

## PURY-P200YMF-C, PURY-P250YMF-C

## CONTENTS

1. Specifications .....	56
2. Capacity Tables .....	58
2-1 Correction by temperature .....	58
2-2 Correction by total indoor .....	60
2-3 Correction by refrigerant piping length .....	62
2-4 Correction at frosting and defrosting .....	63
2-5 Operation limit .....	63
3. Sound Levels .....	64
4. External Dimensions .....	65
5. Electrical Wiring Diagram .....	66
6. Refrigerant Circuit Diagram .....	67
And Thermal Sensor	

R2(R407C)

# 1. Specifications

Model name		PURY-P200YMF-C	
		Cooling	Heating
Capacity	kW	*1 22.4	25.0
	kcal/h	*2 20,000	-
Power source		3N ~ 380/400/415V 50/60Hz	
Power input	kW	8.64	7.98
Current	A	14.5/13.8/13.3	13.4/12.7/12.3
Fan	TypeX Quantity	Propeller fanX 1	
	Airflow rate	m <sup>3</sup> /min	185
	Motor output	kW	0.38
Compressor	Type	Hermetic	
	Motor output	kW	5.5
	Crankcase heater	kW	0.062(240V)
Refrigerant / Lubricant		R407C/MEL32	
External finish		Steel plate painting with polyester powder <MUNSELL 5Y8/1 or similar>	
External dimension		mm	1715(H)X 990(W)X 840(L)
Protection devices	High pressure protection		2.94MPa
	Compressor / Fan		Over current protection / Thermal switch
	Inverter		DC bus current protection, thermal switch
Refrigerant piping diameter		High press. / Low press.	φ□9.05 flare / φ□25.4 Flange
Indoor unit	Total capacity		50 ~ 150% of outdoor unit capacity
	Model / Quantity		Model 20~ 250 / 1~ 15
Noise level	dB<A>	56	
Net weight	kg	241	
Operating temperature range		Indoor:15°CWB ~ 24°CWB Outdoor:-5°CDB ~ 43°CDB	Indoor:15°CDB ~ 27°CDB Outdoor:-15°CWB ~ 15.5°CWB
		※-5°CDB/-6°CWB ~ 21°CDB/15.5°CWB with cooling/heating mixed operation.	

Note: 1.Cooling/heating capacity indicates the maximum value at operation under the following condition.

\*1 **Cooling** Indoor : 27°CDB/19°CWB Outdoor : 35°CDB      \*2 **Cooling** Indoor : 27°CDB/19.5°CWB Outdoor : 35°CDB  
**Heating** Indoor : 20°CDB      Outdoor : 7°CDB/6°CWB      Pipe length : 5m      Height difference : 0m  
 Pipe length : 7.5m      Height difference : 0m

2.Works not included : Installation/foundation work, electrical connection work, duct work, insulation work, power source switch and other items not specified in this specification.

Model name		PURY-P250YMF-C	
		Cooling	Heating
Capacity	kW	*1 28.0	31.5
	kcal/h	*2 25,000	-
Power source		3N ~380/400/415V 50/60Hz	
Power input	kW	10.89	10.15
Current	A	18.3/17.4/16.8	17.1/16.2/15.6
Fan	TypeX Quantity	Propeller fanX 1	
	Airflow rate	m <sup>3</sup> /min	185
	Motor output	kW	0.38
Compressor	Type	Hermetic	
	Motor output	kW	7.5
	Crankcase heater	kW	0.062(240V)
Refrigerant / Lubricant		R407C/MEL32	
External finish		Steel plate painting with polyester powder <MUNSELL 5Y8/1 or similar>	
External dimension	mm	1715(H)X 990(W)X 840(L)	
Protection devices	High pressure protection	2.94MPa	
	Compressor / Fan	Over current protection / Thermal switch	
	Inverter	DC bus current protection, thermal switch	
Refrigerant piping diameter	High press. / Low press.	φ□9.05 flare / φ□28.58 Flange	
Indoor unit	Total capacity	50 ~ 150% of outdoor unit capacity	
	Model / Quantity	Model 20 ~ 250 / 1 ~ 16	
Noise level	dB<A>	57	
Net weight	kg	247	
Operating temperature range		Indoor:15°CWB ~ 24°CWB Outdoor:-5°CDB ~ 43°CDB	Indoor:15°CDB ~ 27°CDB Outdoor:-15°CWB ~ 15.5°CWB
		* -5°CDB/-6°CWB ~ 21°CDB/15.5°CWB with cooling/heating mixed operation.	

Note: 1.Cooling/heating capacity indicates the maximum value at operation under the following condition.

*1 <b>Cooling</b> Indoor : 27°CDB/19°CWB	Outdoor : 35°CDB	*2 <b>Cooling</b> Indoor : 27°CDB/19.5°CWB	Outdoor : 35°CDB
<b>Heating</b> Indoor : 20°CDB	Outdoor : 7°CDB/6°CWB	Pipe length : 5m	Height difference : 0m
Pipe length : 7.5m	Height difference : 0m		

2.Works not included : Installation/foundation work, electrical connection work, duct work, insulation work, power source switch and other items not specified in this specification.

# 2. Capacity tables

## 2-1. Correction by temperature

### Cooling

- Standard Specifications

		PURY-P200YMF-C	PURY-P250YMF-C
Capacity	kW	22.4	28.0
Input	kW	8.64	10.89
Source	V	380/400/415	
Current	A	14.5/13.8/13.3	18.3/17.4/16.8

- Calculation

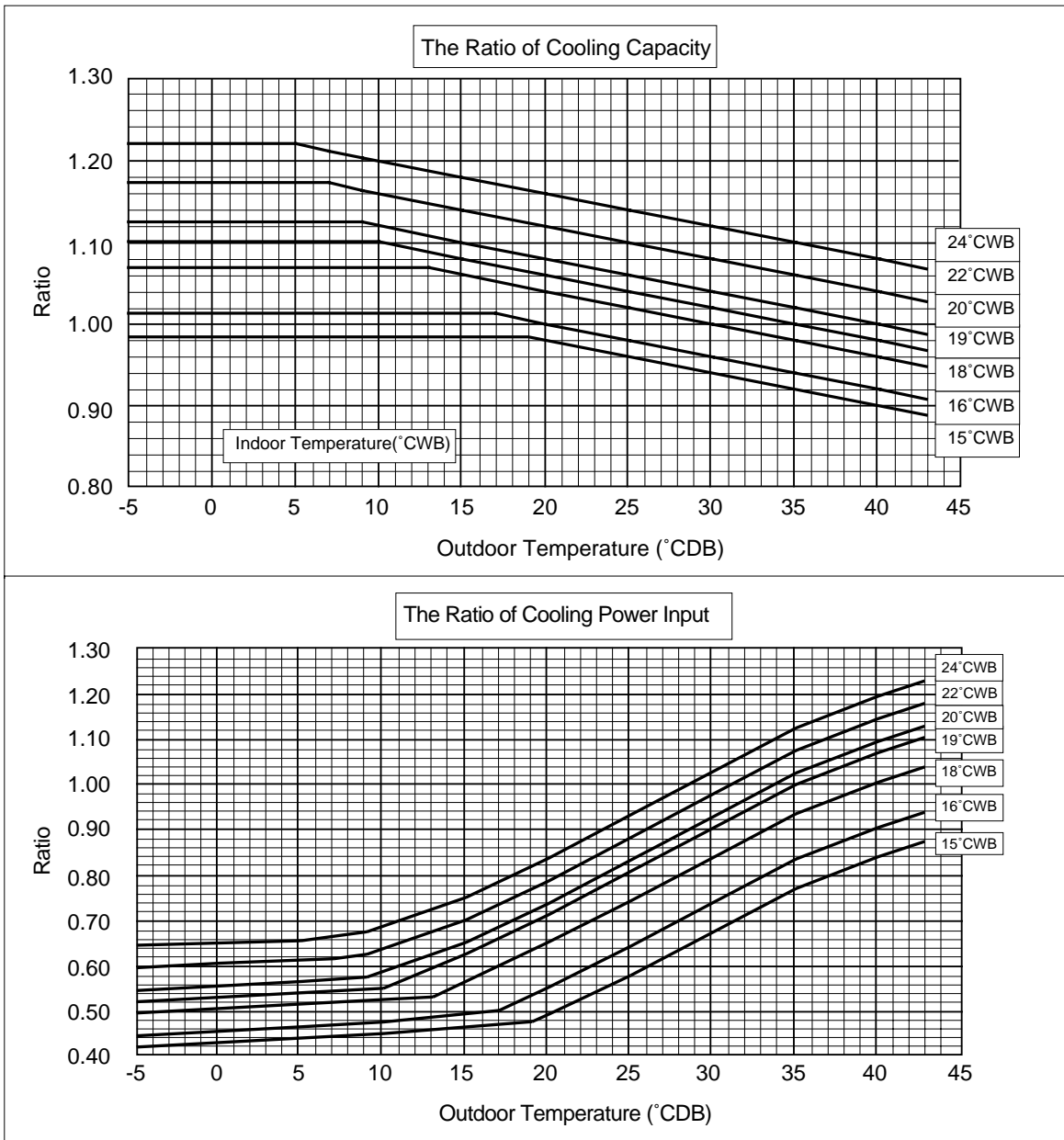
$$\text{Capacity}' = \text{Capacity} \times \text{Ratio}$$

$$\text{Input}' = \text{Input} \times \text{Ratio}$$

$$\text{Current}' = \frac{\text{Input}' \times 1000}{\sqrt{3} \times \text{Source} \times 0.90}$$

\* Capacity'  
 Input'  
 Current'

} After correction



R2(R407C)

**Heating**

• Standard Specifications

		PURY-P200YMF-C	PURY-P250YMF-C
Capacity	kW	25.0	31.5
Input	kW	7.98	10.15
Source	V	380/400/415	
Current	A	13.4/12.7/12.3	17.1/16.2/15.6

• Calculation

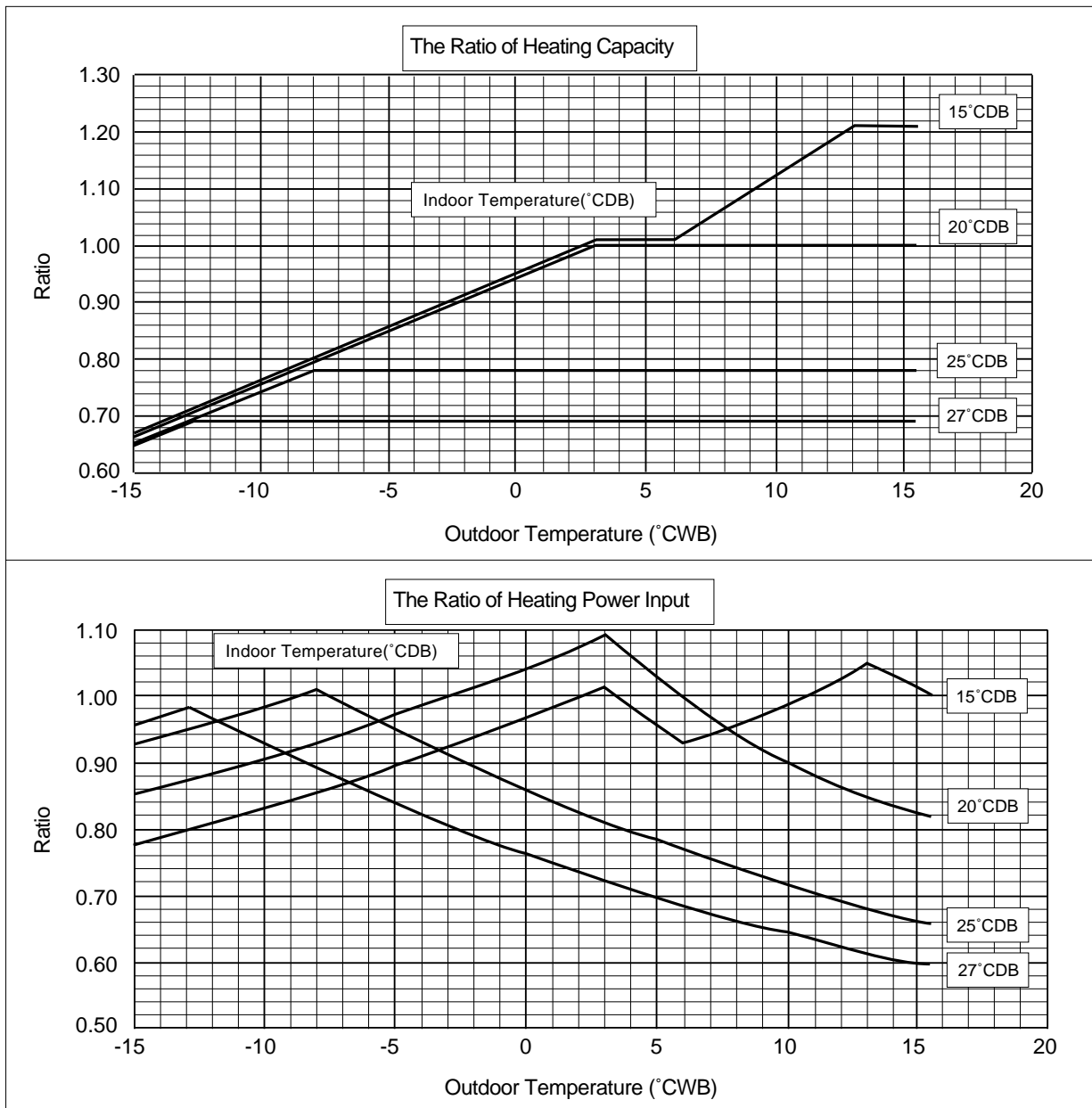
Capacity' = Capacity X Ratio

Input' = Input X Ratio

Current' =  $\frac{\text{Input}' \times 1000}{\sqrt{3} \times \text{Source} \times 0.90}$

※Capacity'  
Input'  
Current'

} After correction

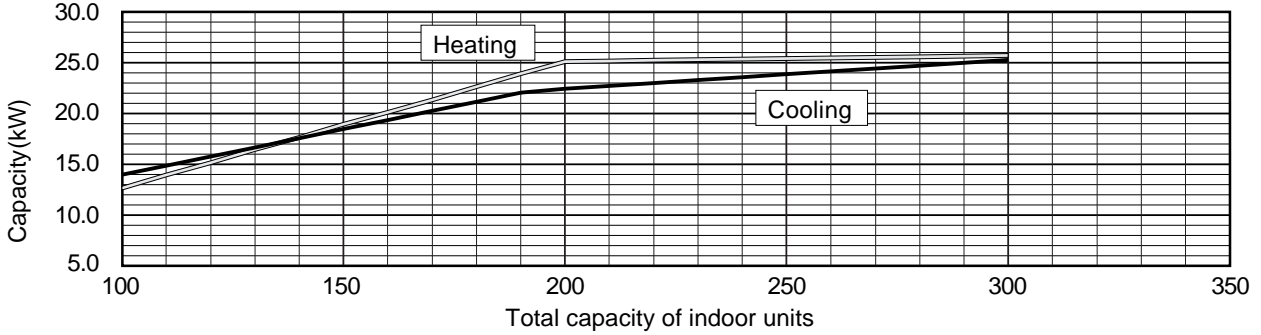


R2(R407C)

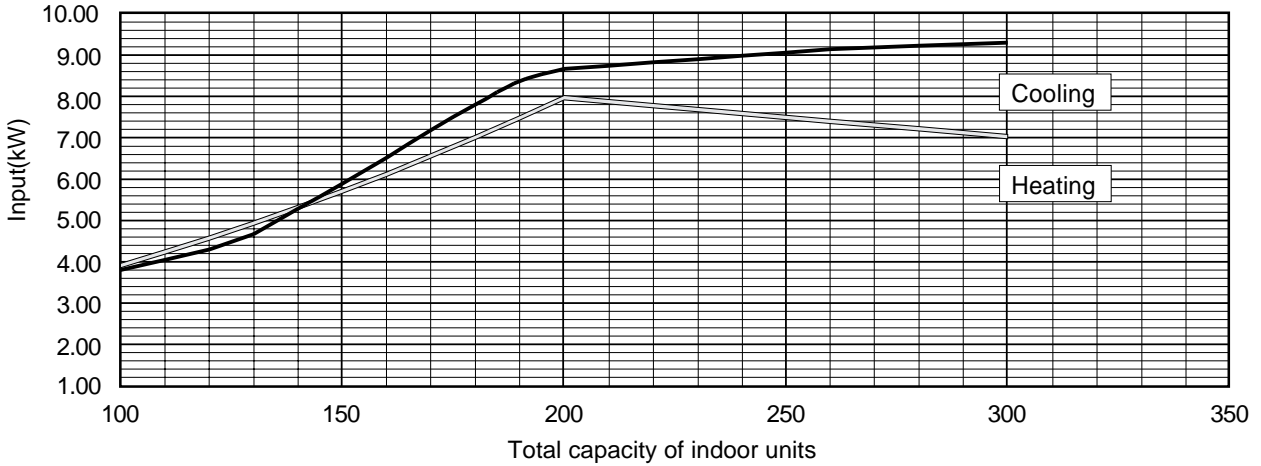
## 2-2. Correction by total indoor

### PURY-P200YMF-C

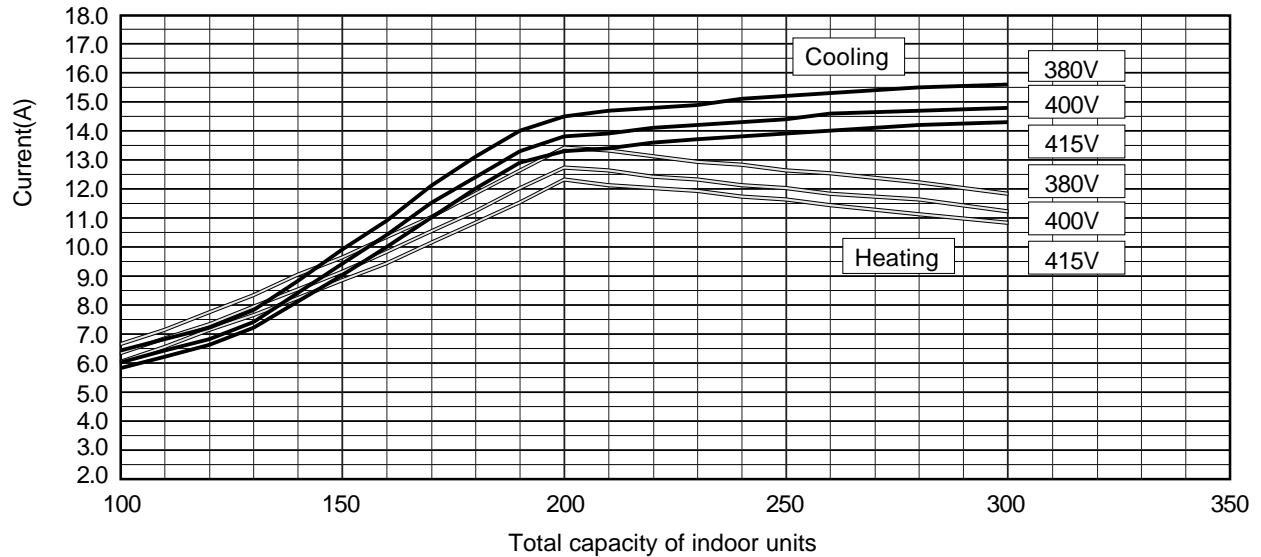
#### 1) Capacity



#### 2) Input



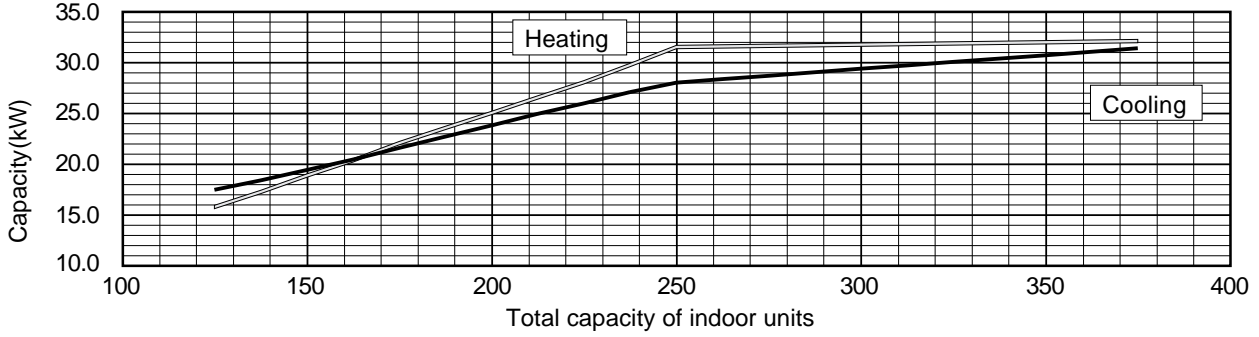
#### 3) Current



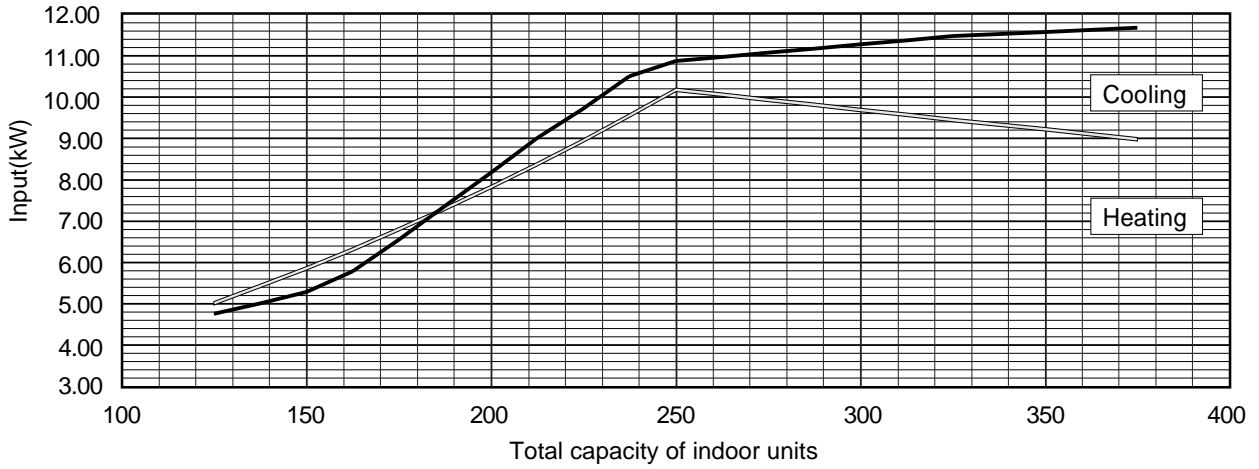
R2(R407C)

**PURY-P250YMF-C**

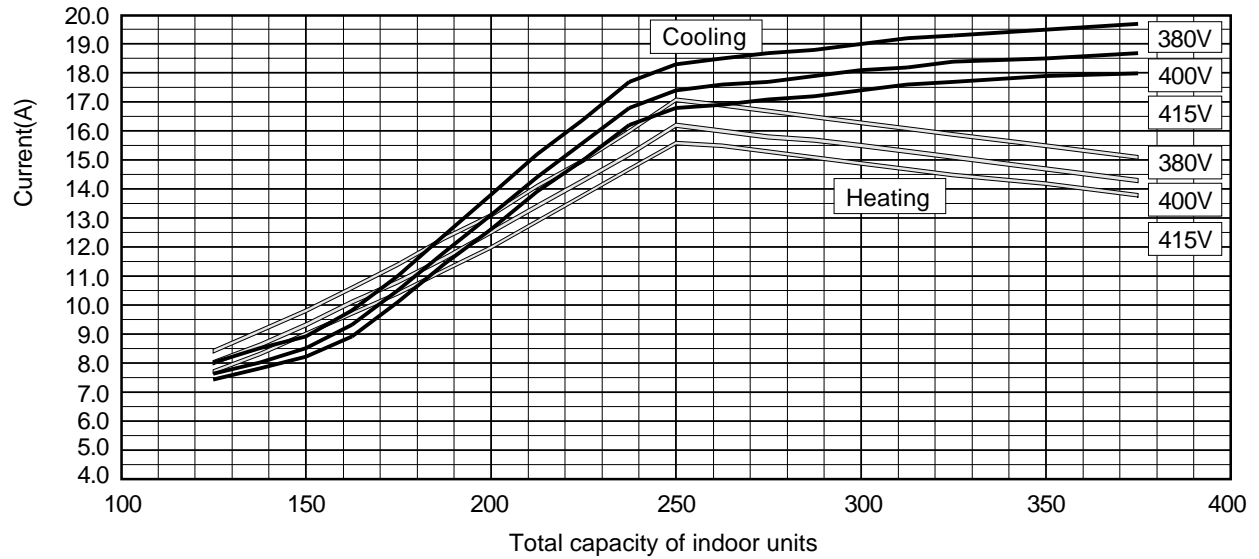
1) Capacity



2) Input



3) Current



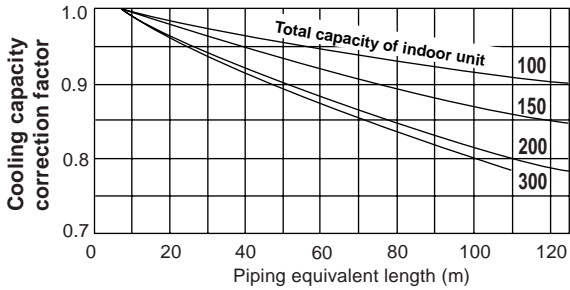
**R2(R407C)**

## 2-3 Correction by refrigerant piping length

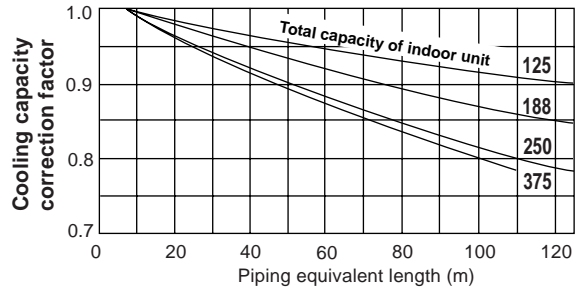
To obtain a decrease in cooling/heating capacity due to refrigerant piping extension, multiply by the capacity correction factor based on the refrigerant piping equivalent length in the table below.

### • Cooling capacity correction

#### PURY-P200YMF-C

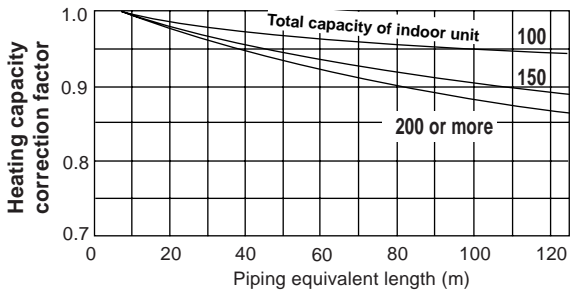


#### PURY-P250YMF-C

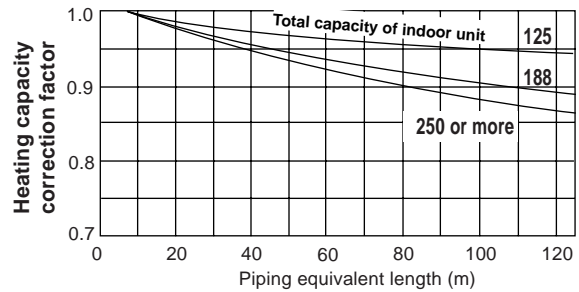


### • Heating capacity correction

#### PURY-P200YMF-C



#### PURY-P250YMF-C



### • How to obtain piping equivalent length

#### ① PURY-P200YMF-C

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.47 × number of bent on the piping)m

#### ② PURY-P250YMF-C

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 × number of bent on the piping)m



## 2-4 Correction at frosting and defrosting

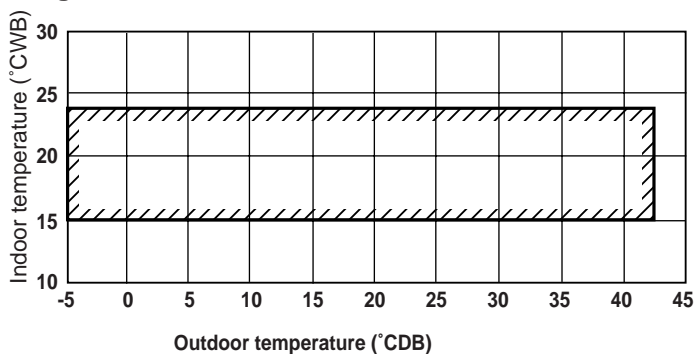
When a decrease in heating capacity due to frosted and defrosting operations is considered, the value multiplied by the correction factor in the table below represents the heating capacity.

Correction factor table

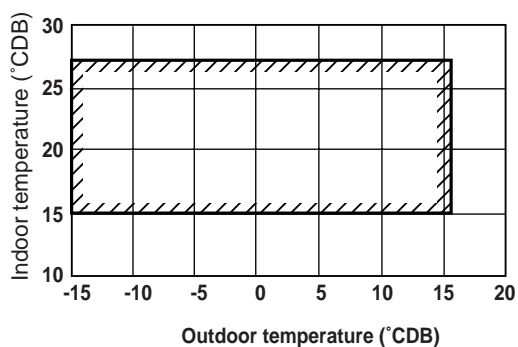
Outdoor inlet air temp (°CWB)	6	4	2	0	-2	-4	-6	-8	-10
Correction factor	1.0	0.95	0.84	0.83	0.87	0.9	0.95	0.95	0.95

## 2-5 Operation limit

### • Cooling



### • Heating

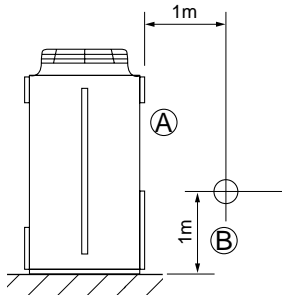


\* Outdoor temperature : -5°CDB/-6°CWB ~ 21°CDB/15.5°CWB in cooling/heating mixed mode.

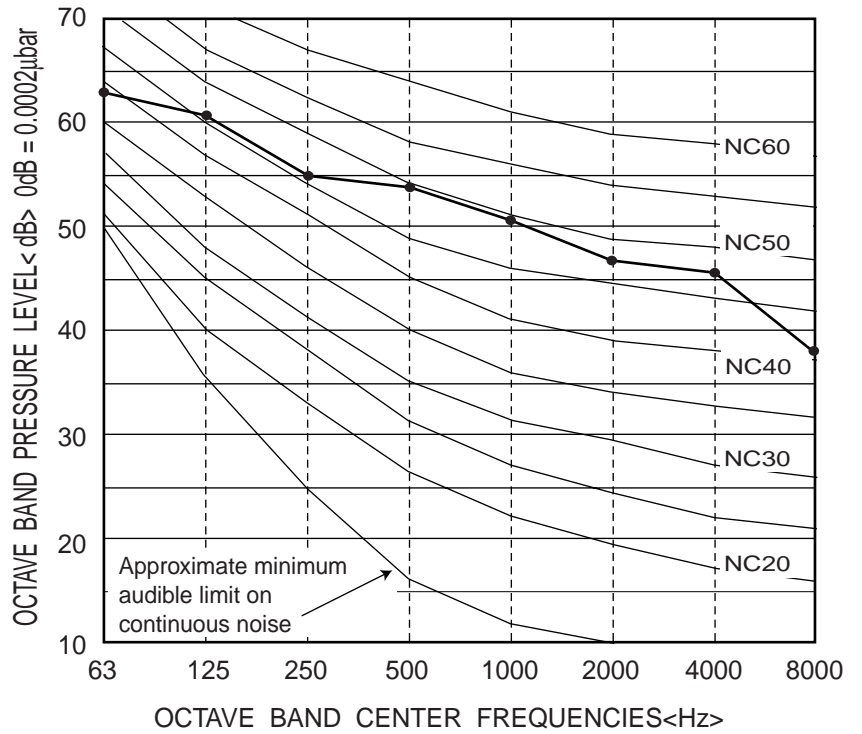
### 3. Sound levels

#### PURY-P200YMF-C

Measurement condition

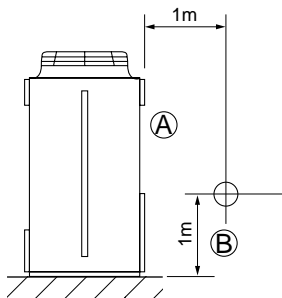


Sound pressure level in anechoic room
56 dB (A)

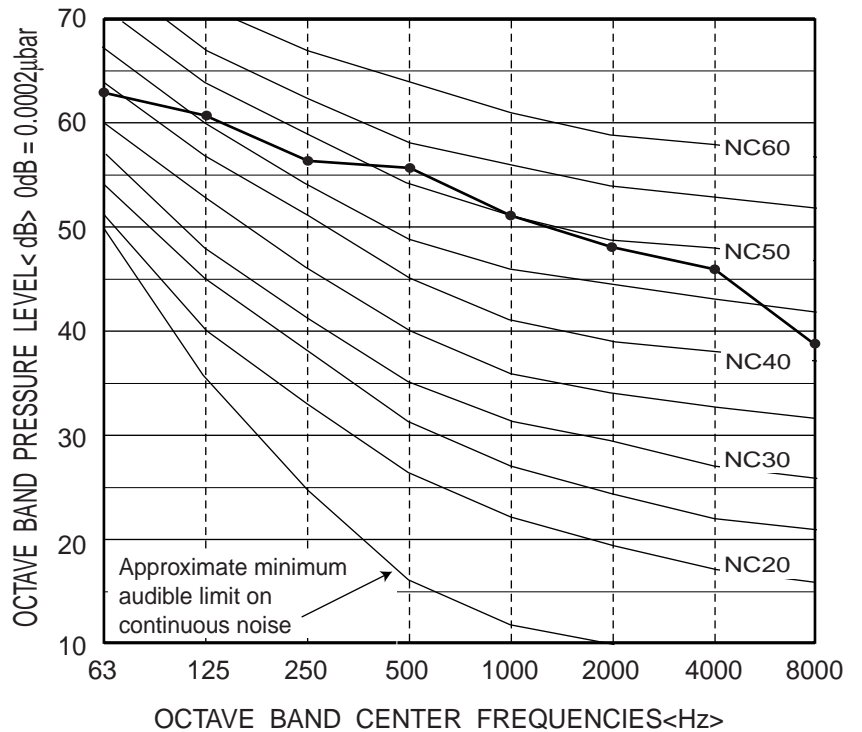


#### PURY-P250YMF-C

Measurement condition



Sound pressure level in anechoic room
57 dB (A)



R2(R407C)

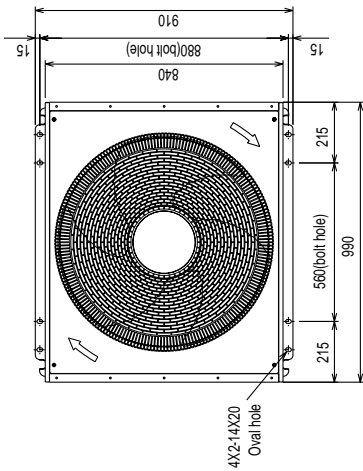
# 4. External dimensions

## PURY-P200,250YMF-C

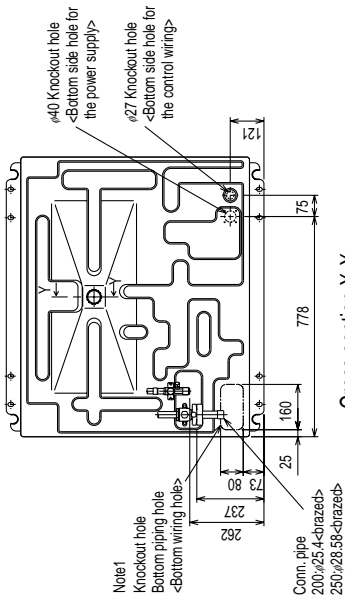
Unit : mm

- < Accessory >
- Refrigerant (gas) conn. pipe ..... 1 pc.  
(The connecting pipe is fixed with the unit)
  - Packing for conn. pipe ..... 1 pc.  
(Attached near the ball valve)
  - Wiring mounting plate
  - Conduit mounting plate  
(Painted the same color as the unit body)
  - $\phi 40$  ..... 1 pc.
  - $\phi 33$  ..... 1 pc.
  - $\phi 27$  ..... 1 pc.

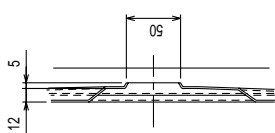
Tapping screw 4 X 10 ..... 6 pcs.  
 Note 1: Please leave a space under the outdoor unit for the piping. When you connect the piping from the bottom.  
 (Please be careful not to close the hole of the bottom plate by the basement)



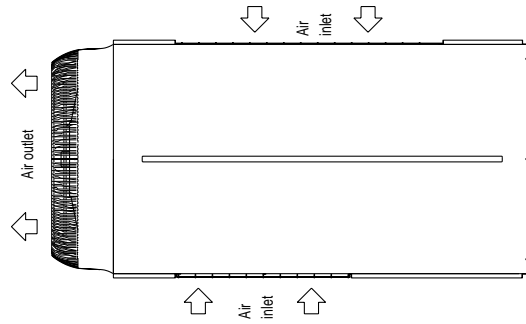
Plane view



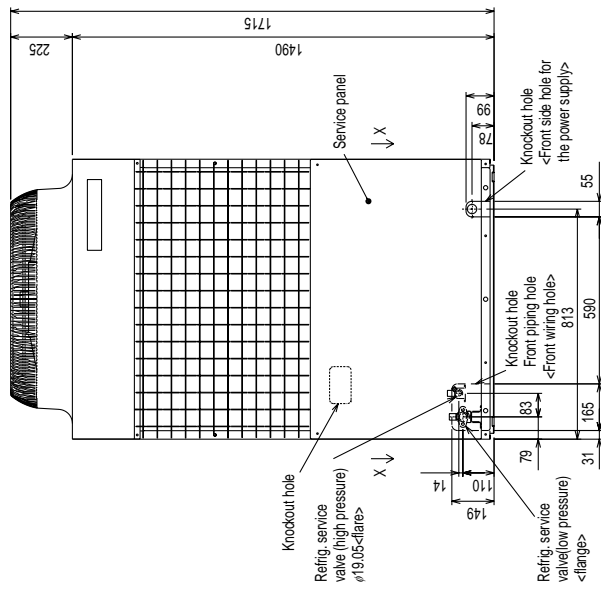
Cross section X-X



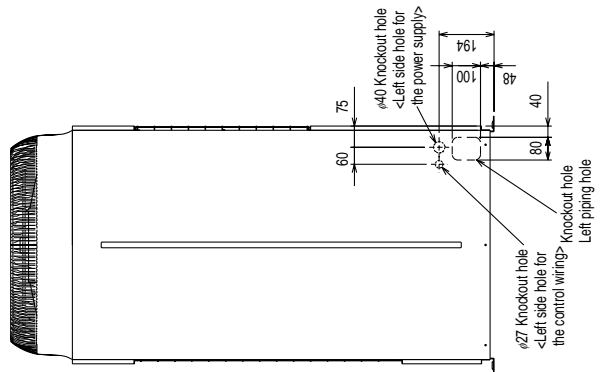
Cross section Y-Y



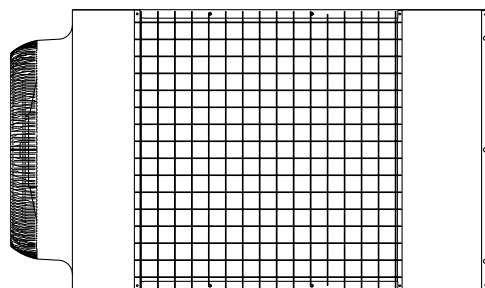
Right side view



Front view



Left side view

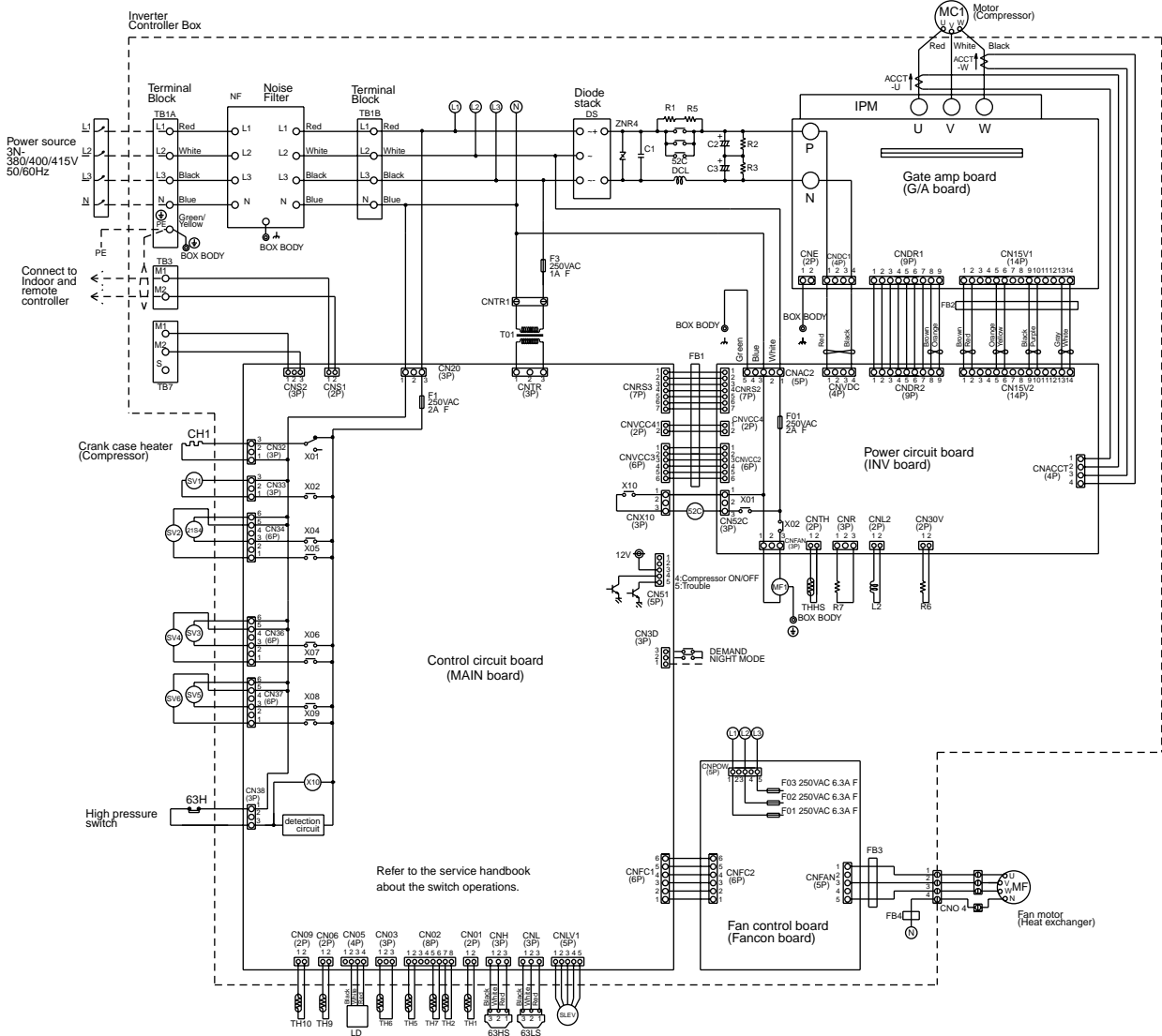


Rear view

R2(R407C)

# 5. Electrical Wiring Diagram

PURY-P200, 250YMF-C



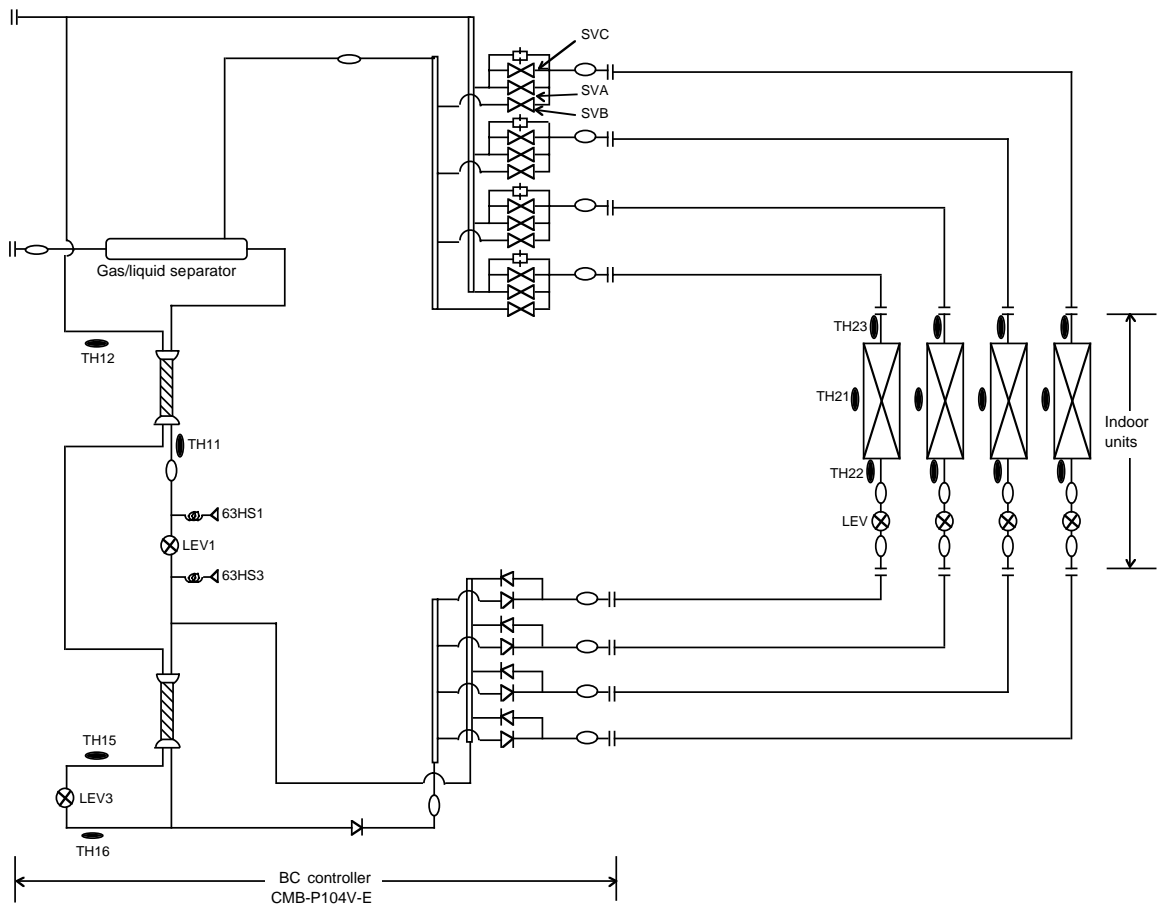
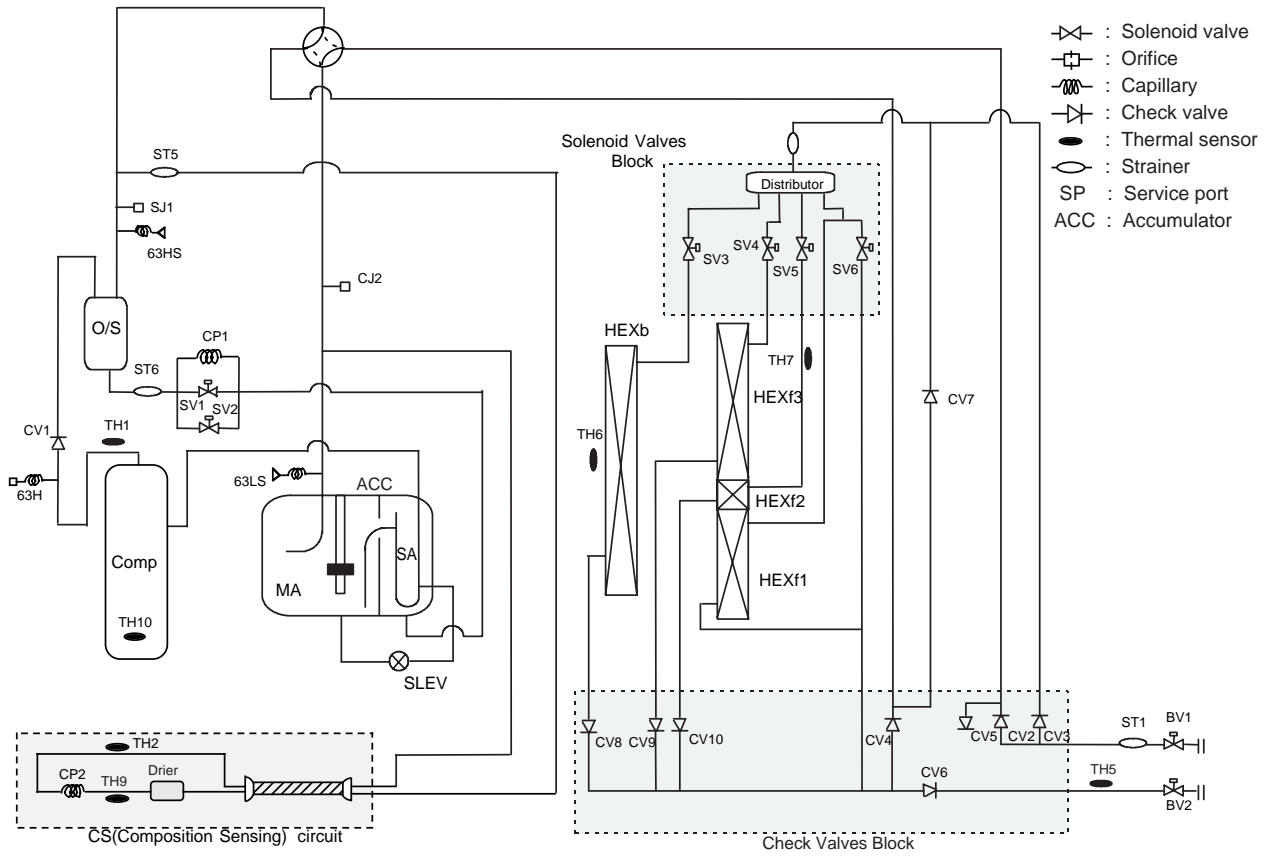
R2(R407C)

## <SYMBOL EXPLANATION>

Symbol	N a m e	Symbol	N a m e	Symbol	N a m e	Symbol	N a m e		
DCL	DC reactor (Power factor improvement)	SV1,SV2	Solenoid valve (Discharge-suction bypass)	TH1	Thermistor	Discharge pipe temp. detect	THHS	Thermistor	Radiator panel temp. detect
ACCT-U/W	Current Sensor	SV3-SV6	Solenoid valve (Heat exchanger capacity control)	TH2		Saturation evapo. temp. detect	LD		Accumulator liquid level detect
ZNR4	Varistor	SLEV	Electronic expansion valve(Oil return)	TH5		Pipe temp. detect	X1-10		Aux. relay
52C	Magnetic contactor (Inverter main circuit)	63HS	High pressure sensor	TH6		OA temp. detect	FB1-4		Ferrite core
MF1	Fan motor (Radiator panel)	63LS	Low pressure sensor	TH7		liquid outlet temp. detect at Sub-cool coil	⊕		Earth terminal
21S4	4-way valve	L2	Choke coil(Transmission)	TH9		High pressure liquid temp.			
		IPM	Intelligent power module	TH10		Compressor shell temp.			

# 6. Refrigerant circuit diagram and Thermal sensor

PURY-P200, 250YMF-C



R2(R407C)

**R2(R407C)**