	
	Header	Follower
MMY-AP1401T8, AP1401HT8, AP1401HT7	MMY-MAP0801T8, MAP0801HT8, MAP0801HT7	MMY-MAP0601T8, MAP0601HT8, MAP0601HT7
MMY-AP1601T8, AP1601HT8, AP1601HT7	MMY-MAP0801T8, MAP0801HT8, MAP0801HT7	MMY-MAP0801T8, MAP0801HT8, MAP0801HT7
MMY-AP1801T8, AP1801HT8, AP1801HT7	MMY-MAP1001T8, MAP1001HT8, MAP1001HT7	MMY-MAP0801T8, MAP0801HT8, MAP0801HT7
MMY-AP2001T8, AP2001HT8, AP2001HT7	MMY-MAP1001T8, MAP1001HT8, MAP1001HT7	MMY-MAP1001T8, MAP1001HT8, MAP1001HT7
MMY-AP2211T8, AP2211HT8, AP2211HT7	MMY-MAP1201T8, MAP1201HT8, MAP1201HT7	MMY-MAP1001T8, MAP1001HT8, MAP1001HT7
MMY-AP2411T8, AP2411HT8, AP2411HT7	MMY-MAP1201T8, MAP1201HT8, MAP1201HT7	MMY-MAP1201T8, MAP1201HT8, MAP1201HT7





Space required for service

<Three units connected>

MMY-AP2201T8, AP2401T8, AP2601T8, AP2801T8, AP3001T8, AP3211T8, AP3411T8, AP3611T8

MMY-AP2201HT8, AP2401HT8, AP2601HT8, AP2801HT8, AP3001HT8, AP3211HT8, AP3411HT8, AP3611HT8

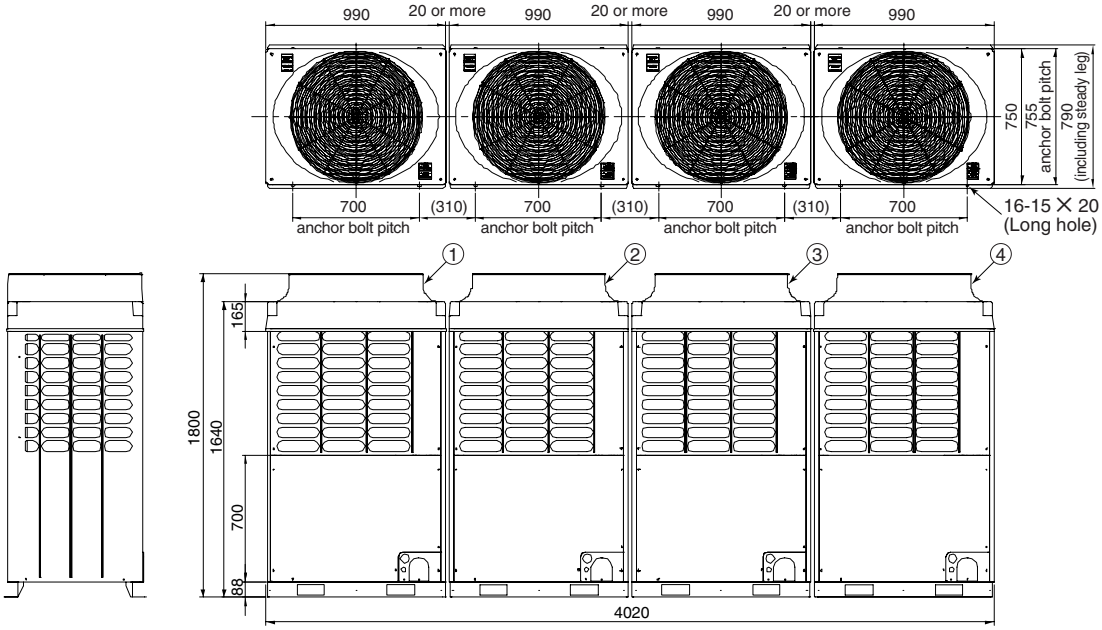
MMY-AP2201HT7, AP2401HT7, AP2601HT7, AP2801HT7, AP3001HT7, AP3211HT7, AP3411HT7, AP3611HT7

<Four units connected>

MMY-AP3201T8, AP3401T8, AP3601T8, AP3801T8, AP4001T8, AP4201T8, AP4401T8, AP4601T8, AP4801T8

MMY-AP3201HT8, AP3401HT8, AP3601HT8, AP3801HT8, AP4001HT8, AP4201HT8, AP4401HT8, AP4601HT8, AP4801HT8

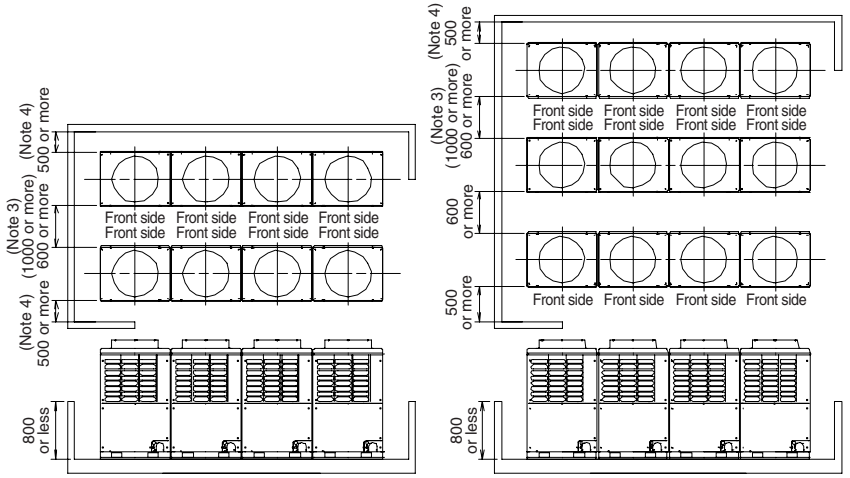
MMY-AP3201HT7, AP3401HT7, AP3601HT7, AP3801HT7, AP4001HT7, AP4201HT7, AP4401HT7, AP4601HT7, AP4801HT7

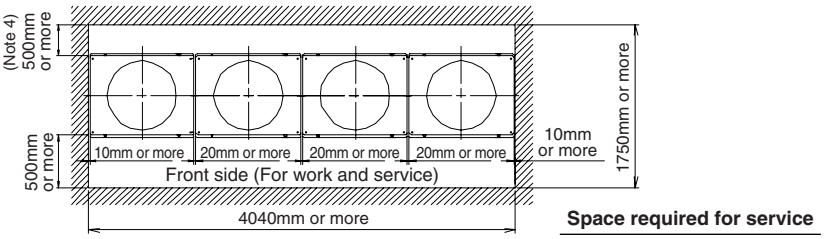


Combination unit	Combination outdoor unit			
	Header	Follower	Follower	Follower
MMY-AP3201T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7
MMY-AP3401T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7
MMY-AP3601T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7
MMY-AP3801T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP0801T8, HT8, HT7
MMY-AP4001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7
MMY-AP4201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7
MMY-AP4401T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7
MMY-AP4601T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1001T8, HT8, HT7
MMY-AP4801T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7	MMY-MAP1201T8, HT8, HT7

(NOTES)

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.
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4. Arrange each outdoor unit in order of its capacity.
   (Head unit ≥ Follower ② ≥ Follower ③ ≥ Follower ④)





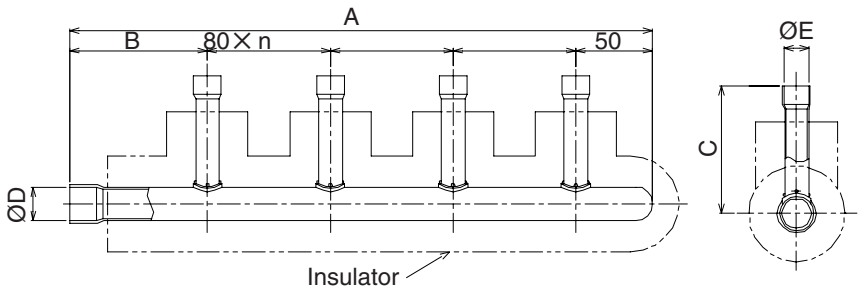
Space required for service

Branch header/Branch joint

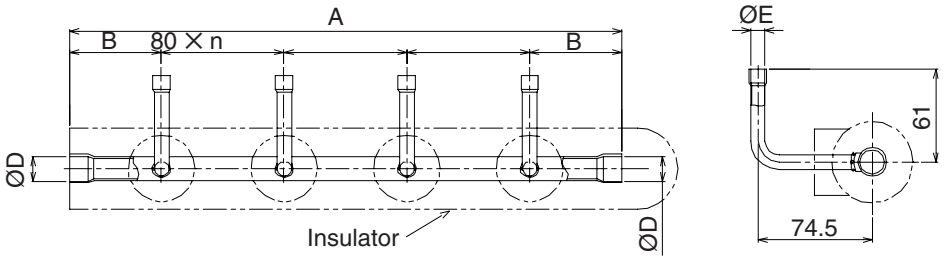
Branch header

RBM-HY1043E, HY1083E, HY2043E, HY2083E

Gas side



Liquid side

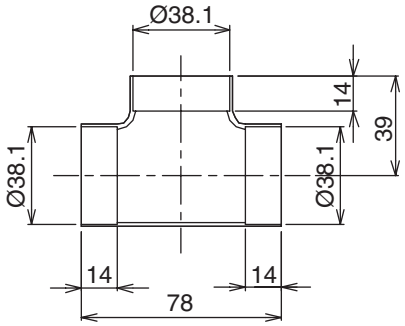


Model		A	B	C	ØD	ØE	n	Accessory soket Q'ty
RBM-HY1043E	Gas side	380	90	83.6	22.2	15.9	3	(6) ×4, (9) ×4, (14) ×1, (18) ×1, (70) ×1
	Liquid side	360	60	—	15.9	9.5	3	(1) ×4, (6) ×1, (9) ×1
RBM-HY1083E	Gas side	700	90	83.6	22.2	15.9	7	(6) ×8, (9) ×8, (14) ×1, (18) ×1, (70) ×1
	Liquid side	680	60	—	15.9	9.5	7	(1) ×8, (6) ×1, (9) ×1
RBM-HY2043E	Gas side	385.5	95.5	89.3	31.8	15.9	3	(6) ×2, (9) ×2, (27) ×1, (59) ×1
	Liquid side	360	60	—	15.9	9.5	3	(1) ×2
RBM-HY2083E	Gas side	705.5	95.5	89.3	31.8	15.9	7	(6) ×7, (9) ×7, (27) ×1, (59) ×1
	Liquid side	680	60	—	15.9	9.5	7	(1) ×7

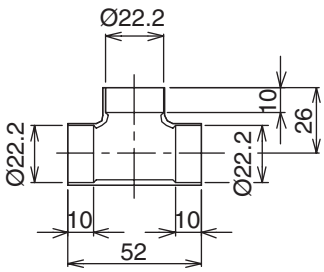
T-shape branch joint

RBM-BT13E

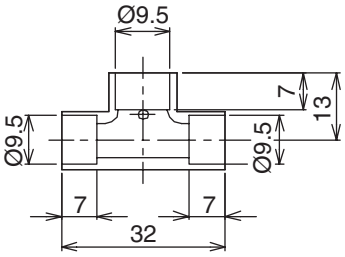
Gas side



Liquid side



Balance pipe

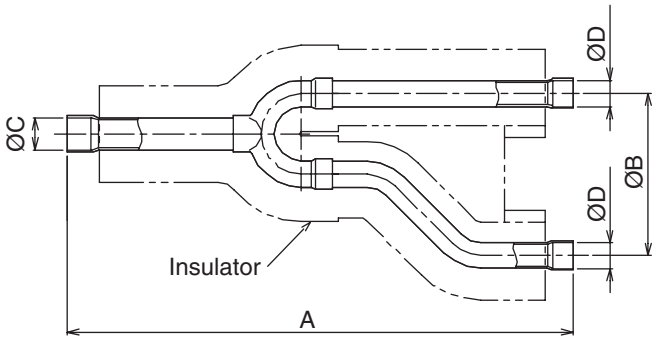


	Accessory soket Q'ty
Gas side	(61) ×1, (62) ×1, (71) ×2, (73) ×2, (74) ×1,
Liquid side	(14) ×2, (18) ×1, (85) ×2, (86) ×1

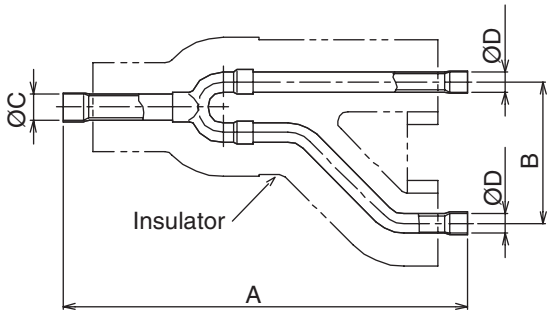
Y-shape branch joint

RBM-BY53E, BY103E

Gas side

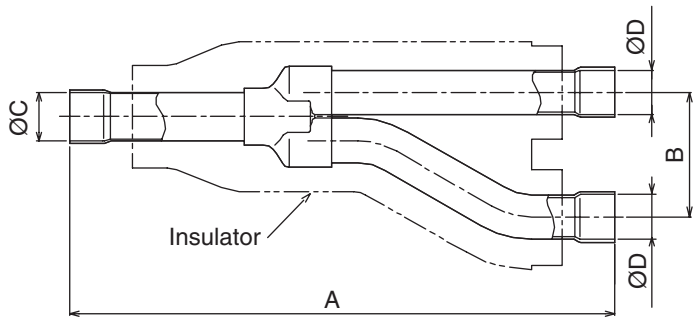


Liquid side

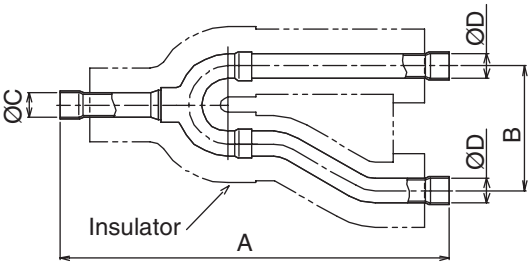


RBM-BY203E, BY303E

Gas side



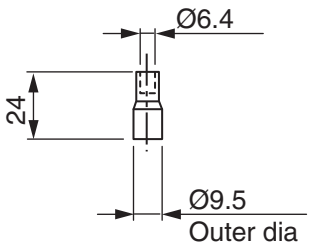
Liquid side



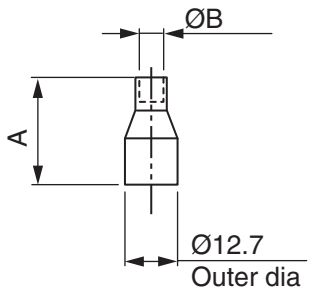
Model		A	B	ØC	ØD	Accessory soket Q'ty
RBM-BY53E	Gas side	250	80	15.9	12.7	(5) ×2, (54) ×2, (9) ×1, (51) ×1
	Liquid side	200	70	12.7	9.5	(1) ×2, (5) ×1
RBM-BY103E	Gas side	350	80	22.2	19.1	(7) ×1, (10) ×1, (13) ×2, (18) ×1, (52) ×2, (70) ×1, (89) ×1
	Liquid side	250	80	15.9	12.7	(2) ×1, (5) ×2, (6) ×1, (9) ×1, (54) ×1
RBM-BY203E	Gas side	350	80	31.8	28.6	(16) ×1, (20) ×1, (27) ×1, (43) ×2, (48) ×1, (49) ×1, (58) ×1, (59) ×1
	Liquid side	250	80	15.9	15.9	(3) ×1, (6) ×1, (9) ×2
RBM-BY303E	Gas side	400	110	38.1	38.1	(61) ×3, (62) ×2, (71) ×2, (73) ×1, (74) ×1, (75) ×1, (76) ×1, (77) ×1
	Liquid side	350	80	22.2	19.1	(4) ×1, (7) ×1, (10) ×1, (13) ×2, (14) ×1, (18) ×1, (52) ×1

Accessory socket

(1)

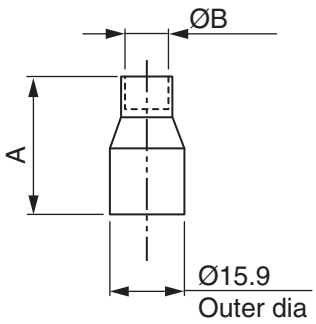


(2) (5) (54)



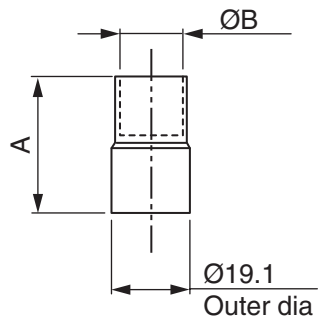
	A	ØB
(2)	29	6.4
(5)	26	9.5
(54)	31	15.9

(3) (6) (9) (51)



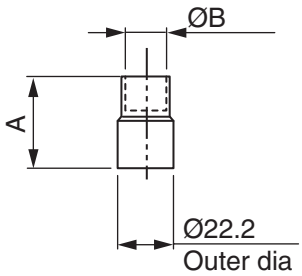
	A	ØB
(3)	35	6.4
(6)	32	9.5
(9)	28	12.7
(51)	38	19.1

(4) (7) (10) (13) (52) (89)



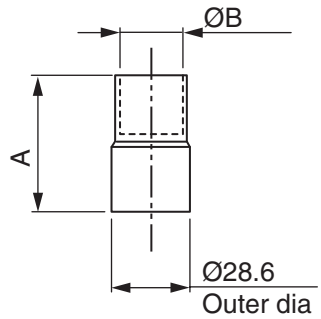
	A	ØB
(4)	39	6.4
(7)	39	9.5
(10)	36	12.7
(13)	33	15.9
(52)	43	22.2
(89)	53	28.6

(14) (18) (70) (85) (86)



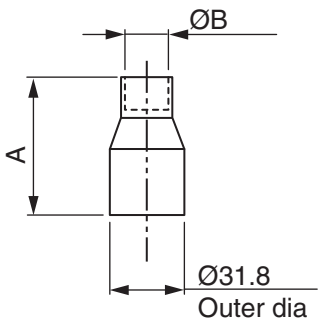
	A	ØB
(14)	40	15.9
(18)	40	19.1
(70)	54	28.6
(85)	41	12.7
(86)	44	9.5

(16) (20) (43) (48) (49) (58)



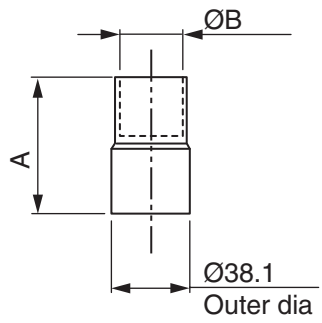
	A	ØB
(16)	50	15.9
(20)	52	19.1
(43)	50	22.2
(48)	54	9.5
(49)	52	12.7
(58)	62	34.9

(27) (59)



	A	ØB
(27)	49	28.6
(59)	59	34.9

(61) (62) (73) (74) (75) (76) (77)



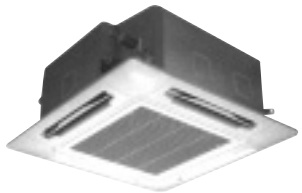
	A	ØB
(61)	55	34.9
(62)	66	41.3
(71)	66	28.6
(73)	66	22.2
(74)	66	19.1
(75)	64	15.9
(76)	62	12.7
(77)	62	9.5

16

Specifications

TECHNICAL SPECIFICATIONS

50Hz



Indoor unit (50Hz specifications)

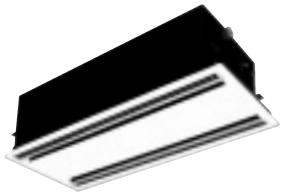
- **4-way Air Discharge Cassette Type**

Model name				MMU-	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H	AP0271H	AP0301H	AP0361H	AP0481H	AP0561H
Cooling/Heating capacity (Note 1)				(kW)	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply				1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)									
	Running current			(A)	0.17		0.19	0.21	0.24		0.35	0.59	0.81	0.83
	Power consumption			(kW)	0.020		0.022	0.026	0.032		0.048	0.070	0.110	0.112
	Starting current			(A)	0.30		0.33	0.36	0.42		0.59	0.87	1.23	1.26
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate									
	Ceiling Panel	Model			RBC-U21PG (W) -E									
		Panel color			Moon white (Munsell/2.5GY 9.0/0.5)									
Outer dimension	Main unit	Height		(mm)	256							319		
		Width		(mm)	840									
		Depth		(mm)	840									
	Ceiling panel	Height		(mm)	35									
		Width		(mm)	950									
		Depth		(mm)	950									
Total weight	Main unit			(kg)	20		22		23			28		
	Ceiling panel			(kg)	4.5									
Heat exchanger					Finned tube									
Soundproof/Heat-insulating material					Non-flammable insulation									
Fan unit	Fan				Turbo fan									
	Standard air flow High (Mid./Low)			(m^3/h)	800 (730/680)		930 (830/790)	1,050 (920/800)	1,200 (920/820)		1,320 (1,110/850)	1,680 (1300/1,070)	2,040 (1,430/1,130)	2,090 (1,520/1,230)
	Motor			(W)	60							90		
Air filter					Standard filter attached (Long life filter)									
Controller					Remote controller									
Connecting pipe	Gas side			(mm)	Ø9.5		Ø12.7		Ø15.9					
	Liquid side			(mm)	Ø6.4				Ø9.5					
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)									
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	30/29/27		31/29/27	32/29/28	34/31/28		37/33/30	40/36/33	44/38/34	45/40/34

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

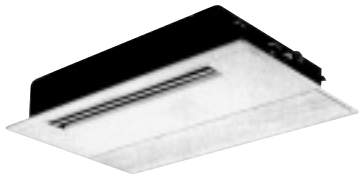
• 2-way Air Discharge Cassette Type

Model name				MMU-	AP0071WH	AP0091WH	AP0121WH	AP0151WH	AP0181WH	AP0241WH	AP0271WH	AP0301WH	AP0481WH China only
Cooling/Heating capacity				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	14.0/16.0
Electrical characteristics	Power supply				1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)								1 phase 50Hz 220V
	Running current			(A)	0.31			0.32		0.46		0.47	1.16
	Power consumption			(kW)	0.070			0.072		0.105		0.106	0.250
	Power factor			(%)	97					99		98	98
	Starting current			(A)	0.47			0.60		0.89		0.98	1.33
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate								
	Ceiling panel	Model			RBC-UW136PG			RBC-UW266PG					RBC-UW466PG
		Panel color			Light ivory (Munsell 10Y 9/0.5)								
Outer dimension	Main unit	Height		(mm)	398								406
		Width		(mm)	830			1,350					1,650
		Depth		(mm)	550								620
	Ceiling panel	Height		(mm)	8								
		Width		(mm)	1,000			1,520					1,898
		Depth		(mm)	650								680
Total weight	Main unit			(kg)	33			44		48			52
	Ceiling panel			(kg)	8			11					18
Heat exchanger					Finned tube								
Soundproof/Heat-insulating material					Non-flammable insulation								
Fan unit	Fan				Centrifugal fan								
	Standard air flow (High/Mid./Low)			(m^3/h)	570/510/450			780/700/600		1140/960/720		1260/1140/960	1920/1500/1050
	Motor			(W)	53			39		53			92
Air filter					Standard filter attached (Long life filter)								
Controller					Remote controller								
Connecting pipe	Gas side			(mm)	Ø9.5			Ø12.7		Ø15.9			
	Liquid side			(mm)	Ø6.4					Ø9.5			
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)								
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	34/32/30			35/33/30		38/35/33		40/37/34	45/42/39

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• 1-way Air Discharge Cassette Type

Model name				MMU-	AP0071YH	AP0091YH	AP0121YH	AP0151SH	AP0181SH	AP0241SH
Cooling/Heating capacity (Note 1)				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics (Note 2)	Power supply				1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)					
	Running current			(A)	0.24			0.48		0.55
	Power consumption			(kW)	0.053			0.103		0.115
	Power factor			(%)	95			93		91
	Starting current			(A)	0.6			0.8		1.1
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate					
	Ceiling panel	Model			RBC-UY135PG			RBC-US165PG		RBC-US265PG
		Panel color			W : Silky shade (1Y8.5/0.5)					
Outer dimension	Main unit	Height		(mm)	235			198		
		Width		(mm)	850			1,000		1,200
		Depth		(mm)	400			655		
	Ceiling panel	Height		(mm)	18			10		
		Width		(mm)	1,050			1,220		1,420
		Depth		(mm)	470			755		
Total weight	Main unit			(kg)	22			27		31
	Ceiling panel			(kg)	3.5			8		9
Heat exchanger					Finned tube					
Soundproof/Heat-insulating material					Non-flammable insulation					
Fan unit	Fan				Centrifugal fan					
	Standard air flow (High/Mid./Low)			(m^3/h)	540/480/420			780/720/660		1,200/1,140/1,020
	Motor			(W)	22			34		
Controller					Remote controller					
Room thermostat					Attached					
Air filter					Standard filter attached (Long life filter)					
Connecting pipe	Gas side			(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side			(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)			25 (Polyvinyl chloride tube)					
Sound pressure level(Note 2)(High/Mid./Low)				(dB(A))	42/39/34			42/39/35		43/41/37

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• Concealed Duct Type

Model name				MMD-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH	AP0271BH	AP0301BH	AP0361BH	AP0481BH	AP0561BH
Cooling/Heating capacity (Note 1)				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply				1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)										
	Running current			(A)	0.29		0.34		0.43	0.52		0.61	0.83	0.98	
	Power consumption			(kW)	0.033		0.039		0.050	0.060		0.071	0.107	0.128	
	Starting current			(A)	0.5		0.59		0.75	0.90		1.05	1.44	1.70	
Appearance	Main unit				Zinc hot dipping steel plate										
Outer dimension	Main unit	Height		(mm)	320										
		Width		(mm)	550			700		1,000			1,350		
		Depth		(mm)	800										
	Suction ceiling panel	Height		(mm)	9										
		Width		(mm)	630			780		1,080			1,430		
		Depth		(mm)	500										
Total weight	Main unit			(kg)	28			32		43			55		
	Ceiling panel			(kg)	3.5			4		6			7		
Heat exchanger					Finned tube										
Soundproof/Heat-insulating material					Non-flammable insulation										
Fan unit	Fan				Centrifugal fan										
	Standard air flow High (Mid./Low)			(m^3/h)	480 (420/340)		570 (490/400)	650 (540/480)	780 (660/540)	1,140 (990/870)		1,260 (1080/870)	1,620 (1410/1200)	1,980 (1710/1490)	
	Motor			(W)	120										
	External static pressure (factory setting)			(Pa)	50 (4 mmAq)										
	External static pressure			(Pa)	110 (10 mmAq)										
Air filter					Standard filter attached (Long life filter)										
Controller					Remote controller										
Connecting pipe	Gas side			(mm)	Ø9.5				Ø12.7			Ø15.9			
	Liquid side			(mm)	Ø6.4							Ø9.5			
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)										
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	30/28/26		31/29/27		32/30/28	33/31/29		34/32/29	36/34/32	38/36/32	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• Concealed Duct High Static Pressure Type

Model name			MMD-	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0721H	AP0961H
Cooling/Heating capacity (Note 1)			(kW)	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	22.4/25.0	28.0/31.5
Electrical characteristics	Power supply			1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)						
	Running current		(A)	0.81	1.35		1.63	1.84	5.25	5.52
	Power consumption		(kW)	0.184	0.299		0.368	0.414	1.200	1.260
	Power factor		(%)	99	96		98	98	99	99
	Starting current		(A)	1.3	3.5		4.1	4.8	13.6	14.8
Appearance				Zinc hot dipping steel plate						
Outer dimension	Height x Width x Depth		(mm)	380 x 850 x 660				380 x 1,200 x 660	470 x 1,380 x 1,250	
Total weight			(kg)	50	52		56	67	150	
Heat exchanger				Finned tube						
Soundproof/Heat-insulating material				Non-flammable insulation						
Fan unit	Fan			Centrifugal fan						
	Standard air flow		(m^3/h)	900	1,320		1,600	2,100	3,600	4,200
	Motor		(W)	160			260		370 x 3	
	External static pressure (Factory setting)		(Pa)	137						
	External static pressure		(Pa)	68.6-137-196						
	Air flow limit Lower limit/Upper limit		(m^3/h)	720/1,080	1,060/1,580		1,280/1,920	1,680/2,520	2,880/4,320	3,360/5,040
Air filter				Option or field supply						
Controller				Remote controller						
Connecting pipe	Gas side		(mm)	Ø12.7	Ø15.9				Ø22.2	
	Liquid side		(mm)	Ø6.4	Ø9.5				Ø12.7	
	Drain port	(Nominal dia. mm)		25 (One side of male screw)						
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	37	40				49	50

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• Under Ceiling Type

Model name			MMC-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H
Cooling/Heating capacity (Note 1)			(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0
Electrical characteristics	Power supply			1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)					
	Running current		(A)	0.29	0.32	0.42		0.78	0.84
	Power consumption		(kW)	0.033	0.038	0.050		0.091	0.110
	Starting current		(A)	0.43	0.48	0.62		1.17	1.25
Appearance				White (Munsell 10Y 9.3/0.4)					
Outer dimension	Height x Width x Depth		(mm)	210 x 910 x 680		210 x 1,180 x 680		210 x 1,595 x 680	
Total weight			(kg)	22		26		34	
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Centrifugal fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	720/600/540	780/660/540	1,110/900/840		1,650/1,380/1,200	1,800/1,560/1,320
	Motor		(W)	30		40		80	
Controller				Remote controller					
Room thermostat				Attached					
Air filter				Standard filter attached (Long life filter)					
Connecting pipe	Gas side		(mm)	Ø12.7		Ø15.9			
	Liquid side		(mm)	Ø6.4		Ø9.5			
	Drain port (Nominal dia. mm)			20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	35/32/30	36/33/30	38/36/33		41/38/35	43/40/37

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• High Wall Type

Model name			MMK-	AP0071H	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H
Cooling/Heating capacity (Note 1)			(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply			1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)					
	Running current		(A)	0.30			0.32		0.35
	Power consumption		(kW)	0.035			0.037		0.040
	Starting current		(A)	0.36			0.42		0.47
Appearance	Suction grille and side panel			Silky mist (Munsell 1Y 8.9/0.5)					
	Discharge grille			City gray (Munsell N6.5)					
	Bottom surface			Silky mist (Munsell 1Y 8.9/0.5)					
Outer dimension	Height x Width x Depth		(mm)	368 x 895 x 210			368 x 1,055 x 210		368 x 1,430 x 210
Total weight			(kg)	18			19		25
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Cross-flow fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	600/540/480			780/660/600		1,200/1,020/900
	Motor outlet		(W)	30					
Air filter				Standard filter attached (Simple filter)					
Controller				Remote controller					
Connecting pipe	Gas side		(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side		(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)		20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	39/34/31			42/38/35		42/38/35

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

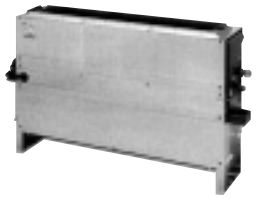
• Floor Standing Cabinet Type

Model name		MML-	AP0071H	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H
Cooling/Heating capacity (Note 1)		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply		1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)					
	Running current	(A)	0.26		0.43		0.47	
	Power consumption	(kW)	0.056		0.092		0.102	
	Power factor	(%)	94		93		94	
	Starting current	(A)	0.60		0.80		1.10	
Appearance			Silky shade (1Y8.5/0.5)					
Outer dimension	Height x Width x Depth	(mm)	630 x 950 x 230					
Total weight		(kg)	37				40	40
Heat exchanger			Finned tube					
Soundproof/Heat-insulating material			Non-flammable insulation					
Fan unit	Fan		Centrifugal fan					
	Standard air flow (High/Mid./Low)	(m^3/h)	480/420/360		900/780/650		1,080/930/780	
	Motor outlet	(W)	45				70	
Air filter			Standard filter attached (Simple filter)					
Controller			Remote controller					
Connecting pipe	Gas side	(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side	(mm)	Ø6.4					Ø9.5
	Drain port (Nominal dia. mm)		20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)		(dB(A))	39/37/35		45/41/38		49/44/39	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• Floor Standing Concealed Type

Model name			MML-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH
Cooling/Heating capacity (Note 1)			(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply			1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)					
	Running current		(A)	0.25			0.45		0.46
	Power consumption		(kW)	0.056			0.090		0.095
	Power factor		(%)	97			87		90
	Starting current		(A)	0.60			0.80		1.00
Appearance				Zinc hot dipping steel plate					
Outer dimension	Height x Width x Depth		(mm)	600 x 745 x 220			600 x 1,045 x 220		
Total weight			(kg)	21			29		
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Centrifugal fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	460/400/300			740/600/490		950/790/640
	Motor		(W)	19			70		
	Static pressure range		(kPa)	0					
Air filter				Standard filter attached (Simple filter)					
Controller				Remote controller					
Connecting pipe	Gas side		(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side		(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)		20 (One side of male screw)					
Sound pressure level(Note 2)(High/Mid./Low)			(dB(A))	36 (34/32)					42 (37/33)

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



50Hz

• Floor Standing Type

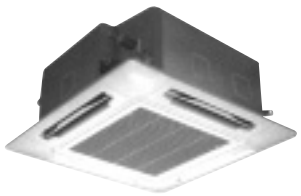
Model name		MMF-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0561H
Cooling/Heating capacity (Note 1)		(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply		1 phase 50Hz 230V (220 – 240V) (Power exclusive for indoor is required.)						
	Running current	(A)	0.67		0.88		1.29	1.60	
	Power consumption	(kW)	0.150		0.190		0.280	0.350	
	Power factor	(%)	97		94			95	
	Starting current	(A)	0.90		1.10		1.70	2.10	
Appearance			W : Silky shade (1Y 8.5/0.5)						
Outer dimension	Height x Width x Depth	(mm)	1750 x 600 x 210				1750 x 600 x 390		
Total weight		(kg)	48		49		65		
Heat exchanger			Finned tube						
Soundproof/Heat-insulating material			Non-flammable insulation						
Fan unit	Fan		Centrifugal fan						
	Standard air flow (High/Mid./Low)	(m^3/h)	900/780/660		1,200/1,020/840		1,920/1,680/1,380	2,160/1,860/1,560	
	Motor	(W)	37		63		11	16	
Air filter			Standard filter attached (Simple filter)						
Controller			Remote controller						
Connecting pipe	Gas side	(mm)	Ø12.7		Ø15.9				
	Liquid side	(mm)	Ø6.4		Ø9.5				
	Drain port (Nominal dia. mm)		20 (One side of male screw)						
Sound pressure level(Note 2)(High/Mid./Low)		(dB(A))	46/43/38		49/45/40		51/48/44	54/50/46	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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

60Hz



Indoor unit (60Hz specifications)

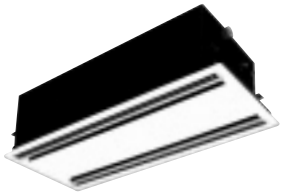
• 4-way Air Discharge Cassette Type

Model name				MMU-	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H	AP0271H	AP0301H	AP0361H	AP0481H	AP0561H
Cooling/Heating capacity (Note 1)				(kW)	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply				1 phase 60Hz 220V (Power exclusive for indoor is required.)									
	Running current			(A)	0.18		0.20	0.22	0.26		0.37	0.61	0.85	0.87
	Power consumption			(kW)	0.020		0.022	0.026	0.032		0.048	0.070	0.110	0.112
	Starting current			(A)	0.30		0.33	0.36	0.42		0.59	0.87	1.23	1.26
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate									
	Ceiling Panel	Model			RBC-U21PG (W) -E									
		Panel color			Moon white (Munsell/2.5GY 9.0/0.5)									
Outer dimension	Main unit	Height		(mm)	256							319		
		Width		(mm)	840									
		Depth		(mm)	840									
	Ceiling panel	Height		(mm)	35									
		Width		(mm)	950									
		Depth		(mm)	950									
Total weight	Main unit			(kg)	20		22		23			28		
	Ceiling panel			(kg)	4.5									
Heat exchanger					Finned tube									
Soundproof/Heat-insulating material					Non-flammable insulation									
Fan unit	Fan				Turbo fan									
	Standard air flow High (Mid./Low)			(m^3/h)	800 (730/680)		930 (830/790)	1,050 (920/800)	1,200 (920/820)		1,320 (1110/850)	1,680 (1,300/1,070)	2,040 (1,430/1,130)	2,090 (1,520/1,230)
	Motor			(W)	60							90		
Air filter					Standard filter attached (Long life filter)									
Controller					Remote controller									
Connecting pipe	Gas side			(mm)	Ø9.5		Ø12.7		Ø15.9					
	Liquid side			(mm)	Ø6.4				Ø9.5					
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)									
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	30/29/27		31/29/27	32/29/28	34/31/28		37/33/30	40/36/33	44/38/34	45/40/34

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

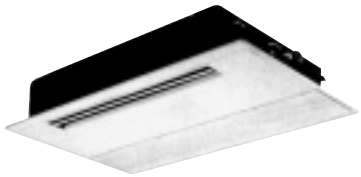
• 2-way Air Discharge Cassette Type

Model name				MMU-	AP0071WH	AP0091WH	AP0121WH	AP0151WH	AP0181WH	AP0241WH	AP0271WH	AP0301WH
Cooling/Heating capacity				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0
Electrical characteristics	Power supply				1 phase 60Hz 220V (Power exclusive for indoor is required.)							
	Running current			(A)	0.33			0.38		0.53		0.58
	Power consumption			(kW)	0.070			0.076		0.115		0.123
	Power factor			(%)	97			90		99		96
	Starting current			(A)	0.46			0.59		0.87		0.96
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate							
	Ceiling panel	Model			RBC-UW136PG			RBC-UW266PG				
		Panel color			Light ivory (Munsell 10Y 9/0.5)							
Outer dimension	Main unit	Height		(mm)	398							
		Width		(mm)	830			1,350				
		Depth		(mm)	550							
	Ceiling panel	Height		(mm)	8							
		Width		(mm)	1,000			1,520				
		Depth		(mm)	650							
Total weight	Main unit			(kg)	33			44		48		
	Ceiling panel			(kg)	8			11				
Heat exchanger					Finned tube							
Soundproof/Heat-insulating material					Non-flammable insulation							
Fan unit	Fan				Centrifugal fan							
	Standard air flow (High/Mid./Low)			(m^3/h)	570/510/450			780/700/600		1140/960/720		1260/1140/960
	Motor			(W)	53			39		53		
Air filter					Standard filter attached (Long life filter)							
Controller					Remote controller							
Connecting pipe	Gas side			(mm)	Ø9.5			Ø12.7		Ø15.9		
	Liquid side			(mm)	Ø6.4					Ø9.5		
	Drain port	(Nominal dia. mm)			25 (Polyvinyl chloride tube)							
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	34/32/30			35/33/30		38/35/33		40/37/34

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• 1-way Air Discharge Cassette Type

Model name				MMU-	AP0071YH	AP0091YH	AP0121YH	AP0151SH	AP0181SH	AP0241SH
Cooling/Heating capacity (Note 1)				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics (Note 2)	Power supply				1 phase 60Hz 220V (Power exclusive for indoor is required.)					
	Running current			(A)	0.26			0.54		0.61
	Power consumption			(kW)	0.056			0.115		0.130
	Power factor			(%)	98			97		97
	Starting current			(A)	0.60			0.80		1.10
Appearance	Main unit				Heat-insulating material attached Zinc hot dipping steel plate					
	Ceiling panel	Model			RBC-UY135PG			RBC-US165PG		RBC-US265PG
		Panel color			W : Silky shade (1Y8.5/0.5)					
Outer dimension	Main unit	Height		(mm)	235			198		
		Width		(mm)	850			1,000		1,200
		Depth		(mm)	400			655		
	Ceiling panel	Height		(mm)	18			10		
		Width		(mm)	1,050			1,220		1,420
		Depth		(mm)	470			755		
Total weight	Main unit			(kg)	22			27		31
	Ceiling panel			(kg)	3.5			8		9
Heat exchanger					Finned tube					
Soundproof/Heat-insulating material					Non-flammable insulation					
Fan unit	Fan				Centrifugal fan					
	Standard air flow (High/Mid./Low)			(m^3/h)	540/480/420			780/720/660		1,200/1,140/1,020
	Motor			(W)	22			34		
Controller					Remote controller					
Room thermostat					Attached					
Air filter					Standard filter attached (Long life filter)					
Connecting pipe	Gas side			(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side			(mm)	Ø6.4					Ø9.5
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)					
Sound pressure level(Note 2)(High/Mid./Low)				(dB(A))	42/39/34			42/39/35		43/41/37

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• Concealed Duct Type

Model name				MMD-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH	AP0271BH	AP0301BH	AP0361BH	AP0481BH	AP0561BH
Cooling/Heating capacity (Note 1)				(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	9.0/10.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply				1 phase 60Hz 220V (Power exclusive for indoor is required.)										
	Running current			(A)	0.30		0.35		0.45	0.55		0.64	0.87	1.03	
	Power consumption			(kW)	0.033		0.039		0.050	0.060		0.071	0.107	0.128	
	Starting current			(A)	0.5		0.59		0.75	0.90		1.05	1.44	1.70	
Appearance	Main unit				Zinc hot dipping steel plate										
Outer dimension	Main unit	Height		(mm)	320										
		Width		(mm)	550			700		1,000			1,350		
		Depth		(mm)	800										
	Suction ceiling panel	Height		(mm)	9										
		Width		(mm)	630			780		1,080			1,430		
		Depth		(mm)	500										
Total weight	Main unit			(kg)	28			32		43			55		
	Ceiling panel			(kg)	3.5			4		6			7		
Heat exchanger					Finned tube										
Soundproof/Heat-insulating material					Non-flammable insulation										
Fan unit	Fan				Centrifugal fan										
	Standard air flow High (Mid./Low)			(m^3/h)	480 (420/340)		570 (490/400)	650 (540/480)	780 (660/540)	1,140 (990/870)		1,260 (1080/870)	1,620 (1410/1200)	1,980 (1710/1490)	
	Motor			(W)	120										
	External static pressure (factory setting)			(Pa)	50 (4 mmAq)										
	External static pressure			(Pa)	110 (10 mmAq)										
Air filter					Standard filter attached (Long life filter)										
Controller					Remote controller										
Connecting pipe	Gas side			(mm)	Ø9.5			Ø12.7		Ø15.9					
	Liquid side			(mm)	Ø6.4					Ø9.5					
	Drain port (Nominal dia. mm)				25 (Polyvinyl chloride tube)										
Sound pressure level(Note 2) (High/Mid./Low)				(dB(A))	30/28/26		31/29/27	31/29/27	32/30/28	33/31/29		34/32/29	36/34/32	38/36/32	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

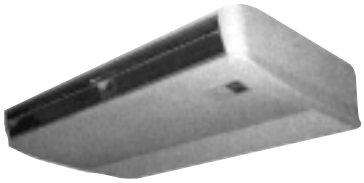
• Concealed Duct High Static Pressure Type

Model name			MMD-	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0721H	AP0961H
Cooling/Heating capacity (Note 1)			(kW)	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	22.4/25.0	28.0/31.5
Electrical characteristics	Power supply			1 phase 60Hz 220V (Power exclusive for indoor is required.)						
	Running current		(A)	0.92	1.80		2.07	2.26	7.10	7.42
	Power consumption		(kW)	0.198	0.385		0.450	0.490	1.540	1.610
	Power factor		(%)	98	97		99		99	
	Starting current		(A)	1.30	3.40		3.90	4.35	13.00	13.60
Appearance				Zinc hot dipping steel plate						
Outer dimension	Height x Width x Depth		(mm)	380 x 850 x 660				380 x 1,200 x 660	470 x 1,380 x 1,250	
Total weight			(kg)	50	52		56	67	150	
Heat exchanger				Finned tube						
Soundproof/Heat-insulating material				Non-flammable insulation						
Fan unit	Fan			Centrifugal fan						
	Standard air flow		(m^3/h)	900	1,320		1,600	2,100	3,600	4,200
	Motor		(W)	160			260		370 x 3	
	External static pressure (Factory setting)		(Pa)	137						
	External static pressure		(Pa)	68.6-137-196						
	Air flow limit Lower limit/Upper limit		(m^3/h)	720/1,080	1,060/1,580		1,280/1,920	1,680/2,520	2,880/4,320	3,360/5,040
Air filter				Option or field supply						
Controller				Remote controller						
Connecting pipe	Gas side		(mm)	Ø12.7	Ø15.9				Ø22.2	
	Liquid side		(mm)	Ø6.4	Ø9.5				Ø12.7	
	Drain port (Nominal dia. mm)			25 (One side of male screw)						
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	37	40				49	50

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• Under Ceiling Type

Model name			MMC-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H
Cooling/Heating capacity (Note 1)			(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0
Electrical characteristics	Power supply			1 phase 60Hz 220V (Power exclusive for indoor is required.)					
	Running current		(A)	0.30	0.34	0.44		0.82	0.87
	Power consumption		(kW)	0.033	0.038	0.050		0.091	0.110
	Starting current		(A)	0.43	0.48	0.62		1.17	1.25
Appearance				White (Munsell 10Y 9.3/0.4)					
Outer dimension	Height x Width x Depth		(mm)	210 x 910 x 680		210 x 1,180 x 680		210 x 1,595 x 680	
Total weight			(kg)	22		26		34	
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Centrifugal fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	720/600/540	780/660/540	1,110/900/840		1,650/1,380/1,200	1,800/1,560/1,320
	Motor		(W)	30		40		80	
Controller				Remote controller					
Room thermostat				Attached					
Air filter				Standard filter attached (Long life filter)					
Connecting pipe	Gas side		(mm)	Ø12.7		Ø15.9			
	Liquid side		(mm)	Ø6.4		Ø9.5			
	Drain port (Nominal dia. mm)			20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	35/32/30	36/33/30	38/36/33		41/38/35	43/40/37

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• High Wall Type

Model name			MMK-	AP0071H	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H
Cooling/Heating capacity (Note 1)			(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply			1 phase 60Hz 220V (Power exclusive for indoor is required.)					
	Running current		(A)	0.32			0.34		0.35
	Power consumption		(kW)	0.035			0.037		0.040
	Starting current		(A)	0.46			0.48		0.60
Appearance	Suction grille and side panel			Silky mist (Munsell 1Y 8.9/0.5)					
	Discharge grille			City gray (Munsell N6.5)					
	Bottom surface			Silky mist (Munsell 1Y 8.9/0.5)					
Outer dimension	Height x Width x Depth		(mm)	368 x 895 x 210			368 x 1,055 x 210		368 x 1,430 x 210
Total weight			(kg)	18			19		25
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Cross-flow fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	600/540/480			780/660/600		1,200/1,020/900
	Motor outlet		(W)	30					
Air filter				Standard filter attached (Simple filter)					
Controller				Remote controller					
Connecting pipe	Gas side		(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side		(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)		20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)			(dB(A))	39/34/31			42/38/35		42/38/35

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

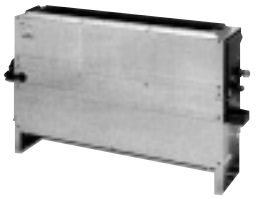
• Floor Standing Cabinet Type

Model name		MML-	AP0071H	AP0091H	AP0121H	AP0151H	AP0181H	AP0241H
Cooling/Heating capacity (Note 1)		(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply		1 phase 60Hz 220V (Power exclusive for indoor is required.)					
	Running current	(A)	0.25		0.44		0.53	
	Power consumption	(kW)	0.053		0.092		0.113	
	Power factor	(%)	96		95		97	
	Starting current	(A)	0.60		0.80		1.10	
Appearance			Silky shade (1Y8.5/0.5)					
Outer dimension	Height x Width x Depth	(mm)	630 x 950 x 230					
Total weight		(kg)	37				40	
Heat exchanger			Finned tube					
Soundproof/Heat-insulating material			Non-flammable insulation					
Fan unit	Fan		Centrifugal fan					
	Standard air flow (High/Mid./Low)	(m^3/h)	480/420/360		900/780/650		1,080/930/780	
	Motor outlet	(W)	45				70	
Air filter			Standard filter attached (Simple filter)					
Controller			Remote controller					
Connecting pipe	Gas side	(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side	(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)	20 (Polyvinyl chloride tube)					
Sound pressure level(Note 2) (High/Mid./Low)		(dB(A))	39/37/35		45/41/38		49/44/39	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• Floor Standing Concealed Type

Model name			MML-	AP0071BH	AP0091BH	AP0121BH	AP0151BH	AP0181BH	AP0241BH
Cooling/Heating capacity (Note 1)			(kW)	2.2/2.5	2.8/3.2	3.6/4.0	4.5/5.0	5.6/6.3	7.1/8.0
Electrical characteristics	Power supply			1 phase 60Hz 220V (Power exclusive for indoor is required.)					
	Running current		(A)	0.27			0.46		0.51
	Power consumption		(kW)	0.058			0.096		0.110
	Power factor		(%)	98			95		98
	Starting current		(A)	0.60			0.80		1.00
Appearance				Zinc hot dipping steel plate					
Outer dimension	Height x Width x Depth		(mm)	600 x 745 x 220			600 x 1,045 x 220		
Total weight			(kg)	21			29		
Heat exchanger				Finned tube					
Soundproof/Heat-insulating material				Non-flammable insulation					
Fan unit	Fan			Centrifugal fan					
	Standard air flow (High/Mid./Low)		(m^3/h)	460/400/300			740/600/490		950/790/640
	Motor		(W)	19			70		
	Static pressure range		(kPa)	0					
Air filter				Standard filter attached (Simple filter)					
Controller				Remote controller					
Connecting pipe	Gas side		(mm)	Ø9.5			Ø12.7		Ø15.9
	Liquid side		(mm)	Ø6.4					Ø9.5
	Drain port	(Nominal dia. mm)		20 (One side of male screw)					
Sound pressure level(Note 2)(High/Mid./Low)			(dB(A))	36/34/32					42/37/33

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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



60Hz

• Floor Standing Type

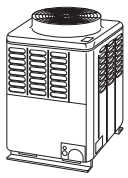
Model name		MMF-	AP0151H	AP0181H	AP0241H	AP0271H	AP0361H	AP0481H	AP0561H
Cooling/Heating capacity (Note 1)		(kW)	4.5/5.0	5.6/6.3	7.1/8.0	8.0/9.0	11.2/12.5	14.0/16.0	16.0/18.0
Electrical characteristics	Power supply		1 phase 60Hz 220V (Power exclusive for indoor is required.)						
	Running current	(A)	0.67		0.90		1.37	1.75	
	Power consumption	(kW)	0.146		0.195		0.295	0.380	
	Power factor	(%)	99		98			99	
	Starting current	(A)	0.90		1.10		1.80	2.30	
Appearance			W : Silky Shade (1Y 8.5/0.5)						
Outer dimension	Height x Width x Depth	(mm)	1750 x 600 x 210				1750 x 600 x 390		
Total weight		(kg)	48		49		65		
Heat exchanger			Finned tube						
Soundproof/Heat-insulating material			Non-flammable insulation						
Fan unit	Fan		Centrifugal fan						
	Standard air flow (High/Mid./Low)	(m^3/h)	900/780/660		1,200/1,020/840		1,680/1,920/1,380	2,160/1,860/1,560	
	Motor	(W)	37		63		110	160	
Air filter			Standard filter attached (Simple filter)						
Controller			Remote controller						
Connecting pipe	Gas side	(mm)	Ø12.7		Ø15.9				
	Liquid side	(mm)	Ø6.4		Ø9.5				
	Drain port	(Nominal dia. mm)	20 (One side of male screw)						
Sound pressure level(Note 2) (High/Mid./Low)		(dB(A))	46/43/38		49/45/40		51/48/44	54/50/46	

Note 1 : The cooling capacities and electrical characteristics are measured under the conditions speciied by JIS B 8615 based on the reference piping. The reference piping consists of 5 m of main piping and 2.5 m of branch piping connected with 0 meter height.

Note 2 : The sound level are measured in an anechoic chamber in accordance with JIS B8616. Normally, the values measured in the actual operating environment become larger than the indicated values due to the effects of external sound.

Note : 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

Outdoor unit (50Hz)



50Hz

Equivalent HP					Equivalent to 5HP	Equivalent to 6HP	Equivalent to 8HP	Equivalent to 10HP	Equivalent to 12HP
Model name	Cooling Only			MMY-	MAP0501T8	MAP0601T8	MAP0801T8	MAP1001T8	MAP1201T8
	Heat Pump			MMY-	MAP0501HT8	MAP0601HT8	MAP0801HT8	MAP1001HT8	MAP1201HT8
Outdoor unit type					Inverter unit				
Cooling capacity (* 1)				(kW)	14.0	16.0	22.4	28.0	33.5
Standard heating capacity (* 1)				(kW)	16.0	18.0	25.0	31.5	37.5
Power supply (* 2)					3 phase 50Hz 400V (380 – 415V)				
Electrical characteristics (* 1)	Cooling	Running current		(A)	5.85	7.28	8.62	11.55	18.30
		Power consumption		(kW)	3.65	4.64	5.67	7.68	11.92
		Power factor		(%)	90	92	95	96	94
		EER (Energy Efficiency Ratio)		(kW/kW)	3.84	3.45	3.95	3.65	2.81
		Starting current		(A)	1.0	1.0	1.0	1.0	1.0
	Heating	Running current		(A)	6.09	7.08	8.93	11.98	15.65
		Power consumption		(kW)	3.84	4.56	5.88	7.97	10.19
		Power factor		(%)	91	93	95	96	94
		EER (Energy Efficiency Ratio)		(kW/kW)	4.17	3.95	4.25	3.95	3.68
		Starting current		(A)	1.0	1.0	1.0	1.0	1.0
External dimension				(mm)	Height 1,800 x Width 990 x Depth 750				
Total weight		Cooling Only		(kg)	227		256		
		Heat Pump		(kg)	228		258		
Color					Silky shade (Munsell 1Y8.5/0.5)				
Compressor	Type				Hermetic type				
	Motor output			(kW)	1.1 x 2	1.4 x 2	2.3 x 2	3.1 x 2	4.2 x 2
Fan unit	Fan				Propeller fan				
	Motor output			(kW)	0.60				
	Air volume			(m^3/h)	9,000		9,900	10,500	
Heat exchanger					Finned tube				
Refrigerant R410A (Charged refrigerant amount) (3)		Cooling Only		(kg)	8.0		11		
		Heat Pump		(kg)	8.5		12.5		
High-pressure switch				(MPa)	OFF : 2.90 ON : 3.73				
Protective devices					(*5)				
Refrigerant piping specifications (* 4)	Connecting port dia	Gas side		(mm)	Ø15.9	Ø19.1	Ø22.2		Ø28.6
		Liquid side		(mm)	Ø9.5		Ø12.7		
		Balance pipe		(mm)	Ø9.5				
	Connecting method	Gas side			Flare	Brazing			
		Liquid side			Flare				
		Balance pipe			Flare				
	Max. equivalent length			(m)	175				
	Max. real length			(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)				
	Max. total pipe length (Real length)			(m)	300				
	Max. height difference			(m)	Outdoor unit is higher than indoor unit : 50				
					Outdoor unit is lower than indoor unit : 40 (* 6)				
Control wiring					Shield wire 1.25mm² x 2 cores. up to 2000m				
Central remote controller					When connecting to outdoor unit: (Shield wire) 1.25mm² x 2 cores. up to 1000m (Shield wire) 2.0mm² x 2 cores. up to 2000m				
Max. No. of connected indoor units					8	10	13	16	20
Sound pressure level				(dB(A))	55	56	57	58	59

***1 :** 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
The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

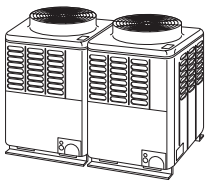
***2 :** The source voltage must not fluctuate more than ±10%.

***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure sensor, Low-pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Outdoor unit (Combination) (50Hz)

Equivalent HP				Equivalent to 14HP		Equivalent to 16HP		Equivalent to 18HP		Equivalent to 20HP	
Set Model name	Cooling Only	MMY-		AP1401T8		AP1601T8		AP1801T8		AP2001T8	
	Heat Pump	MMY-		AP1401HT8		AP1601HT8		AP1801HT8		AP2001HT8	
Outdoor unit type				Inverter							
Outdoor unit model	Cooling Only	MMY-		MAP0801T8	MAP0601T8	MAP0801T8	MAP0801T8	MAP1001T8	MAP0801T8	MAP1001T8	MAP1001T8
	Heat Pump	MMY-		MAP0801HT8	MAP0601HT8	MAP0801HT8	MAP0801HT8	MAP1001HT8	MAP0801HT8	MAP1001HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	38.4		45		50.4		56.0	
Standard heating capacity (* 1)			(kW)	43.0		50.0		56.5		63.0	
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)							
Electrical characteristics (* 1)	Cooling	Running current	(A)	17.08		18.54		21.29		24.31	
		Power consumption	(kW)	11.12		12.20		14.16		16.17	
		Power factor	(%)	94		95		96		96	
		EER (Energy Efficiency Ratio)	(kW/kW)	3.45		3.69		3.56		3.46	
		Starting current	(A)	1.0		1.0		1.0		1.0	
	Heating	Running current	(A)	16.83		18.65		21.61		24.75	
		Power consumption	(kW)	10.96		12.28		14.37		16.46	
		Power factor	(%)	94		95		96		96	
		EER (Energy Efficiency Ratio)	(kW/kW)	3.92		4.07		3.93		3.83	
		Starting current	(A)	1.0		1.0		1.0		1.0	
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight	Cooling Only		(kg)	256	227	256	256	256	256	256	256
	Heat Pump		(kg)	258	228	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	2.3 x 2	1.4 x 2	2.3 x 2		3.1 x 2	2.3 x 2	3.1 x 2	
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	9,900	9,000	9,900		10,500	9,900	10,500	
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	8.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	8.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2	Ø19.1	Ø22.2					
		Liquid side	(mm)	Ø12.7	Ø9.5	Ø12.7					
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm² x 2 cores up to 1000m and (Shield wire) 2.0mm² x 2 cores up to 2000m							
Max. No. of connected indoor units				23		27		30		33	
Sound pressure level			(dB(A))	59.5		60		60.5		61	

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

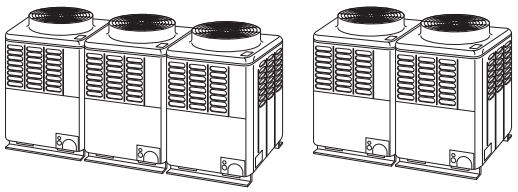
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 22HP				
Set Model name		Cooling Only	MMY-	AP2201T8			AP2211T8	
		Heat Pump	MMY-	AP2201HT8			AP2211HT8	
Outdoor unit type				Inverter				
Outdoor unit model		Cooling Only	MMY-	MAP0801T8	MAP0801T8	MAP0601T8	MAP1201T8	MAP1001T8
		Heat Pump	MMY-	MAP0801HT8	MAP0801HT8	MAP0601HT8	MAP1201HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	61.5				
Standard heating capacity (* 1)			(kW)	69.0				
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)				
Electrical characteristics (* 1)	Cooling	Running current	(A)	26.42			31.01	
		Power consumption	(kW)	17.39			20.41	
		Power factor	(%)	95				
		EER (Energy Efficiency Ratio)	(kW/kW)	3.54			3.01	
		Starting current	(A)	1.0			1.0	
	Heating	Running current	(A)	26.36			28.38	
		Power consumption	(kW)	17.35			18.68	
		Power factor	(%)	95				
		EER (Energy Efficiency Ratio)	(kW/kW)	3.98			3.69	
		Starting current	(A)	1.0			1.0	
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750				
Total weight		Cooling Only	(kg)	256	256	227	256	256
		Heat Pump	(kg)	258	258	228	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)				
Compressor	Type			Hermetic type				
	Motor output		(kW)	2.3 x 2		1.4 x 2	4.2 x 2	3.1 x 2
Fan unit	Fan			Propeller fan				
	Motor output		(kW)	0.6				
	Air volume		(m^3/h)	9,900		9,000	10,500	
Heat exchanger				Finned tube				
Refrigerant R410A Charged amount (* 3)		Cooling Only	(kg)	11.0	11.0	8.0	11.0	11.0
		Heat Pump	(kg)	12.5	12.5	8.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73				
Protective devices				(* 5)				
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2		Ø19.1	Ø28.6	Ø22.2
		Liquid side	(mm)	Ø12.7		Ø9.5	Ø12.7	
		Balance side	(mm)	Ø9.5				
	Connecting method	Gas side		Brazing				
		Liquid side		Flare				
		Balance side		Flare				
	Max. equivalent length		(m)	175				
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)				
	Max. total pipe length (Real length)		(m)	300				
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50				
				Outdoor unit is lower than indoor unit : 40 (* 6)				
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m				
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m				
Max. No. of connected indoor units				37				
Sound pressure level			(dB(A))	61.5				

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

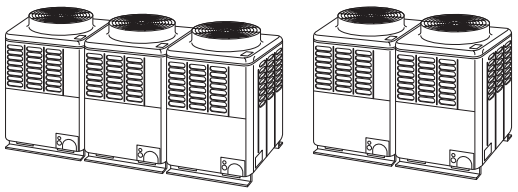
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 24HP				
Set Model name		Cooling Only	MMY-	AP2401T8			AP2411T8	
		Heat Pump	MMY-	AP2401HT8			AP2411HT8	
Outdoor unit type				Inverter				
Outdoor unit model		Cooling Only	MMY-	MAP0801T8	MAP0801T8	MAP0801T8	MAP1201T8	MAP1201T8
		Heat Pump	MMY-	MAP0801HT8	MAP0801HT8	MAP0801HT8	MAP1201HT8	MAP1201HT8
Rated cooling capacity (* 1)			(kW)	68.0				
Standard heating capacity (* 1)			(kW)	76.5				
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)				
Electrical characteristics (* 1)	Cooling	Running current	(A)	27.73			38.02	
		Power consumption	(kW)	18.44			25.02	
		Power factor	(%)	96			95	
		EER (Energy Efficiency Ratio)	(kW/kW)	3.69			2.72	
		Starting current	(A)	1.0			1.0	
	Heating	Running current	(A)	27.96			32.06	
		Power consumption	(kW)	18.79			21.32	
		Power factor	(%)	97			96	
		EER (Energy Efficiency Ratio)	(kW/kW)	4.07			3.59	
		Starting current	(A)	1.0			1.0	
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750				
Total weight		Cooling Only	(kg)	256	256	256	256	256
		Heat Pump	(kg)	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)				
Compressor	Type			Hermetic type				
	Motor output		(kW)	2.3 x2			4.2 x 2	
Fan unit	Fan			Propeller fan				
	Motor output		(kW)	0.6				
	Air volume		(m^3/h)	9,900			10.500	
Heat exchanger				Finned tube				
Refrigerant R410A Charged amount (* 3)		Cooling Only	(kg)	11.0	11.0	11.0	11.0	11.0
		Heat Pump	(kg)	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73				
Protective devices				(* 5)				
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2			Ø28.6	
		Liquid side	(mm)	Ø12.7				
		Balance side	(mm)	Ø9.5				
	Connecting method	Gas side		Brazing				
		Liquid side		Flare				
		Balance side		Flare				
	Max. equivalent length		(m)	175				
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)				
	Max. total pipe length (Real length)		(m)	300				
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50				
				Outdoor unit is lower than indoor unit : 40 (* 6)				
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m				
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m				
Max. No. of connected indoor units				40				
Sound pressure level			(dB(A))	62				

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

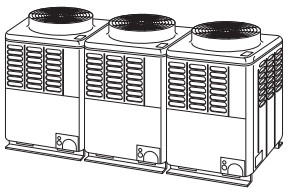
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 26HP			Equivalent to 28HP			Equivalent to 30HP		
Set Model name	Cooling Only	MMY-		AP2601T8			AP2801T8			AP3001T8		
	Heat Pump	MMY-		AP2601HT8			AP2801HT8			AP3001HT8		
Outdoor unit type				Inverter								
Outdoor unit model	Cooling Only	MMY-		MAP1001T8	MAP0801T8	MAP0801T8	MAP1001T8	MAP1001T8	MAP0801T8	MAP1001T8	MAP1001T8	MAP1001T8
	Heat Pump	MMY-		MAP1001HT8	MAP0801HT8	MAP0801HT8	MAP1001HT8	MAP1001HT8	MAP0801HT8	MAP1001HT8	MAP1001HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	73			78.5			84.0		
Standard heating capacity (* 1)			(kW)	81.5			88.0			95.0		
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)								
Electrical characteristics (* 1)	Cooling	Running current	(A)	30.51			33.48			36.48		
		Power consumption	(kW)	20.29			22.27			24.26		
		Power factor	(%)	96								
		EER (Energy Efficiency Ratio)	(kW/kW)	3.60			3.52			3.46		
		Starting current	(A)	1.0			1.0			1.0		
	Heating	Running current	(A)	31.16			33.98			36.93		
		Power consumption	(kW)	20.51			22.60			24.82		
		Power factor	(%)	95			96			97		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.97			3.89			3.83		
		Starting current	(A)	1.0			1.0			1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750								
Total weight	Cooling Only		(kg)	256	256	256	256	256	256	256	256	256
	Heat Pump		(kg)	258	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)								
Compressor	Type			Hermetic type								
	Motor output		(kW)	2.3 x 2			3.1 x 2		2.3 x 2	3.1 x 2		
Fan unit	Fan			Propeller fan								
	Motor output		(kW)	0.6								
	Air volume		(m^3/h)	10,500	9,900		10,500		9,900	10,500		
Heat exchanger				Finned tube								
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73								
Protective devices				(* 5)								
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2								
		Liquid side	(mm)	Ø12.7								
		Balance side	(mm)	Ø9.5								
	Connecting method	Gas side		Brazing								
		Liquid side		Flare								
		Balance side		Flare								
	Max. equivalent length		(m)	175								
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)								
	Max. total pipe length (Real length)		(m)	300								
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50								
				Outdoor unit is lower than indoor unit : 40 (* 6)								
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m								
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m								
Max. No. of connected indoor units				43			47			48		
Sound pressure level			(dB(A))	62			62.5			63		

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

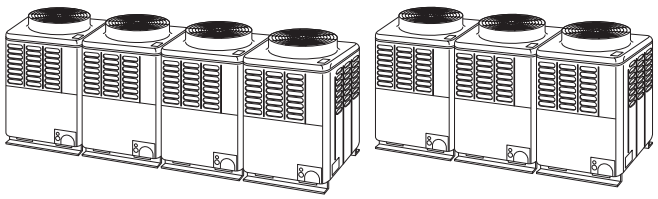
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 32HP						
Set Model name		Cooling Only	MMY-	AP3201T8				AP3211T8		
		Heat Pump	MMY-	AP3201HT8				AP3211HT8		
Outdoor unit type				Inverter						
Outdoor unit model		Cooling Only	MMY-	MAP0801T8	MAP0801T8	MAP0801T8	MAP0801T8	MAP1201T8	MAP1001T8	MAP1001T8
		Heat Pump	MMY-	MAP0801HT8	MAP0801HT8	MAP0801HT8	MAP0801HT8	MAP1201HT8	MAP1001HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	90.0						
Standard heating capacity (* 1)			(kW)	100.0						
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)						
Electrical characteristics (* 1)	Cooling	Running current	(A)	37.09				43.08		
		Power consumption	(kW)	24.41				28.65		
		Power factor	(%)	95				96		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.69				3.14		
		Starting current	(A)	1.0				1.0		
	Heating	Running current	(A)	37.32				40.69		
		Power consumption	(kW)	24.56				26.78		
		Power factor	(%)	95				95		
		EER (Energy Efficiency Ratio)	(kW/kW)	4.07				3.73		
		Starting current	(A)	1.0				1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750						
Total weight		Cooling Only	(kg)	256	256	256	256	256	256	256
		Heat Pump	(kg)	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)						
Compressor	Type			Hermetic type						
	Motor output		(kW)	2.3 x 2				4.2 x 2	3.1 x 2	
Fan unit	Fan			Propeller fan						
	Motor output		(kW)	0.6						
	Air volume		(m^3/h)	9,900				10,500		
Heat exchanger				Finned tube						
Refrigerant R410A Charged amount (* 3)		Cooling Only	(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0
		Heat Pump	(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73						
Protective devices				(* 5)						
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2				Ø28.6	Ø22.2	
		Liquid side	(mm)	Ø12.7						
		Balance side	(mm)	Ø9.5						
	Connecting method	Gas side		Brazing						
		Liquid side		Flare						
		Balance side		Flare						
	Max. equivalent length		(m)	175						
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)						
	Max. total pipe length (Real length)		(m)	300						
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50						
				Outdoor unit is lower than indoor unit : 40 (* 6)						
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m						
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m						
Max. No. of connected indoor units				48						
Sound pressure level			(dB(A))	63						

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

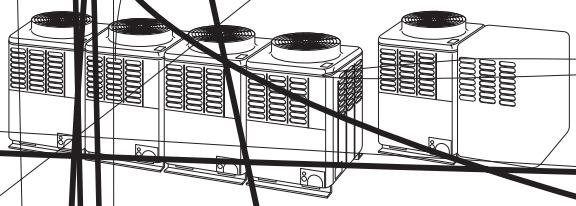
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 34HP						
Set Model name	Cooling Only	MMY-		AP3401T8				AP3411T8		
	Heat Pump	MMY-		AP3401HT8				AP3411HT8		
Outdoor unit type				Inverter						
Outdoor unit model	Cooling Only	MMY-	MAP1001T8	MAP0801T8	MAP0801T8	MAP0801T8	MAP1201T8	MAP1201T8	MAP1001T8	
	Heat Pump	MMY-	MAP1001HT8	MAP0801HT8	MAP0801HT8	MAP0801HT8	MAP1201HT8	MAP1201HT8	MAP1001HT8	
Rated cooling capacity (* 1)		(kW)	96.0							
Standard heating capacity (* 1)		(kW)	108.0							
Power supply (* 2)			3 phase 50Hz 400V (380 – 415V)							
Electrical characteristics (* 1)	Cooling	Running current	(A)	39.89				50.26		
		Power consumption	(kW)	26.53				33.08		
		Power factor	(%)	96				95		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.62				2.90		
		Starting current	(A)	1.0				1.0		
	Heating	Running current	(A)	40.22				44.42		
		Power consumption	(kW)	27.03				29.57		
		Power factor	(%)	97				96		
		EER (Energy Efficiency Ratio)	(kW/kW)	4.00				3.66		
		Starting current	(A)	1.0				1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750						
Total weight	Cooling Only		(kg)	256	256	256	256	256	256	256
	Heat Pump		(kg)	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)						
Compressor	Type			Hermetic type						
	Motor output		(kW)	3.1 x 2		2.3 x 2		4.2 x 2		3.1 x 2
Fan unit	Fan			Propeller fan						
	Motor output		(kW)	0.6						
	Air volume		(m³/h)	10,500		9,900		10,500		
Heat exchanger				Finned tube						
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73						
Protective devices				(* 5)						
Refrigerant pipe spec. (* 4)	Connecting pipe dia.	Gas side	(mm)	Ø22.2				Ø28.6		Ø22.2
		Liquid side	(mm)	Ø12.7						
		Balance side	(mm)	Ø9.5						
	Connecting method	Gas side		Brazing						
		Liquid side		Flare						
		Balance side		Flare						
	Max. equivalent length		(m)	175						
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)						
	Max. total pipe length (Real length)		(m)	300						
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50						
				Outdoor unit is lower than indoor unit : 40 (*6)						
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m						
Central remote controller				When connecting to outdoor unit : MVVS (Shield wire) 1.25mm² x 2 cores up to 1000m, and MVVS (Shield wire) 2.0mm² x 2 cores up to 2000m						
Max. No. of connected indoor units				48						
Sound pressure level			(dB(A))	63.5				63.5		

***1 :** 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

The standard piping means that main pipe length is 5m, branching pipe length 2.5 m or branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

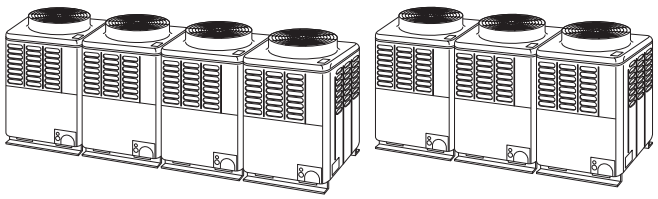
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 36HP						
Set Model name		Cooling Only	MMY-	AP3601T8				AP3611T8		
		Heat Pump	MMY-	AP3601HT8				AP3611HT8		
Outdoor unit type				Inverter						
Outdoor unit model		Cooling Only	MMY-	MAP1001T8	MAP1001T8	MAP0801T8	MAP0801T8	MAP1201T8	MAP1201T8	MAP1201T8
		Heat Pump	MMY-	MAP1001HT8	MAP1001HT8	MAP0801HT8	MAP0801HT8	MAP1201HT8	MAP1201HT8	MAP1201HT8
Rated cooling capacity (* 1)			(kW)	101.0						
Standard heating capacity (* 1)			(kW)	113.0						
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)						
Electrical characteristics (* 1)	Cooling	Running current	(A)	42.67				57.06		
		Power consumption	(kW)	28.38				37.16		
		Power factor	(%)	96				94		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.56				2.72		
		Starting current	(A)	1.0				1.0		
	Heating	Running current	(A)	43.21				48.36		
		Power consumption	(kW)	28.74				31.49		
		Power factor	(%)	96				94		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.93				3.59		
		Starting current	(A)	1.0				1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750						
Total weight		Cooling Only	(kg)	256	256	256	256	256	256	256
		Heat Pump	(kg)	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)						
Compressor	Type			Hermetic type						
	Motor output		(kW)	3.1 x2		2.3 x 2		4.2 x 2		
Fan unit	Fan			Propeller fan						
	Motor output		(kW)	0.6						
	Air volume		(m^3/h)	10,500		9,900		10,500		
Heat exchanger				Finned tube						
Refrigerant R410A Charged amount (* 3)		Cooling Only	(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0
		Heat Pump	(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73						
Protective devices				(*5)						
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2				Ø28.6		
		Liquid side	(mm)	Ø12.7						
		Balance side	(mm)	Ø9.5						
	Connecting method	Gas side		Brazing						
		Liquid side		Flare						
		Balance side		Flare						
	Max. equivalent length		(m)	175						
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)						
	Max. total pipe length (Real length)		(m)	300						
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50						
				Outdoor unit is lower than indoor unit : 40 (* 6)						
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m						
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m						
Max. No. of connected indoor units				48						
Sound pressure level			(dB(A))	63.5				64		

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

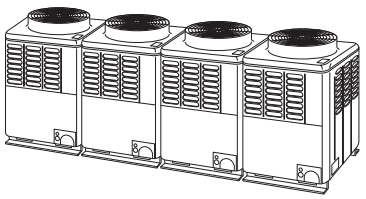
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 38HP				Equivalent to 40HP			
Set Model name	Cooling Only	MMY-		AP3801T8				AP4001T8			
	Heat Pump	MMY-		AP3801HT8				AP4001HT8			
Outdoor unit type				Inverter							
Outdoor unit model	Cooling Only	MMY-		MAP1001T8	MAP1001T8	MAP1001T8	MAP0801T8	MAP1001T8	MAP1001T8	MAP1001T8	MAP1001T8
	Heat Pump	MMY-		MAP1001HT8	MAP1001HT8	MAP1001HT8	MAP0801HT8	MAP1001HT8	MAP1001HT8	MAP1001HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	106.5				112.0			
Standard heating capacity (* 1)			(kW)	119.5				126.5			
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)							
Electrical characteristics (* 1)	Cooling	Running current	(A)	45.65				48.63			
		Power consumption	(kW)	30.36				32.34			
		Power factor	(%)	96							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.51				3.46			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	46.36				49.69			
		Power consumption	(kW)	30.83				33.05			
		Power factor	(%)	96							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.88				3.83			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight	Cooling Only		(kg)	256	256	256	256	256	256	256	256
	Heat Pump		(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	3.1 x2			2.3 x 2	3.1 x 2			
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500			9,900	10,500			
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2							
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	64							

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

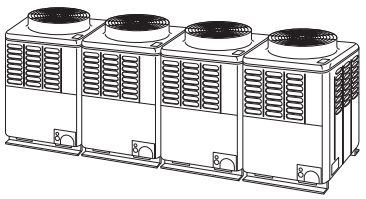
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 42HP				Equivalent to 44HP			
Set Model name	Cooling Only	MMY-		AP4201T8				AP4401T8			
	Heat Pump	MMY-		AP4201HT8				AP4401HT8			
Outdoor unit type				Inverter							
Outdoor unit model	Cooling Only	MMY-		MAP1201T8	MAP1001T8	MAP1001T8	MAP1001T8	MAP1201T8	MAP1201T8	MAP1001T8	MAP1001T8
	Heat Pump	MMY-		MAP1201HT8	MAP1001HT8	MAP1001HT8	MAP1001HT8	MAP1201HT8	MAP1201HT8	MAP1001HT8	MAP1001HT8
Rated cooling capacity (* 1)			(kW)	118.0				123.5			
Standard heating capacity (* 1)			(kW)	132.0				138.5			
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)							
Electrical characteristics (* 1)	Cooling	Running current	(A)	55.24				62.28			
		Power consumption	(kW)	36.74				40.99			
		Power factor	(%)	96				95			
		EER (Energy Efficiency Ratio)	(kW/kW)	3.21				3.01			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	53.39				56.76			
		Power consumption	(kW)	35.14				37.36			
		Power factor	(%)	95							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.76				3.69			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight	Cooling Only		(kg)	256	256	256	256	256	256	256	256
	Heat Pump		(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	4.2 x 2	3.1 x 2			4.2 x2		3.1 x 2	
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500							
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø28.6	Ø22.2			Ø28.6		Ø22.2	
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	64.5							

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

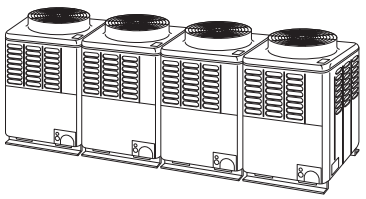
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



50Hz

Equivalent HP				Equivalent to 46HP				Equivalent to 48HP			
Set Model name	Cooling Only	MMY-		AP4601T8				AP4801T8			
	Heat Pump	MMY-		AP4601HT8				AP4801HT8			
Outdoor unit type				Inverter							
Outdoor unit model	Cooling Only	MMY-		MAP1201T8	MAP1201T8	MAP1201T8	MAP1001T8	MAP1201T8	MAP1201T8	MAP1201T8	MAP1201T8
	Heat Pump	MMY-		MAP1201HT8	MAP1201HT8	MAP1201HT8	MAP1001HT8	MAP1201HT8	MAP1201HT8	MAP1201HT8	MAP1201HT8
Rated cooling capacity (* 1)			(kW)	130.0				135.0			
Standard heating capacity (* 1)			(kW)	145.0				150.0			
Power supply (* 2)				3 phase 50Hz 400V (380 – 415V)							
Electrical characteristics (* 1)	Cooling	Running current	(A)	69.27				75.47			
		Power consumption	(kW)	45.59				49.67			
		Power factor	(%)	95							
		EER (Energy Efficiency Ratio)	(kW/kW)	2.85				2.72			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	60.55				64.19			
		Power consumption	(kW)	39.85				41.80			
		Power factor	(%)	95				94			
		EER (Energy Efficiency Ratio)	(kW/kW)	3.64				3.59			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight	Cooling Only		(kg)	256	256	256	256	256	256	256	256
	Heat Pump		(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	4.2 x 2			3.1 x 2	4.2 x 2			
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500							
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)	Cooling Only		(kg)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	Heat Pump		(kg)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø28.6			Ø22.2	Ø28.6			
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	160							
	Max. real length		(m)	135 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	65							

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

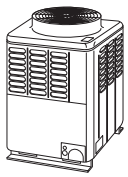
***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.

Outdoor unit (60Hz)



60Hz

Equivalent HP				Equivalent to 5HP	Equivalent to 6HP	Equivalent to 8HP	Equivalent to 10HP	Equivalent to 12HP
Model name	Heat Pump		MMY-	MAP0501HT7	MAP0601HT7	MAP0801HT7	MAP1001HT7	MAP1201HT7
Outdoor unit type				Inverter unit				
Cooling capacity (* 1)			(kW)	14.0	16.0	22.4	28.0	33.5
Standard heating capacity (* 1)			(kW)	16.0	18.0	25.0	31.5	37.5
Power supply (* 2)				3 phase 60Hz 380V				
Electrical characteristics (* 1)	Cooling	Running current	(A)	6.16	7.66	9.07	12.16	19.27
		Power consumption	(kW)	3.65	4.64	5.67	7.68	11.92
		Power factor	(%)	90	92	95	96	94
		EER (Energy Efficiency Ratio)	(kW/kW)	3.84	3.45	3.95	3.65	2.81
		Starting current	(A)	1.0	1.0	1.0	1.0	1.0
	Heating	Running current	(A)	6.41	7.45	9.40	12.61	16.47
		Power consumption	(kW)	3.84	4.56	5.88	7.97	10.19
		Power factor	(%)	91	93	95	96	94
		EER (Energy Efficiency Ratio)	(kW/kW)	4.17	3.95	4.25	3.95	3.68
		Starting current	(A)	1.0	1.0	1.0	1.0	1.0
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750				
Total weight			(kg)	228		258		
Color				Silky shade (Munsell 1Y8.5/0.5)				
Compressor	Type			Hermetic type				
	Motor output		(kW)	1.1 x 2	1.4 x 2	2.3 x 2	3.1 x 2	4.2 x 2
Fan unit	Fan			Propeller fan				
	Motor output		(kW)	0.60				
	Air volume		(m^3/h)	9,000		9,900	10,500	
Heat exchanger				Finned tube				
Refrigerant R410A (Charged refrigerant amount) (*3)			(kg)	R410A (8.5)		R410A (12.5)		
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73				
Protective devices				(* 5)				
Refrigerant piping specifications (* 4)	Connecting port dia	Gas side	(mm)	Ø15.9	Ø19.1	Ø22.2		Ø28.6
		Liquid side	(mm)	Ø9.5		Ø12.7		
		Balance pipe	(mm)	Ø9.5				
	Connecting method	Gas side		Flare	Brazing			
		Liquid side		Flare				
		Balance pipe		Flare				
	Max. equivalent length		(m)	175				
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)				
	Max. total pipe length (Real length)		(m)	300				
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50				
				Outdoor unit is lower than indoor unit : 40 (* 6)				
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m				
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m (Shield wire) 2.0mm^2 x 2 cores up to 2000m				
Max. No. of connected indoor units				8	10	13	16	20
Sound pressure level			(dB(A))	55	56	57	58	59

***1 :** 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
The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

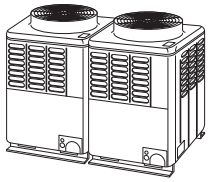
***2 :** The source voltage must not fluctuate more than ±10%.

***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Outdoor unit (Combination) (60Hz)

Equivalent HP				Equivalent to 14HP		Equivalent to 16HP		Equivalent to 18HP		Equivalent to 20HP	
Set Model name	Heat Pump	MMY-		AP1401HT7		AP1601HT7		AP1801HT7		AP2001HT7	
Outdoor unit type				Inverter							
Outdoor unit model	Heat Pump	MMY-		MAP0801HT7	MAP0601HT7	MAP0801HT7	MAP0801HT7	MAP1001HT7	MAP0801HT7	MAP1001HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	38.4		45		50.4		56.0	
Standard heating capacity (* 1)			(kW)	43.0		50.0		56.5		63.0	
Power supply (* 2)				3 phase 60Hz 380V							
Electrical characteristics (* 1)	Cooling	Running current	(A)	17.97		19.51		22.41		25.59	
		Power consumption	(kW)	11.12		12.20		14.16		16.17	
		Power factor	(%)	94		95		96		96	
		EER (Energy Efficiency Ratio)	(kW/kW)	3.45		3.69		3.56		3.46	
		Starting current	(A)	1.0		1.0		1.0		1.0	
	Heating	Running current	(A)	17.72		19.64		22.74		26.05	
		Power consumption	(kW)	10.96		12.28		14.37		16.46	
		Power factor	(%)	94		95		96		96	
		EER (Energy Efficiency Ratio)	(kW/kW)	3.92		4.07		3.93		3.83	
		Starting current	(A)	1.0		1.0		1.0		1.0	
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight			(kg)	258	228	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	2.3 x 2	1.4 x 2	2.3 x 2		3.1 x 2	2.3 x 2	3.1 x 2	
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	9,900	9,000	9,900		10,500	9,900	10,500	
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)			(kg)	12.5	8.5	12.5					
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2	Ø19.1	Ø22.2					
		Liquid side	(mm)	Ø12.7	Ø9.5	Ø12.7					
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m and (Shield wire) 2.0mm^2 x 2 cores up to 2000m							
Max. No. of connected indoor units				23		27		30		33	
Sound pressure level			(dB(A))	59.5		60		60.5		61	

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

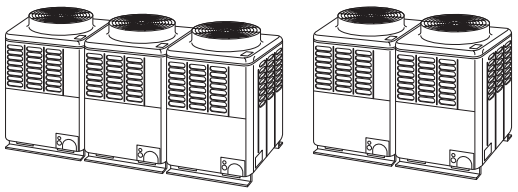
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 22HP				
Set Model name	Heat Pump	MMY-		AP2201HT7			AP2211HT7	
Outdoor unit type				Inverter				
Outdoor unit model	Heat Pump	MMY-		MAP0801HT7	MAP0801HT7	MAP0601HT7	MAP1201HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	61.5				
Standard heating capacity (* 1)			(kW)	69.0				
Power supply (* 2)				3 phase 60Hz 380V				
Electrical characteristics (* 1)	Cooling	Running current	(A)	27.81			32.64	
		Power consumption	(kW)	17.39			20.41	
		Power factor	(%)	95				
		EER (Energy Efficiency Ratio)	(kW/kW)	3.54			3.01	
		Starting current	(A)	1.0			1.0	
	Heating	Running current	(A)	27.75			29.88	
		Power consumption	(kW)	17.35			18.68	
		Power factor	(%)	95				
		EER (Energy Efficiency Ratio)	(kW/kW)	3.98			3.69	
		Starting current	(A)	1.0			1.0	
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750				
Total weight			(kg)	258	258	228	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)				
Compressor	Type			Hermetic type				
	Motor output		(kW)	2.3 x 2		1.4 x 2	4.2 x 2	3.1 x 2
Fan unit	Fan			Propeller fan				
	Motor output		(kW)	0.6				
	Air volume		(m^3/h)	9,900		9,000	10,500	
Heat exchanger				Finned tube				
Refrigerant R410A Charged amount (* 3)			(kg)	12.5		8.5	12.5	
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73				
Protective devices				(* 5)				
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2		Ø19.1	Ø28.6	Ø22.2
		Liquid side	(mm)	Ø12.7		Ø9.5	Ø12.7	
		Balance side	(mm)	Ø9.5				
	Connecting method	Gas side		Brazing				
		Liquid side		Flare				
		Balance side		Flare				
	Max. equivalent length		(m)	175				
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)				
	Max. total pipe length (Real length)		(m)	300				
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50				
				Outdoor unit is lower than indoor unit : 40 (* 6)				
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m				
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm² x 2 cores up to 1000m, and (Shield wire) 2.0mm² x 2 cores up to 2000m				
Max. No. of connected indoor units				37				
Sound pressure level			(dB(A))	61.5				

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

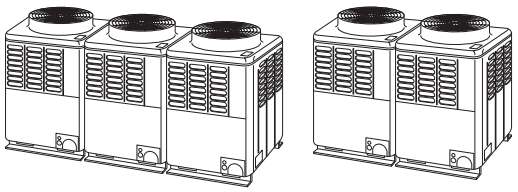
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 24HP					
Set Model name	Heat Pump	MMY-		AP2401HT7			AP2411HT7		
Outdoor unit type				Inverter					
Outdoor unit model	Heat Pump	MMY-		MAP0801HT7	MAP0801HT7	MAP0801HT7	MAP1201HT7	MAP1201HT7	
Rated cooling capacity (* 1)			(kW)	68.0					
Standard heating capacity (* 1)			(kW)	76.5					
Power supply (* 2)				3 phase 60Hz 380V					
Electrical characteristics (* 1)	Cooling	Running current	(A)	29.19			40.02		
		Power consumption	(kW)	18.44			25.02		
		Power factor	(%)	96			95		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.69			2.72		
		Starting current	(A)	1.0			1.0		
	Heating	Running current	(A)	29.43			33.74		
		Power consumption	(kW)	18.79			21.32		
		Power factor	(%)	97			96		
		EER (Energy Efficiency Ratio)	(kW/kW)	4.07			3.59		
		Starting current	(A)	1.0			1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750					
Total weight			(kg)	258	258	258	258	258	
Color				Silky shade (Munsell 1Y8.5/0.5)					
Compressor	Type			Hermetic type					
	Motor output		(kW)	2.3 x 2			4.2 x 2		
Fan unit	Fan			Propeller fan					
	Motor output		(kW)	0.6					
	Air volume		(m^3/h)	9,900			10.500		
Heat exchanger				Finned tube					
Refrigerant R410A Charged amount (* 3)			(kg)	12.5					
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73					
Protective devices				(* 5)					
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2			Ø28.6		
		Liquid side	(mm)	Ø12.7					
		Balance side	(mm)	Ø9.5					
	Connecting method	Gas side		Brazing					
		Liquid side		Flare					
		Balance side		Flare					
	Max. equivalent length		(m)	175					
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)					
	Max. total pipe length (Real length)		(m)	300					
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50					
				Outdoor unit is lower than indoor unit : 40 (* 6)					
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m					
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m					
Max. No. of connected indoor units				40					
Sound pressure level			(dB(A))	62					

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

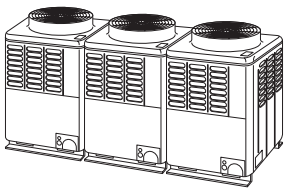
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 26HP			Equivalent to 28HP			Equivalent to 30HP		
Set Model name	Heat Pump	MMY-		AP2601HT7			AP2801HT7			AP3001HT7		
Outdoor unit type				Inverter								
Outdoor unit model	Heat Pump	MMY-		MAP1001HT7	MAP0801HT7	MAP0801HT7	MAP1001HT7	MAP1001HT7	MAP0801HT7	MAP1001HT7	MAP1001HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	73			78.5			84.0		
Standard heating capacity (* 1)			(kW)	81.5			88.0			95.0		
Power supply (* 2)				3 phase 60Hz 380V								
Electrical characteristics (* 1)	Cooling	Running current	(A)	32.11			35.25			38.40		
		Power consumption	(kW)	20.29			22.27			24.26		
		Power factor	(%)	96								
		EER (Energy Efficiency Ratio)	(kW/kW)	3.60			3.52			3.46		
		Starting current	(A)	1.0			1.0			1.0		
	Heating	Running current	(A)	32.80			35.77			38.88		
		Power consumption	(kW)	20.51			22.60			24.82		
		Power factor	(%)	95			96			97		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.97			3.89			3.83		
		Starting current	(A)	1.0			1.0			1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750								
Total weight			(kg)	258	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)								
Compressor	Type			Hermetic type								
	Motor output		(kW)	2.3 x 2			3.1 x 2		2.3 x 2	3.1 x 2		
Fan unit	Fan			Propeller fan								
	Motor output		(kW)	0.6								
	Air volume		(m^3/h)	10,500	9,900		10,500		9,900	10,500		
Heat exchanger				Finned tube								
Refrigerant R410A Charged amount (*3)			(kg)	12.5								
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73								
Protective devices				(* 5)								
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2								
		Liquid side	(mm)	Ø12.7								
		Balance side	(mm)	Ø9.5								
	Connecting method	Gas side		Brazing								
		Liquid side		Flare								
		Balance side		Flare								
	Max. equivalent length		(m)	175								
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)								
	Max. total pipe length (Real length)		(m)	300								
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50								
				Outdoor unit is lower than indoor unit : 40 (* 6)								
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m								
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m								
Max. No. of connected indoor units				43			47			48		
Sound pressure level			(dB(A))	62			62.5			63		

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

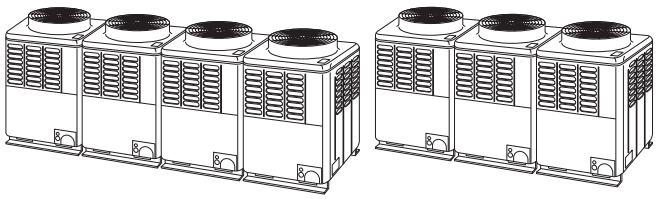
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 34HP						
Set Model name	Heat Pump	MMY-		AP3401HT7				AP3411HT7		
Outdoor unit type				Inverter						
Outdoor unit model	Heat Pump	MMY-		MAP1001HT7	MAP0801HT7	MAP0801HT7	MAP0801HT7	MAP1201HT7	MAP1201HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	96.0						
Standard heating capacity (* 1)			(kW)	108.0						
Power supply (* 2)				3 phase 60Hz 380V						
Electrical characteristics (* 1)	Cooling	Running current	(A)	41.99				52.91		
		Power consumption	(kW)	26.53				33.08		
		Power factor	(%)	96				95		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.62				2.90		
		Starting current	(A)	1.0				1.0		
	Heating	Running current	(A)	42.34				46.75		
		Power consumption	(kW)	27.03				29.54		
		Power factor	(%)	97				96		
		EER (Energy Efficiency Ratio)	(kW/kW)	4.00				3.66		
		Starting current	(A)	1.0				1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750						
Total weight			(kg)	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)						
Compressor	Type			Hermetic type						
	Motor output		(kW)	3.1 x 2	2.3 x 2			4.2 x 2		3.1 x 2
Fan unit	Fan			Propeller fan						
	Motor output		(kW)	0.6						
	Air volume		(m^3/h)	10,500	9,900			10,500		9,900
Heat exchanger				Finned tube						
Refrigerant R410A Charged amount (* 3)			(kg)	12.5						
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73						
Protective devices				(* 5)						
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2				Ø28.6		Ø22.2
		Liquid side	(mm)	Ø12.7						
		Balance side	(mm)	Ø9.5						
	Connecting method	Gas side		Brazing						
		Liquid side		Flare						
		Balance side		Flare						
	Max. equivalent length		(m)	175						
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)						
	Max. total pipe length (Real length)		(m)	300						
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50						
				Outdoor unit is lower than indoor unit : 40 (* 6)						
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m						
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm² x 2 cores up to 1000m, and (Shield wire) 2.0mm² x 2 cores up to 2000m						
Max. No. of connected indoor units				48						
Sound pressure level			(dB(A))	63.5				63.5		

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

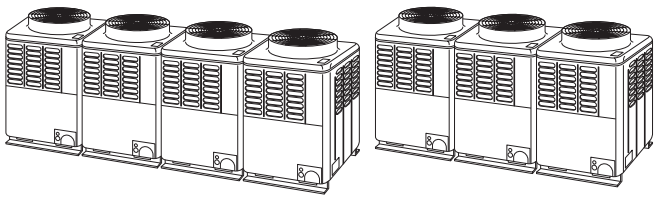
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 36HP						
Set Model name	Heat Pump	MMY-		AP3601HT7				AP3611HT7		
Outdoor unit type				Inverter						
Outdoor unit model	Heat Pump	MMY-		MAP1001HT7	MAP1001HT7	MAP0801HT7	MAP0801HT7	MAP1201HT7	MAP1201HT7	MAP1201HT7
Rated cooling capacity (* 1)			(kW)	101.0						
Standard heating capacity (* 1)			(kW)	113.0						
Power supply (* 2)				3 phase 60Hz 380V						
Electrical characteristics (* 1)	g	Running current	(A)	44.92				60.06		
		Power consumption	(kW)	28.38				37.16		
		Power factor	(%)	96				94		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.56				2.72		
		Starting current	(A)	1.0				1.0		
	Heating	Running current	(A)	45.49				50.90		
		Power consumption	(kW)	28.74				31.49		
		Power factor	(%)	96				94		
		EER (Energy Efficiency Ratio)	(kW/kW)	3.93				3.59		
		Starting current	(A)	1.0				1.0		
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750						
Total weight			(kg)	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)						
Compressor	Type			Hermetic type						
	Motor output		(kW)	3.1 x 2		2.3 x 2		4.2 x 2		
Fan unit	Fan			Propeller fan						
	Motor output		(kW)	0.6						
	Air volume		(m^3/h)	10,500		9,900		10,500		
Heat exchanger				Finned tube						
Refrigerant R410A Charged amount (* 3)			(kg)	12.5						
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73						
Protective devices				(* 5)						
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2				Ø28.6		
		Liquid side	(mm)	Ø12.7						
		Balance side	(mm)	Ø9.5						
	Connecting method	Gas side		Brazing						
		Liquid side		Flare						
		Balance side		Flare						
	Max. equivalent length		(m)	175						
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)						
	Max. total pipe length (Real length)		(m)	300						
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50						
				Outdoor unit is lower than indoor unit : 40 (* 6)						
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m						
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m						
Max. No. of connected indoor units				48						
Sound pressure level			(dB(A))	63.5				64		

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

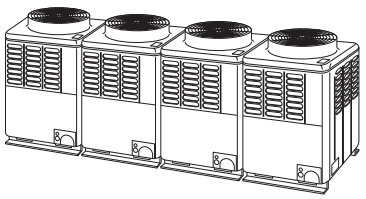
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 38HP				Equivalent to 40HP			
Set Model name	Heat Pump	MMY-		AP3801HT7				AP4001HT7			
Outdoor unit type				Inverter							
Outdoor unit model	Heat Pump	MMY-		MAP1001HT7	MAP1001HT7	MAP1001HT7	MAP0801HT7	MAP1001HT7	MAP1001HT7	MAP1001HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	106.5				112.0			
Standard heating capacity (* 1)			(kW)	119.5				126.5			
Power supply (* 2)				3 phase 60Hz 380V							
Electrical characteristics (* 1)	Cooling	Running current	(A)	48.05				51.18			
		Power consumption	(kW)	30.36				32.34			
		Power factor	(%)	96							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.51				3.46			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	48.79				52.31			
		Power consumption	(kW)	30.83				33.05			
		Power factor	(%)	96							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.88				3.83			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight			(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	3.1 x 2			2.3 x 2	3.1 x 2			
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500			9,900	10,500			
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)			(kg)	12.5							
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø22.2							
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm² x 2 cores up to 1000m, and (Shield wire) 2.0mm² x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	64							

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

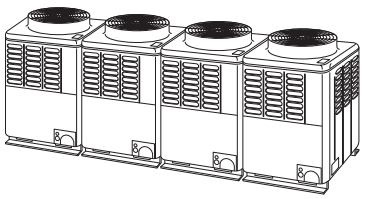
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 42HP				Equivalent to 44HP			
Set Model name	Heat Pump	MMY-		AP4201HT7				AP4401HT7			
Outdoor unit type				Inverter							
Outdoor unit model	Heat Pump	MMY-		MAP1201HT7	MAP1001HT7	MAP1001HT7	MAP1001HT7	MAP1201HT7	MAP1201HT7	MAP1001HT7	MAP1001HT7
Rated cooling capacity (* 1)			(kW)	118.0				123.5			
Standard heating capacity (* 1)			(kW)	132.0				138.0			
Power supply (* 2)				3 phase 60Hz 380V							
Electrical characteristics (* 1)	Cooling	Running current	(A)	58.15				60.56			
		Power consumption	(kW)	36.74				40.99			
		Power factor	(%)	96				95			
		EER (Energy Efficiency Ratio)	(kW/kW)	3.21				3.01			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	56.20				59.75			
		Power consumption	(kW)	35.14				37.36			
		Power factor	(%)	95							
		EER (Energy Efficiency Ratio)	(kW/kW)	3.76				3.69			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight			(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	4.2 x 2	3.1 x 2			4.2 x 2	3.1 x 2		
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500							
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)			(kg)	12.5							
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(* 5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø28.6	Ø22.2			Ø28.6	Ø22.2		
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	175							
	Max. real length		(m)	150 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm^2 x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm^2 x 2 cores up to 1000m, and (Shield wire) 2.0mm^2 x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	64.5							

***1 :** 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

The standard piping measns that main pipe length is 5 m, branching pipe length 2.5 m of branch piping connected with a 0 meter height.

***2 :** The source voltage must not fluctuate more than ±10%.

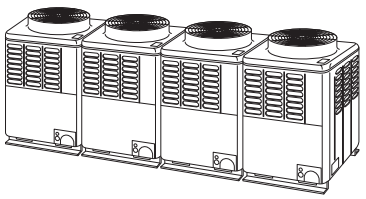
***3 :** The amount does not consider extra piping lengths. Refrigerant must be added on site in accordance with the actual piping length.

***4 :** The maximum total piping length indicates the sum of one-way piping lengths on the liquid side or gas side.

System safety protection

***5 :** Discharge temp. sensor, Suction temp. sensor, Compressor case thermostat, High-pressure Switch, Over-current sensor, High-pressure Sensor, Low pressure sensor, Over-current relay.

***6 :** 30m when the height difference between indoor units exceeds 3m.



60Hz

Equivalent HP				Equivalent to 46HP				Equivalent to 48HP			
Set Model name	Heat Pump	MMY-		AP4601HT7				AP4801HT7			
Outdoor unit type				Inverter							
Outdoor unit model	Heat Pump	MMY-		MAP1201HT7	MAP1201HT7	MAP1201HT7	MAP1001HT7	MAP1201HT7	MAP1201HT7	MAP1201HT7	MAP1201HT7
Rated cooling capacity (* 1)			(kW)	130.0				135.0			
Standard heating capacity (* 1)			(kW)	145.0				150.0			
Power supply (* 2)				3 phase 60Hz 380V							
Electrical characteristics (* 1)	Cooling	Running current	(A)	72.92				79.44			
		Power consumption	(kW)	45.59				49.67			
		Power factor	(%)	95							
		EER (Energy Efficiency Ratio)	(kW/kW)	2.85				2.72			
		Starting current	(A)	1.0				1.0			
	Heating	Running current	(A)	63.73				67.56			
		Power consumption	(kW)	39.85				41.80			
		Power factor	(%)	95				94			
		EER (Energy Efficiency Ratio)	(kW/kW)	3.64				3.59			
		Starting current	(A)	1.0				1.0			
External dimension			(mm)	Height 1,800 x Width 990 x Depth 750							
Total weight			(kg)	258	258	258	258	258	258	258	258
Color				Silky shade (Munsell 1Y8.5/0.5)							
Compressor	Type			Hermetic type							
	Motor output		(kW)	4.2 x 2			3.1 x 2	4.2 x 2			
Fan unit	Fan			Propeller fan							
	Motor output		(kW)	0.6							
	Air volume		(m^3/h)	10,500							
Heat exchanger				Finned tube							
Refrigerant R410A Charged amount (* 3)			(kg)	12.5							
High-pressure switch			(MPa)	OFF : 2.90 ON : 3.73							
Protective devices				(*5)							
Refrigerant pipe spec. (* 4)	Connecting port dia.	Gas side	(mm)	Ø28.6			Ø22.2	Ø28.6			
		Liquid side	(mm)	Ø12.7							
		Balance side	(mm)	Ø9.5							
	Connecting method	Gas side		Brazing							
		Liquid side		Flare							
		Balance side		Flare							
	Max. equivalent length		(m)	160							
	Max. real length		(m)	135 (However, if equivalent bend length is longer, equivalent length is the standard.)							
	Max. total pipe length (Real length)		(m)	300							
	Max. height difference		(m)	Outdoor unit is higher than indoor unit : 50							
				Outdoor unit is lower than indoor unit : 40 (* 6)							
Control wiring				Shield wire 1.25mm² x 2 cores. up to 2000m							
Central remote controller				When connecting to outdoor unit : (Shield wire) 1.25mm² x 2 cores up to 1000m, and (Shield wire) 2.0mm² x 2 cores up to 2000m							
Max. No. of connected indoor units				48							
Sound pressure level			(dB(A))	65							

***1 :** 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

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