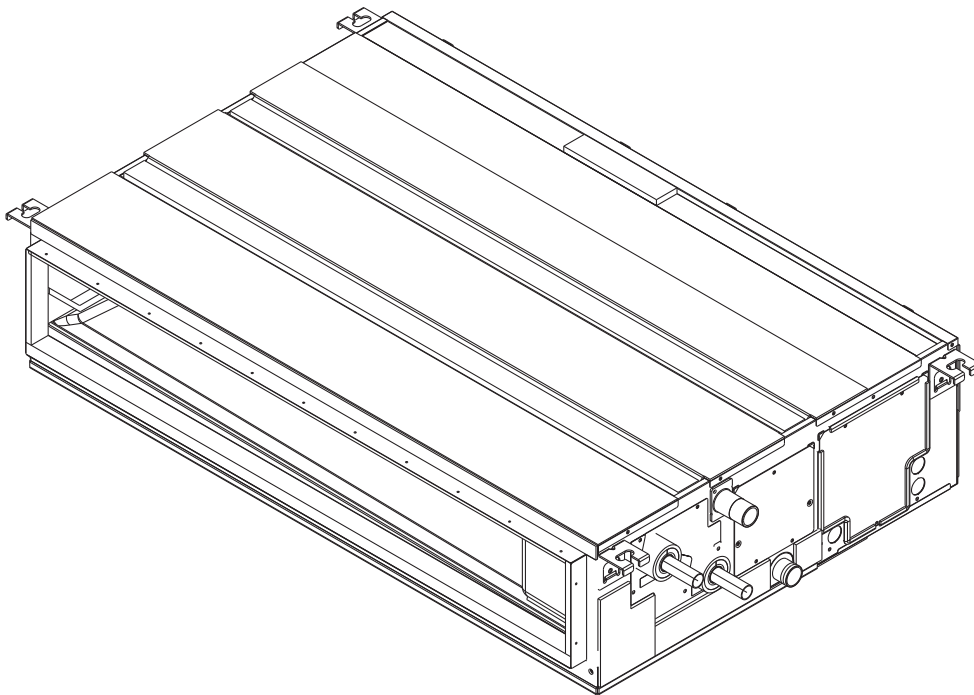


TECHNICAL & SERVICE MANUAL

Models

PEFY-W20VMA(L)(2)-A,
PEFY-W25VMA(L)(2)-A,
PEFY-W32VMA(L)(2)-A,
PEFY-W40VMA(L)(2)-A,
PEFY-W50VMA(L)(2)-A,

PEFY-W63VMA(L)(2)-A
PEFY-W71VMA(L)(2)-A
PEFY-W80VMA(L)(2)-A
PEFY-W100VMA(L)(2)-A
PEFY-W125VMA(L)(2)-A



CITY MULTI

Safety Precautions

Read before installation and performing electrical work

- Thoroughly read the following safety precautions prior to installation.
- Observe these safety precautions for your safety.
- This equipment may have adverse effects on the equipment on the same power supply system.
- Contact the local power authority before connecting to the system.

Symbol explanations

WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

CAUTION

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.



Indicates an action that must be avoided.



Indicates important instructions.



Indicates a parts that requires grounding.



Indicates that caution must be taken with rotating parts. (This symbol is on the main unit label.) <Color: Yellow>



Indicates that the parts that are marked with this symbol pose a risk of electric shock. (This symbol is on the main unit label.) <Color: Yellow>

WARNING

Carefully read the labels affixed to the main unit.

WARNING

- **Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.**

- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, during repair, or at the time of disposal of the unit.

It may also be in violation of applicable laws.

MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

- **Ask your dealer or a qualified technician to install the unit.**

- Improper installation by the user may result in water leakage, electric shock, or fire.

- **Properly install the unit on a surface that can withstand its weight.**

- Unit installed on an unstable surface may fall and cause injury.

- **Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable.**

- Improperly connected cables may produce heat and start a fire.

- **Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over.**

- Improper installation may cause the unit to topple over and cause injury or damage to the unit.

- **Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric.**

- **Do not make any modifications or alterations to the unit.**

Consult your dealer for repair.

- Improper repair may result in water leakage, electric shock, or fire.

- **Do not touch the heat exchanger fins with bare hands.**

- The fins are sharp and pose a risk of cuts.

- **Properly install the unit according to the instructions in the Installation Manual.**

- Improper installation may result in water leakage, electric shock, or fire.

- **Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.**

- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- **Keep electrical parts away from water.**

- Wet electrical parts pose a risk of electric shock, smoke, or fire.

- **Securely attach the control box cover.**

- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.

- **Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.**

- Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.

- **Consult your dealer or a qualified technician when moving or reinstalling the unit.**

- Improper installation may result in water leakage, electric shock, or fire.

- **After completing the service work, check for a refrigerant leak.**

- If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.

- **Do not try to defeat the safety features of the unit.**

- Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices, or the use of accessories other than the ones that are recommended by Mitsubishi Electric may result in smoke, fire, or explosion.

- **Consult your dealer for proper disposal method.**

- **Do not use a leak detection additive.**

Precautions for handling units for use with water

CAUTION

- **Do not use the existing water piping.**

- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before installation. Keep the joints wrapped in plastic bags. If dust or dirt enters the water circuit, it may damage the heat exchanger and cause water leakage.

- **Only use water.**

- Only use clean water as a refrigerant. The use of water outside the specification may damage the refrigerant circuit.

- **Install the unit so that external force is not applied to the water pipes.**

CONTENTS

I Features

[1] Features.....	1
-------------------	---

II Components and Functions

[1] Components and Functions.....	2
-----------------------------------	---

III Specifications

[1] Specifications.....	5
1.Specifications.....	5
2.Electrical component specifications.....	12

IV Outlines and Dimensions

[1] Outlines and Dimensions.....	15
----------------------------------	----

V Wiring Diagram

[1] Wiring Diagram.....	21
-------------------------	----

VI Refrigerant System Diagram

[1] Refrigerant system diagram.....	23
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VII Troubleshooting

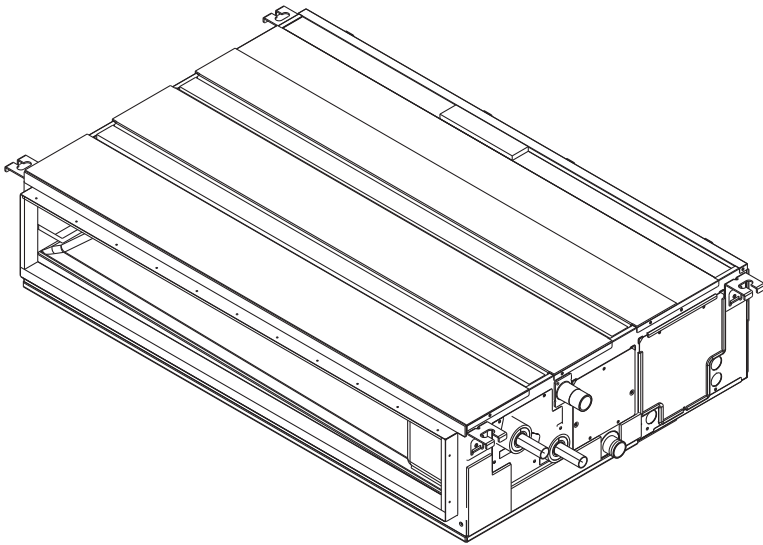
[1] Troubleshooting.....	24
1.Check methods.....	24
2.DC fan motor (fan motor/indoor control board).....	27
3.Address switch setting.....	28
4.Voltage test points on the control board.....	29
5.Dipswitch setting (Factory setting).....	30

VIII Disassembly Procedure

[1] Disassembly Procedure.....	34
1.Control box.....	34
2.Thermistor (Intake air).....	35
3.Drain pump.....	35
4.Drainpan.....	36
5.Thermistor (Water outlet) (Water inlet).....	37
6.Fan and fan motor.....	38
7.Heat exchanger (Pressure sensor and FCV).....	39



[1] Features

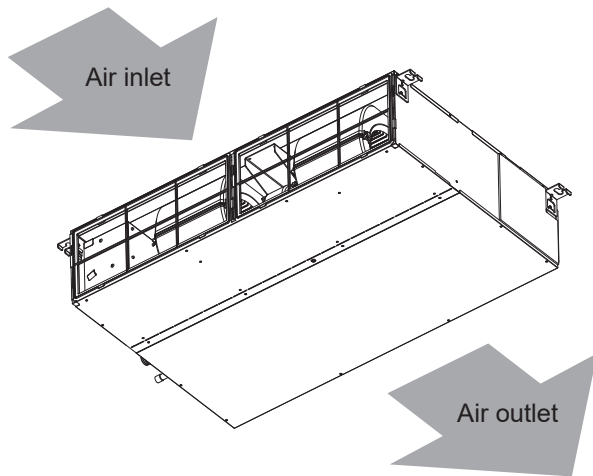


Model	Cooling capacity/Heating capacity
	kW
PEFY-W20VMA(L)(2)-A	2.2/2.5
PEFY-W25VMA(L)(2)-A	2.8/3.2
PEFY-W32VMA(L)(2)-A	3.6/4.0
PEFY-W40VMA(L)(2)-A	4.5/5.0
PEFY-W50VMA(L)(2)-A	5.6/6.3
PEFY-W63VMA(L)(2)-A	7.1/8.0
PEFY-W71VMA(L)(2)-A	8.0/9.0
PEFY-W80VMA(L)(2)-A	9.0/10.0
PEFY-W100VMA(L)(2)-A	11.2/12.5
PEFY-W125VMA(L)(2)-A	14.0/16.0

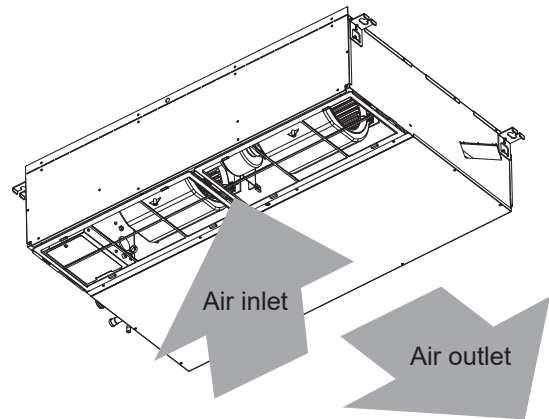
[1] Components and Functions

1. Indoor (Main) Unit

(1) In case of rear inlet



(2) In case of bottom inlet

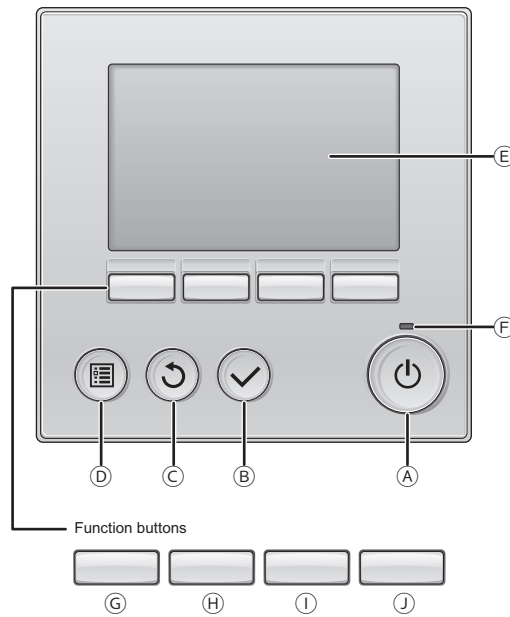


2. Remote Controller

[PAR-32MAA]

Once the operation mode is selected, the unit will remain in the selected mode until changed.

(1) Remote Controller Buttons



A [ON/OFF] button

Press to turn ON/OFF the indoor unit.

B [SELECT] button

Press to save the setting.

C [RETURN] button

Press to return to the previous screen.

D [MENU] button

Press to bring up the Main menu.

E Backlit LCD

Operation settings will appear.

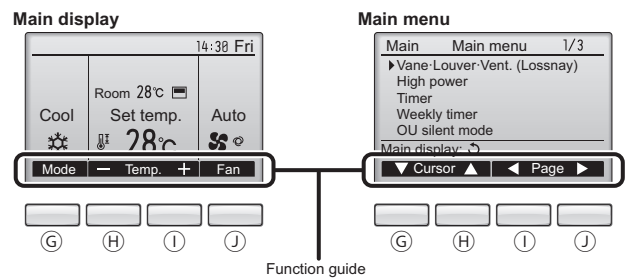
When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.

When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the [ON/OFF] button)

F ON/OFF lamp

This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.

The functions of the function buttons change depending on the screen. Refer to the button function guide that appears at the bottom of the LCD for the functions they serve on a given screen. When the system is centrally controlled, the button function guide that corresponds to the locked button will not appear.



G Function button [F1]

Main display: Press to change the operation mode.
Main menu: Press to move the cursor down.

H Function button [F2]

Main display: Press to decrease temperature.
Main menu: Press to move the cursor up.

I Function button [F3]

Main display: Press to increase temperature.
Main menu: Press to go to the previous page.

J Function button [F4]

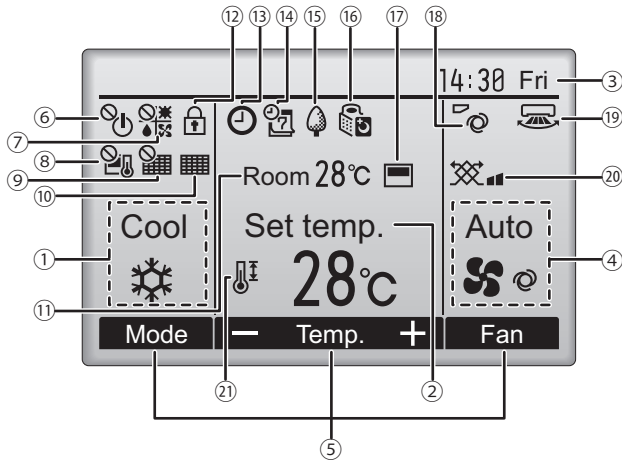
Main display: Press to change the fan speed.
Main menu: Press to go to the next page.

(2) Remote Controller Display

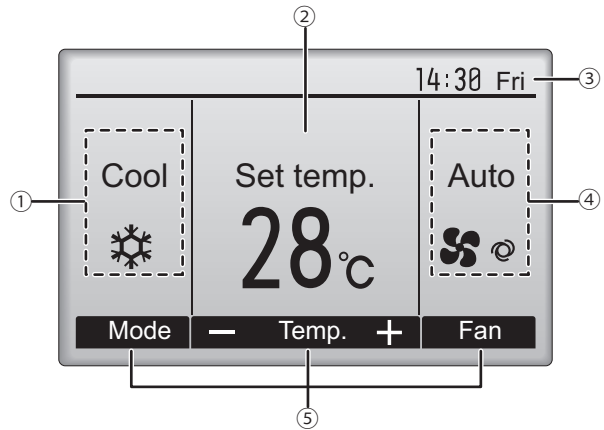
The main display can be displayed in two different modes: "Full" and "Basic."
 The factory setting is "Full." To switch to the "Basic" mode, change the setting on the "Main display" setting screen (Main menu > Initial setting > Main display).

Full mode

* All icons are displayed for explanation.



Basic mode



① Operation mode

Indoor unit operation mode appears here.

② Set temperature

Set temperature appears here.

③ Clock

Current time appears here.

④ Fan speed

Fan speed setting appears here.

⑤ Button function guide

Functions of the corresponding buttons appear here.

⑥

Appears when the ON/OFF operation is centrally controlled.

⑦

Appears when the operation mode is centrally controlled.

⑧

Appears when the set temperature is centrally controlled.

⑨

Appears when the filter reset function is centrally controlled.

⑩

Indicates when filter needs maintenance.

⑪ Room temperature

Current room temperature appears here.

⑫

Appears when the buttons are locked.

⑬

Appears when the On/Off timer, Night setback, or Auto-off timer function is enabled.

ⓧ appears when the timer is disabled by the centralized control system.

⑭

Appears when the Weekly timer is enabled.

⑮

Appears while the units are operated in the energy-save mode. (Will not appear on some models of indoor units)

⑯

Appears while the outdoor units are operated in the silent mode.

⑰

Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (⑰).

ⓧ appears when the thermistor on the indoor unit is activated to monitor the room temperature.

⑱

Indicates the vane setting.

⑲

Indicates the louver setting.

⑳

Indicates the ventilation setting.

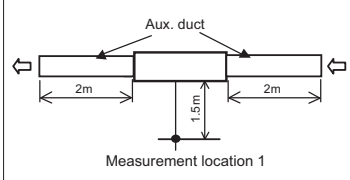
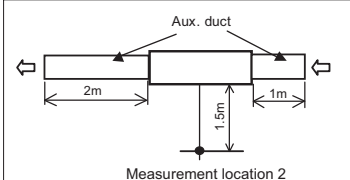
㉑

Appears when the set temperature range is restricted.

Most settings (except ON/OFF, mode, fan speed, temperature) can be made from the Main menu.

[1] Specifications

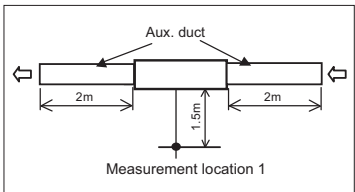
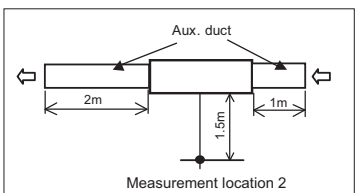
1. Specifications

Model			PEFY-W20VMA(L)-A	PEFY-W25VMA(L)-A	PEFY-W32VMA(L)-A	PEFY-W40VMA(L)-A
Power supply	Voltage	V	1-phase 220-230-240			
	Frequency	Hz	50			
Cooling capacity *1		kW	2.2	2.8	3.6	4.5
Heating capacity *1		kW	2.5	3.2	4.0	5.0
Power consumption *2	Cooling	kW	0.032(0.030)		0.044(0.042)	0.047(0.045)
	Heating	kW	0.030		0.042	0.045
Current consumption	Cooling	A	0.26		0.36	0.39
	Heating	A	0.26		0.36	0.39
External finish			Galvanized			
Dimensions	Height	mm	250			
	Width	mm	700		900	
	Depth	mm	732			
Net weight *2		kg	22(21)			26(25)
Heat exchanger			Cross fin(Aluminium fin and copper tube)			
Fan	Type		Sirocco fan x 1			Sirocco fan x 2
	Airflow rate (Low-Mid-High)	m ³ /min	6.0-7.5-8.5		7.5-9.0-10.5	10.0-12.0-14.0
	External static pressure	Pa	35/50/70/100/150			
Motor	Output	kW	0.085			0.121
Air filter			PP Honeycomb fabric (washable)			
Water pipe dimensions	Gas (Inlet connection)	mm I.D.	20			
	Liquid (Outlet connection)	mm I.D.	20			
Drain pipe dimensions		mm[in.]	O.D. 32[1-1/4]			
Operating noise(Low-Mid-High)	 <p>Measurement location 1</p> <p>* Measured in anechoic room.</p>	35Pa	dB (A)	18-22-24	20-24-27	20-25-28
		50Pa		20-23-26	21-25-30	21-28-30
		70Pa		19-24-27	22-27-31	24-28-32
		100Pa		21-27-30	24-29-32	26-30-34
		150Pa		25-31-35	28-32-36	29-34-38
	 <p>Measurement location 2</p> <p>* Measured in anechoic room.</p>	35Pa	21-25-27	23-27-30	23-28-31	
		50Pa	23-26-29	24-28-33	24-31-33	
		70Pa	22-27-30	25-30-34	27-31-35	
		100Pa	24-30-33	27-32-35	29-33-37	
		150Pa	28-34-38	31-35-39	32-37-41	

*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°FWB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°FWB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°FWB)

*2 Figures in the parentheses indicate drainpump-less Model (L).

[III Specifications]

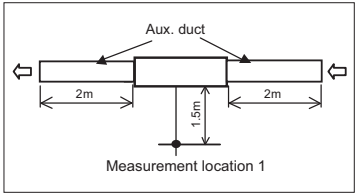
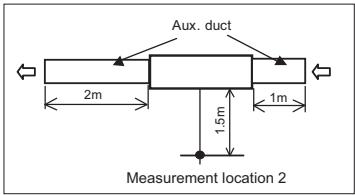
Model			PEFY-W50VMA(L)-A	PEFY-W63VMA(L)-A	PEFY-W71VMA(L)-A	PEFY-W80VMA(L)-A
Power supply	Voltage	V	1-phase 220-230-240			
	Frequency	Hz	50			
Cooling capacity *1		kW	5.6	7.1	8.0	9.0
Heating capacity *1		kW	6.3	8.0	9.0	10.0
Power consumption *2	Cooling	kW	0.093(0.091)			
	Heating	kW	0.091			
Current consumption	Cooling	A	0.68			
	Heating	A	0.68			
External finish			Galvanized			
Dimensions	Height	mm	250			
	Width	mm	1100			
	Depth	mm	732			
Net weight *2		kg	30(29)			
Heat exchanger			Cross fin(Aluminium fin and copper tube)			
Fan	Type		Sirocco fan x 2			
	Airflow rate (Low-Mid-High)	m ³ /min	14.5-18.0-21.0			
	External static pressure	Pa	40/50/70/100/150			
Motor	Output	kW	0.121			
Air filter			PP Honeycomb fabric (washable)			
Water pipe dimensions	Gas (Inlet connection)	mm I.D.	20	30		
	Liquid (Outlet connection)	mm I.D.	20	30		
Drain pipe dimensions		mm[in.]	O.D. 32[1-1/4]			
Operating noise(Low-Mid-High)		35Pa / 40Pa	dB (A)	23-28-32		
 <p>* Measured in anechoic room.</p>		50Pa		26-29-33		
		70Pa		26-31-35		
		100Pa		27-33-37		
		150Pa		30-36-40		
		35Pa / 40Pa		26-31-35		
 <p>* Measured in anechoic room.</p>		50Pa		29-32-36		
		70Pa		29-34-38		
		100Pa		30-36-40		
		150Pa		33-39-43		
		35Pa / 40Pa		26-31-35		

*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°FWB) Outdoor temperature: 35°CDB (95°FDB)

<Heating> Indoor temperature: 20°CDB (68°FWB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°FWB)

*2 Figures in the parentheses indicate drainpump-less Model (L).

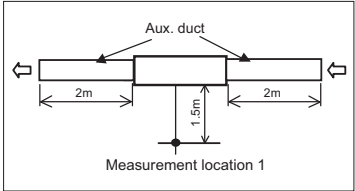
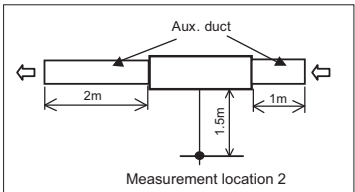
[III Specifications]

Model			PEFY-W100VMA(L)-A	PEFY-W125VMA(L)-A	
Power supply	Voltage	V	1-phase 220-230-240		
	Frequency	Hz	50		
Cooling capacity *1		kW	11.2	14.0	
Heating capacity *1		kW	12.5	16.0	
Power consumption *2	Cooling	kW	0.142(0.140)	0.199(0.197)	
	Heating	kW	0.140	0.197	
Current consumption	Cooling	A	1.01	1.29	
	Heating	A	1.01	1.29	
External finish			Galvanized		
Dimensions	Height	mm	250		
	Width	mm	1400		
	Depth	mm	732		
Net weight *2		kg	37(36)	38(37)	
Heat exchanger			Cross fin(Aluminium fin and copper tube)		
Fan	Type		Sirocco fan x 3		
	Airflow rate (Low-Mid-High)	m ³ /min	23.0-28.0-32.0	28.0-34.0-37.0	
	External static pressure	Pa	40/50/70/100/150		
Motor	Output	kW	0.300		
Air filter			PP Honeycomb fabric (washable)		
Water pipe dimensions	Gas (Inlet connection)	mm I.D.	30		
	Liquid (Outlet connection)	mm I.D.	30		
Drain pipe dimensions		mm[in.]	O.D. 32[1-1/4]		
Operating noise(Low-Mid-High)		40Pa	dB (A)	27-32-35	30-34-36
 <p>Measurement location 1</p> <p>* Measured in anechoic room.</p>		50Pa		28-33-36	31-35-37
		70Pa		30-35-38	31-36-38
		100Pa		32-37-40	32-37-39
		150Pa		34-40-43	35-40-42
		40Pa		30-35-38	33-37-39
 <p>Measurement location 2</p> <p>* Measured in anechoic room.</p>		50Pa		31-36-39	34-38-40
		70Pa		33-38-41	34-39-41
		100Pa		35-40-43	35-40-42
		150Pa		37-43-46	38-43-45

*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°F WB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°F WB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°F WB)

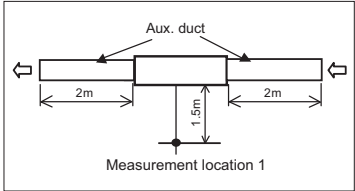
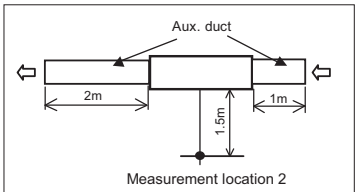
*2 Figures in the parentheses indicate drainpump-less Model (L).

[III Specifications]

Model			PEFY-W20VMA2-A	PEFY-W25VMA2-A
Power supply	Voltage	V	1-phase 220-230-240	
	Frequency	Hz	50	
Cooling capacity *1		kW	2.2	2.8
Heating capacity *1		kW	2.5	3.2
Power consumption	Cooling	kW	0.093	
	Heating	kW	0.091	
Current consumption	Cooling	kW	0.68	
	Heating	kW	0.68	
External finish			Galvanized	
Dimensions	Height	mm	250	
	Width	mm	1100	
	Depth	mm	732	
Net weight		kg	30	
Heat exchanger			Cross fin (Aluminium fin and copper tube)	
Fan	Type		Sirocco fan x 2	
	Airflow rate (Low-Mid-High)	m ³ /min	14.5-18.0-21.0	
	External static pressure	Pa	40/50/70/100/150	
Motor	Output	kW	0.121	
Air filter			PP Honeycomb fabric (washable)	
Water pipe dimensions	Inlet	mm I.D.	20	
	Outlet	mm I.D.	20	
Drain pipe dimensions		mm [in.]	O.D. 32[1-1/4]	
Operating noise (Low-Mid-High)  * Measured in anechoic room.  * Measured in anechoic room.	35Pa	dB (A)	23-28-32	
	50Pa		26-29-33	
	70Pa		26-31-35	
	100Pa		27-33-37	
	150Pa		30-36-40	
	35Pa		26-31-35	
	50Pa		29-32-36	
	70Pa		29-34-38	
	100Pa		30-36-40	
	150Pa		33-39-43	

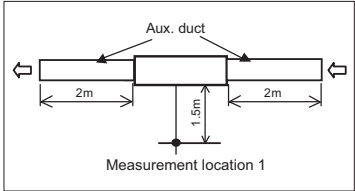
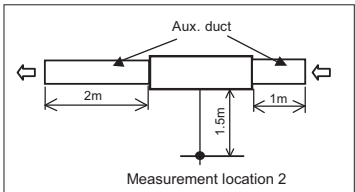
*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°FWB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°FWB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°FWB)

[III Specifications]

Model			PEFY-W32VMA2-A	PEFY-W40VMA2-A	PEFY-W50VMA2-A
Power supply	Voltage	V	1-phase 220-230-240		
	Frequency	Hz	50		
Cooling capacity *1		kW	3.6	4.5	5.6
Heating capacity *1		kW	4.0	5.0	6.3
Power consumption	Cooling	kW	0.208		
	Heating	kW	0.206		
Current consumption	Cooling	kW	1.40		
	Heating	kW	1.40		
External finish			Galvanized		
Dimensions	Height	mm	250		
	Width	mm	1100	1600	
	Depth	mm	732		
Net weight		kg	30	42	
Heat exchanger			Cross fin (Aluminium fin and copper tube)		
Fan	Type		Sirocco fan x 2		Sirocco fan x 3
	Airflow rate (Low-Mid-High)	m ³ /min	14.5-18.0-21.0		29.5-35.5-40.0
	External static pressure	Pa	40/50/70/100/150		
Motor	Output	kW	0.121	0.300	
Air filter			PP Honeycomb fabric (washable)		
Water pipe dimensions	Inlet	mm I.D.	20		
	Outlet	mm I.D.	20		
Drain pipe dimensions		mm [in.]	O.D. 32[1-1/4]		
Operating noise (Low-Mid-High)		35Pa	dB (A)	30-34-36	
 <p>* Measured in anechoic room.</p>		50Pa		30-34-37	
		70Pa		31-35-37	
		100Pa		32-36-39	
		150Pa		34-38-42	
		 <p>* Measured in anechoic room.</p>		35Pa	33-37-39
50Pa	33-37-40				
70Pa	34-38-40				
100Pa	35-39-42				
150Pa	37-41-45				

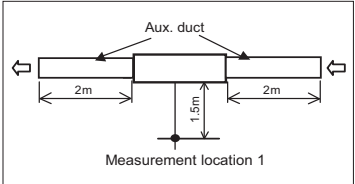
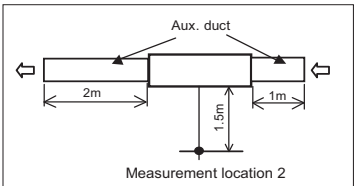
*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°FWB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°FWB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°FWB)

[III Specifications]

Model			PEFY-W63VMA2-A	PEFY-W71VMA2-A	PEFY-W80VMA2-A
Power supply	Voltage	V	1-phase 220-230-240		
	Frequency	Hz	50		
Cooling capacity *1		kW	7.1	8.0	9.0
Heating capacity *1		kW	8.0	9.0	10.0
Power consumption	Cooling	kW	0.208		
	Heating	kW	0.206		
Current consumption	Cooling	kW	1.40		
	Heating	kW	1.40		
External finish			Galvanized		
Dimensions	Height	mm	250		
	Width	mm	1600		
	Depth	mm	732		
Net weight		kg	42		
Heat exchanger			Cross fin (Aluminium fin and copper tube)		
Fan	Type		Sirocco fan x 3		
	Airflow rate (Low-Mid-High)	m ³ /min	29.5-35.5-40.0		
	External static pressure	Pa	40/50/70/100/150		
Motor	Output	kW	0.300		
Air filter			PP Honeycomb fabric (washable)		
Water pipe dimensions	Inlet	mm I.D.	30		
	Outlet	mm I.D.	30		
Drain pipe dimensions		mm [in.]	O.D. 32[1-1/4]		
Operating noise (Low-Mid-High)		35Pa	dB (A)	30-34-36	
 <p>Measurement location 1</p> <p>* Measured in anechoic room.</p>		50Pa		30-34-37	
		70Pa		31-35-37	
		100Pa		32-36-39	
		150Pa		34-38-42	
		 <p>Measurement location 2</p> <p>* Measured in anechoic room.</p>		35Pa	33-37-39
50Pa	33-37-40				
70Pa	34-38-40				
100Pa	35-39-42				
150Pa	37-41-45				

*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°F WB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°F WB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°F WB)

[III Specifications]

Model			PEFY-W100VMA2-A	PEFY-W125VMA2-A
Power supply	Voltage	V	1-phase 220-230-240	
	Frequency	Hz	50	
Cooling capacity *1		kW	11.2	14.0
Heating capacity *1		kW	12.5	16.0
Power consumption	Cooling	kW	0.208	
	Heating	kW	0.206	
Current consumption	Cooling	kW	1.40	
	Heating	kW	1.40	
External finish			Galvanized	
Dimensions	Height	mm	250	
	Width	mm	1600	
	Depth	mm	732	
Net weight		kg	42	
Heat exchanger			Cross fin (Aluminium fin and copper tube)	
Fan	Type		Sirocco fan x 3	
	Airflow rate (Low-Mid-High)	m ³ /min	29.5-35.5-40.0	
	External static pressure	Pa	40/50/70/100/150	
Motor	Output	kW	0.300	
Air filter			PP Honeycomb fabric (washable)	
Water pipe dimensions	Inlet	mm I.D.	30	
	Outlet	mm I.D.	30	
Drain pipe dimensions		mm [in.]	O.D. 32[1-1/4]	
Operating noise (Low-Mid-High)		35Pa	dB (A)	30-34-36
 <p>Measurement location 1</p> <p>* Measured in anechoic room.</p>		50Pa		30-34-37
		70Pa		31-35-37
		100Pa		32-36-39
		150Pa		34-38-42
		35Pa		33-37-39
 <p>Measurement location 2</p> <p>* Measured in anechoic room.</p>		50Pa		33-37-40
		70Pa		34-38-40
		100Pa		35-39-42
		150Pa		37-41-45

*1 <Cooling> Indoor temperature: 27°CDB/19°CWB (81°FDB/66°FWB) Outdoor temperature: 35°CDB (95°FDB)
 <Heating> Indoor temperature: 20°CDB (68°FWB) Outdoor temperature: 7°CDB/6°CWB (45°FDB/43°FWB)

2. Electrical component specifications

Component	Sym- bol	PEFY-W20/25/32VMA(L)-A
Room temperature thermistor	TH21	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water inlet pipe thermistor	TH22	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water outlet pipe thermistor	TH23	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Fuse	F01	AC250V 6.3A
	F02	DC400V 3A
Fan motor		8-pole, Output 85W ZWB278D51A
Pressure sensor (inner water)	PS1	<p> PS1 Pressure 0~1.0 MPa [145psi] Vout 0.5~4.5V 0.392V/0.098 MPa [14psi] Pressure [MPa] =0.25 x Vout [V] - 0.125 Pressure [psi] =(0.25 x Vout [V] - 0.125) x 145 1 GND (Black) 2 Vout (White) 3 Vcc (DC5V) (Red) </p>
Pressure sensor (outlet water)	PS2	
Flow control valve	FCV	12V DC stepping motor (0~770 pulse)
Power supply terminal block	TB2	(L, N, ⊕) 250V 20A
Transmission terminal block	TB5 TB15	(1, 2) 250V 15A, (M1, M2, S) 250V 20A
Drain pump	DP	PMD-12D 13ME INPUT 3W (DC 13V) 24L/Hr
Drain float switch	DS	Open/short detection Initial contact resistance 500 mΩ or less

Component	Sym- bol	PEFY-W40/50/63/71/80VMA(L)-A PEFY-W20/25/32/40VMA2-A
Room temperature thermistor	TH21	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water inlet pipe thermistor	TH22	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water outlet pipe thermistor	TH23	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Fuse	F01	AC250V 6.3A
	F02	DC400V 3A
Fan motor		8-pole, Output 121W ZWB278D54A
Pressure sensor (inner water)	PS1	<p> PS1 Pressure 0~1.0 MPa [145psi] Vout 0.5~4.5V 0.392V/0.098 MPa [14psi] Pressure [MPa] =0.25 x Vout [V] - 0.125 Pressure [psi] =(0.25 x Vout [V] - 0.125) x 145 1 GND (Black) 2 Vout (White) 3 Vcc (DC5V) (Red) </p>
Pressure sensor (outlet water)	PS2	
Flow control valve	FCV	12V DC stepping motor (0~770 pulse)
Power supply terminal block	TB2	(L, N, ⊕) 250V 20A
Transmission terminal block	TB5 TB15	(1, 2) 250V 15A, (M1, M2, S) 250V 20A
Drain pump	DP	PMD-12D 13ME INPUT 3W (DC 13V) 24L/Hr
Drain float switch	DS	Open/short detection Initial contact resistance 500 mΩ or less

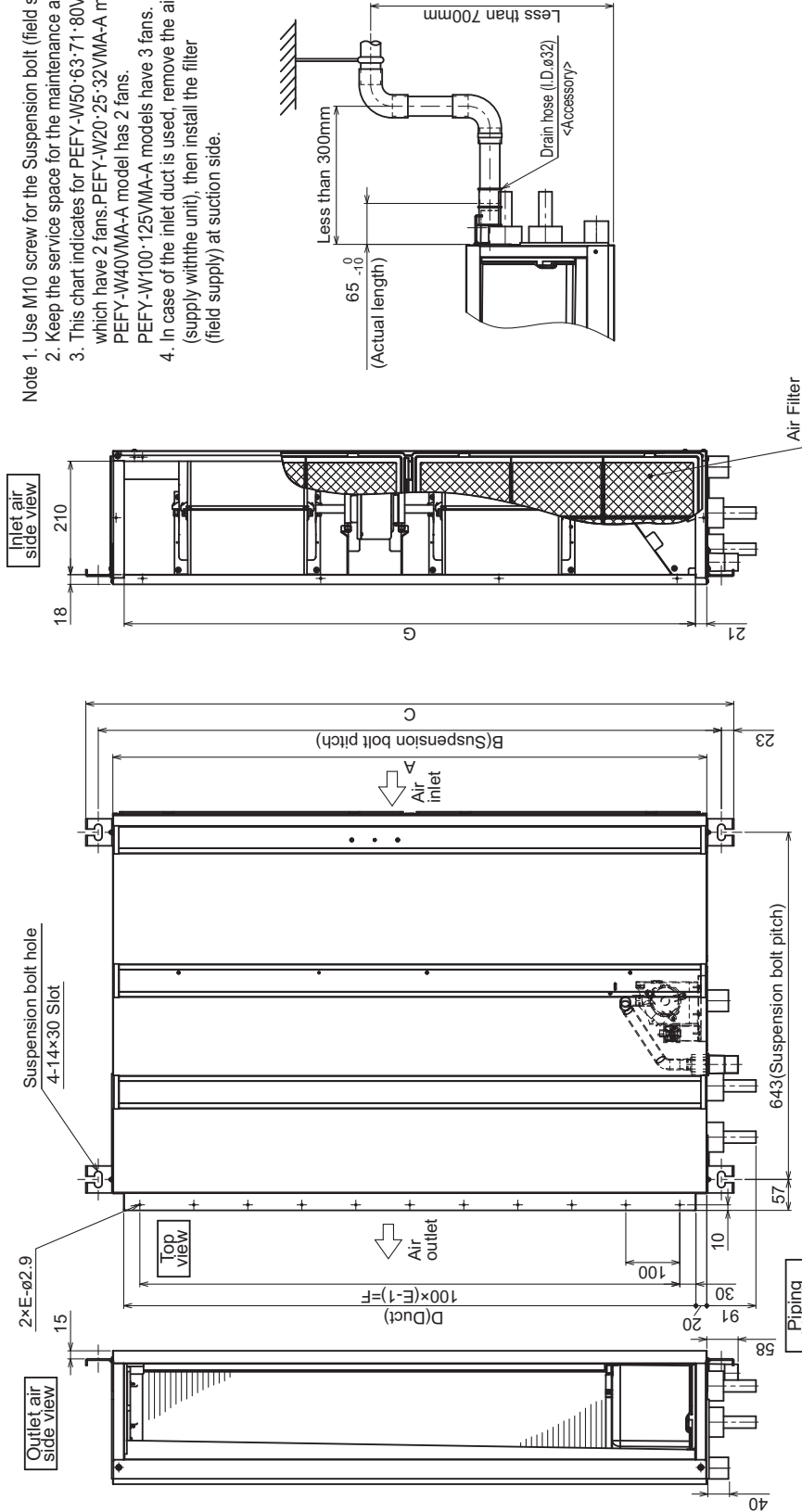
Component	Sym- bol	PEFY-W100/125VMA(L)-A PEFY-W50/63/71/80/100/125VMA2-A
Room temperature thermistor	TH21	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water inlet pipe thermistor	TH22	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Water outlet pipe thermistor	TH23	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ
Fuse	F01	AC250V 6.3A
	F02	DC400V 3A
Fan motor		8-pole, Output 300W ZWB378
Pressure sensor (inner water)	PS1	<p>PS1</p> <p>Pressure 0~1.0 MPa [145psi] Vout 0.5~4.5V 0.392V/0.098 MPa [14psi] Pressure [MPa] = 0.25 x Vout [V] - 0.125 Pressure [psi] = (0.25 x Vout [V] - 0.125) x 145 1 GND (Black) 2 Vout (White) 3 Vcc (DC5V) (Red)</p>
Pressure sensor (outlet water)	PS2	
Flow control valve	FCV	12V DC stepping motor (0~770 pulse)
Power supply terminal block	TB2	(L, N, ⊕) 250V 20A
Transmission terminal block	TB5 TB15	(1, 2) 250V 15A, (M1, M2, S) 250V 20A
Drain pump	DP	PMD-12D 13ME INPUT 3W (DC 13V) 24L/Hr
Drain float switch	DS	Open/short detection Initial contact resistance 500 mΩ or less

[1] Outlines and Dimensions

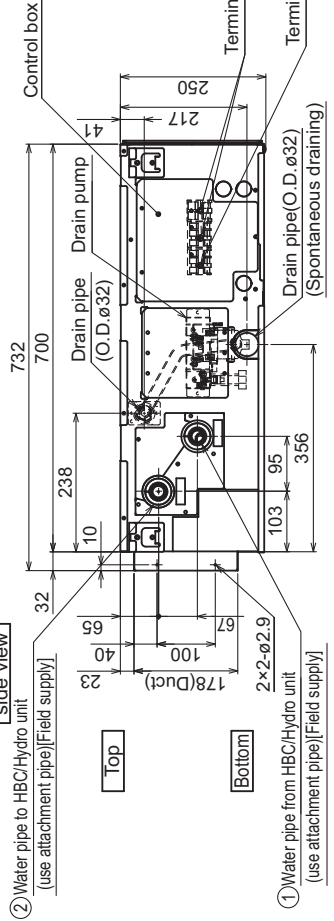
1. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMA-A

Unit: mm

- Note 1. Use M10 screw for the Suspension bolt (field supply).
- 2. Keep the service space for the maintenance at the bottom.
- 3. This chart indicates for PEFY-W50-63-71-80VMA-A models, which have 2 fans, PEFY-W20-25-32VMA-A models have 1 fan. PEFY-W40VMA-A model has 2 fans. PEFY-W100-125VMA-A models have 3 fans.
- 4. In case of the inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.



Model	A	B	C	D	E	F	G	① Water pipe from HBC/Hydro unit	② Water pipe to HBC/Hydro unit
PEFY-W20,25,32VMA-A	700	754	800	660	7	600	658	ø22	
PEFY-W40VMA-A	900	954	1000	860	9	800	858		
PEFY-W50,63,71,80VMA-A	1100	1154	1200	1060	11	1000	1058		
PEFY-W100,125VMA-A	1400	1454	1500	1360	14	1300	1358		



[Maintenance access space]
 Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, drain pump, heat exchanger, and control box in one of the following ways.

Select an installation site for the indoor unit so that its maintenance access space will not be obstructed by beams or other objects.

- (1) When a space of 300mm or more is available below the unit between the unit and the ceiling. (Fig.1)
 - Create access door 1 and 2 (450×450mm each) as shown in Fig.2.
 - (Access door 2 is not required if enough space is available below the unit for a maintenance worker to work in.)
- (2) When a space of less than 300mm is available below the unit between the unit and the ceiling. (At least 20mm of space should be left below the unit as shown in Fig.3.)
 - Create access door 1 diagonally below the control box and access door 3 below the unit as shown in Fig.4.
 - or
 - Create access door 4 below the control box and the unit as shown in Fig.5.

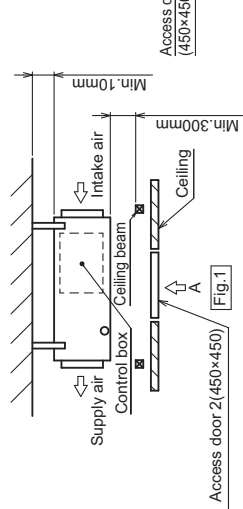


Fig.1

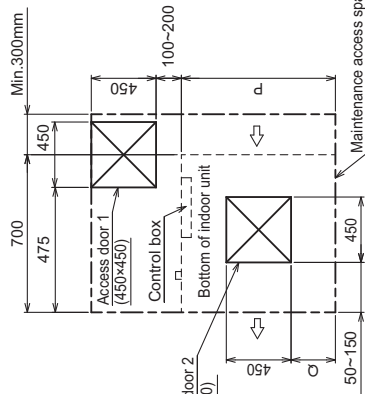


Fig.2 (Viewed from the direction of the arrow A)

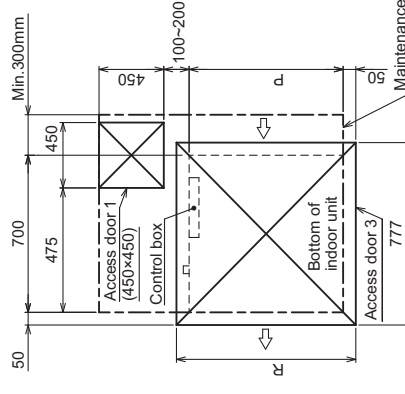


Fig.4 (Viewed from the direction of the arrow B)

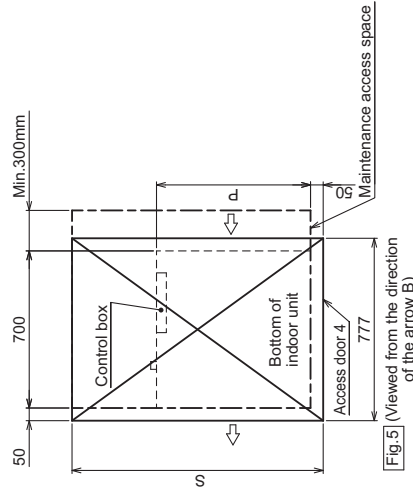


Fig.5 (Viewed from the direction of the arrow B)

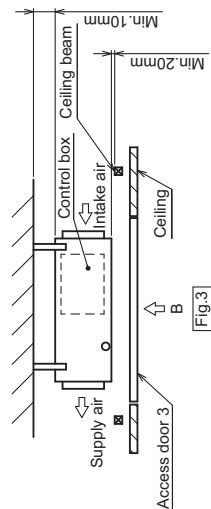
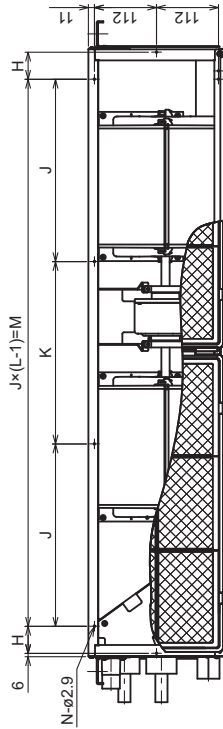


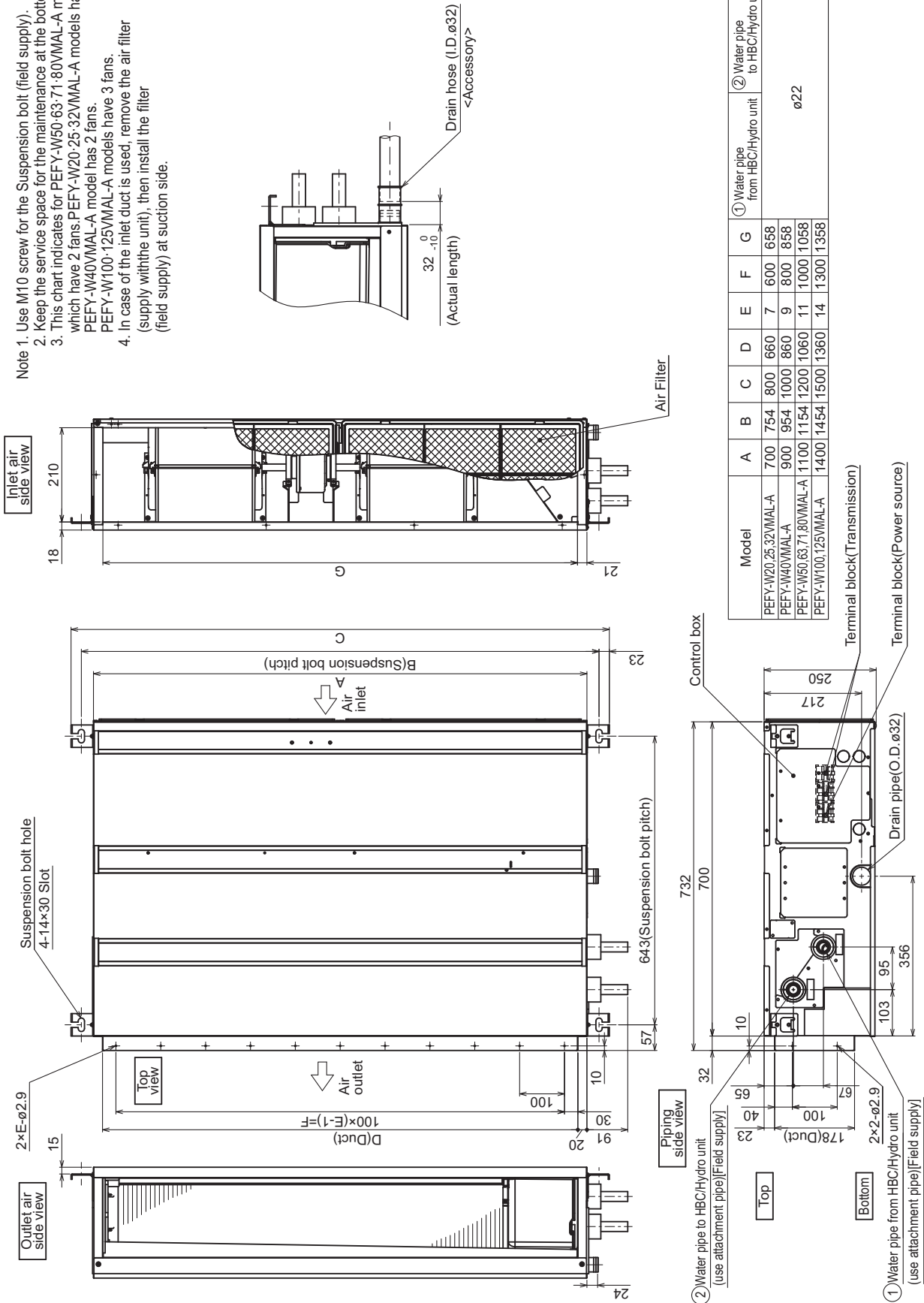
Fig.3

Model	H	J	K	L	M	N	P	Q	R	S
PEFY-W20.25.32VMA-A	44	150	300	/	/	10	700	50~150	800	1300
PEFY-W40VMA-A	54	260	/	4	780	10	900	150~250	1000	1500
PEFY-W50.63.71.80VMA-A	49	330	/	4	990	10	1100	250~350	1200	1700
PEFY-W100.125VMA-A	54	320	/	5	1280	12	1400	400~500	1500	2000

2. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMAL-A

Unit: mm

- Note 1. Use M10 screw for the Suspension bolt (field supply).
 2. Keep the service space for the maintenance at the bottom.
 3. This chart indicates for PEFY-W50-63-71-80VMAL-A models, which have 2 fans. PEFY-W20-25-32VMAL-A models have 1 fan. PEFY-W40VMAL-A model has 2 fans. PEFY-W100-125VMAL-A models have 3 fans.
 4. In case of the inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.



[Maintenance access space]

Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, heat exchanger, and control box in one of the following ways.

Select an installation site for the indoor unit so that its maintenance access space will not be obstructed by beams or other objects.

- (1) When a space of 300mm or more is available below the unit between the unit and the ceiling, (Fig.1)
 - Create access door 1 and 2 (450x450mm each) as shown in Fig.2.
 - (Access door 2 is not required if enough space is available below the unit for a maintenance worker to work in.)
- (2) When a space of less than 300mm is available below the unit between the unit and the ceiling. (At least 20mm of space should be left below the unit as shown in Fig.3.)
 - Create access door 1 diagonally below the control box and access door 3 below the unit as shown in Fig.4.
 - or
 - Create access door 4 below the control box and the unit as shown in Fig.5.

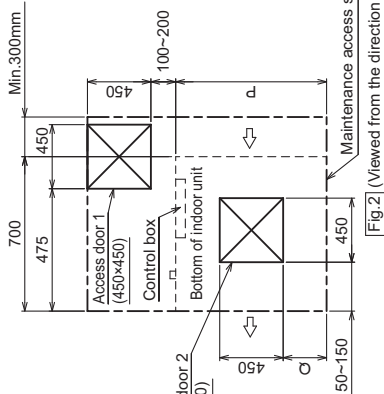
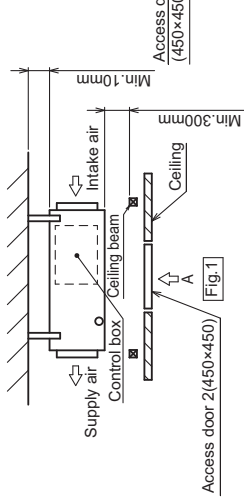


Fig.2 (Viewed from the direction of the arrow A)

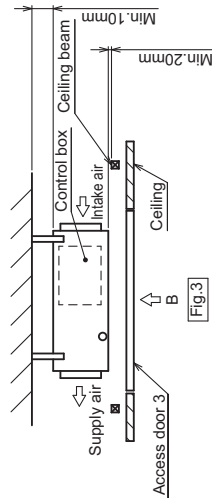


Fig.3

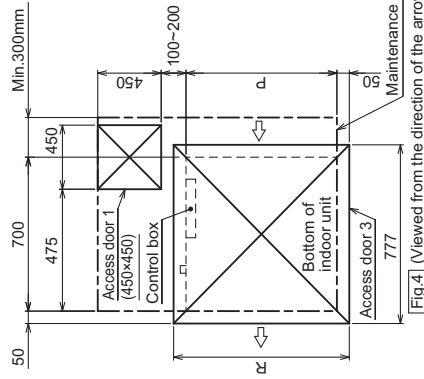


Fig.4 (Viewed from the direction of the arrow B)

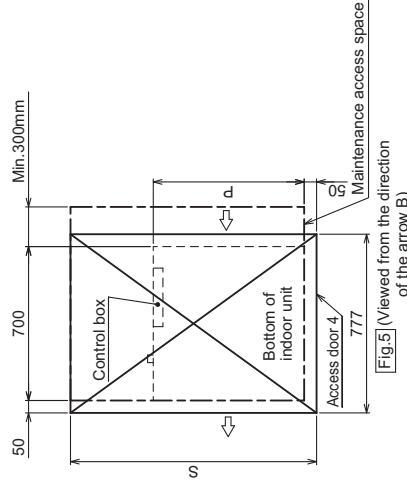
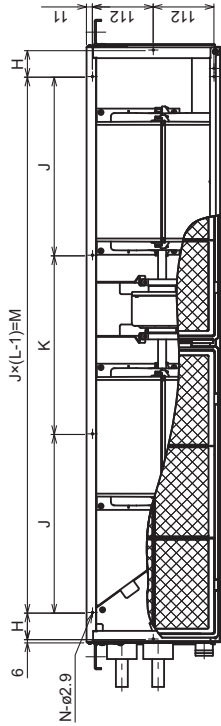


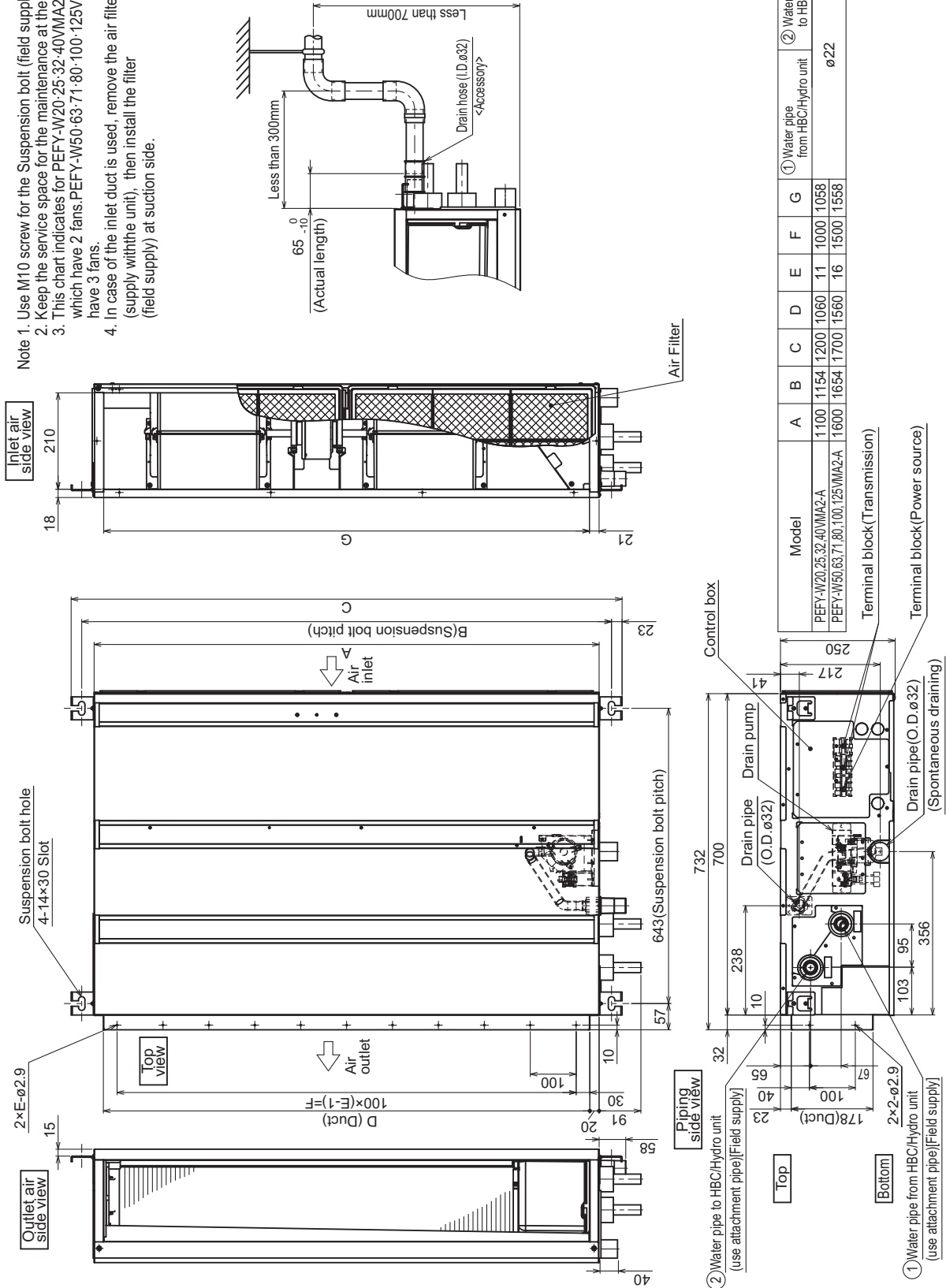
Fig.5 (Viewed from the direction of the arrow B)

Model	H	J	K	L	M	N	P	Q	R	S
PEFYW20.25.32VMAL-A	44	150	300	4	780	10	700	50~150	800	1300
PEFYW40VMAL-A	54	260	4	780	10	900	150~250	1000	1500	1500
PEFYW50.63.71.80VMAL-A	49	330	4	990	10	1100	250~350	1200	1700	1700
PEFYW100.125VMAL-A	54	320	5	1280	12	1400	400~500	1500	2000	2000

3. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMA2-A

Unit: mm

- Note 1. Use M10 screw for the Suspension bolt (field supply).
 2. Keep the service space for the maintenance at the bottom.
 3. This chart indicates for PEFY-W20/25-32-40VMA2-A models, which have 2 fans. PEFY-W50-63-71-80-100-125VMA2-A models have 3 fans.
 4. In case of the inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.

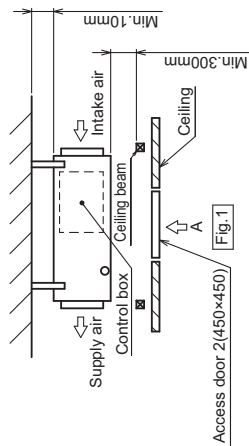


[Maintenance access space]

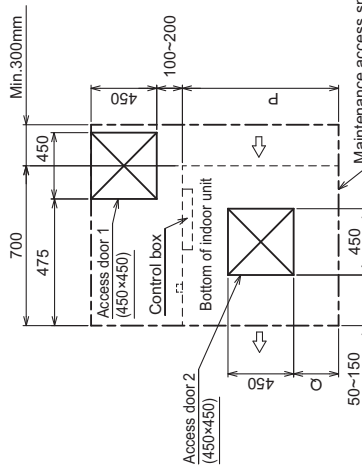
Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, drain pump, heat exchanger, and control box in one of the following ways.

Select an installation site for the indoor unit so that its maintenance access space will not be obstructed by beams or other objects.

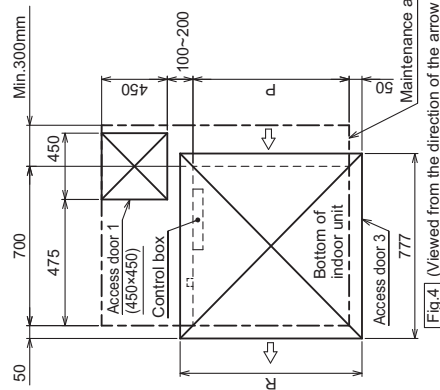
- (1) When a space of 300mm or more is available below the unit between the unit and the ceiling. (Fig.1)
 - Create access door 1 and 2 (450x450mm each) as shown in Fig.2.
 - (Access door 2 is not required if enough space is available below the unit for a maintenance worker to work in.)
- (2) When a space of less than 300mm is available below the unit between the unit and the ceiling. (At least 20mm of space should be left below the unit as shown in Fig.3.)
 - Create access door 1 diagonally below the control box and access door 3 below the unit as shown in Fig.4.
 - or
 - Create access door 4 below the control box and the unit as shown in Fig.5.



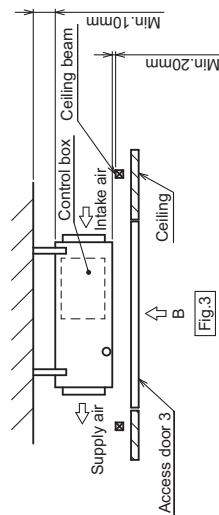
[Fig.1]



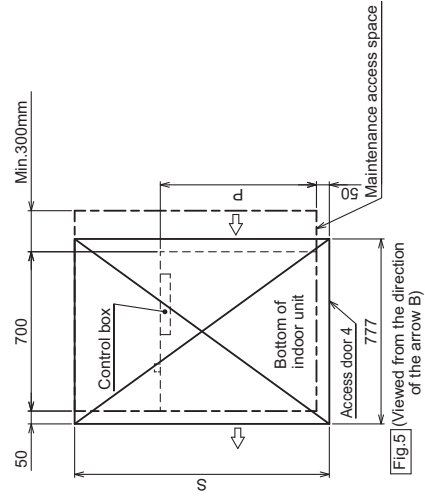
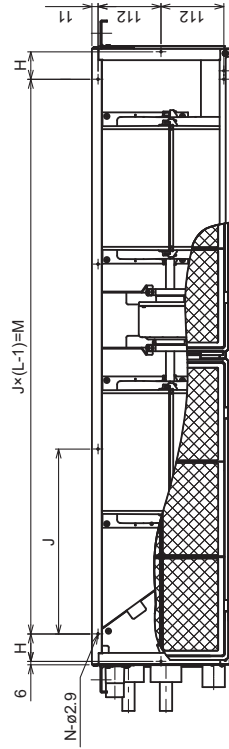
[Fig.2] (Viewed from the direction of the arrow A)



[Fig.4] (Viewed from the direction of the arrow B)



[Fig.3]

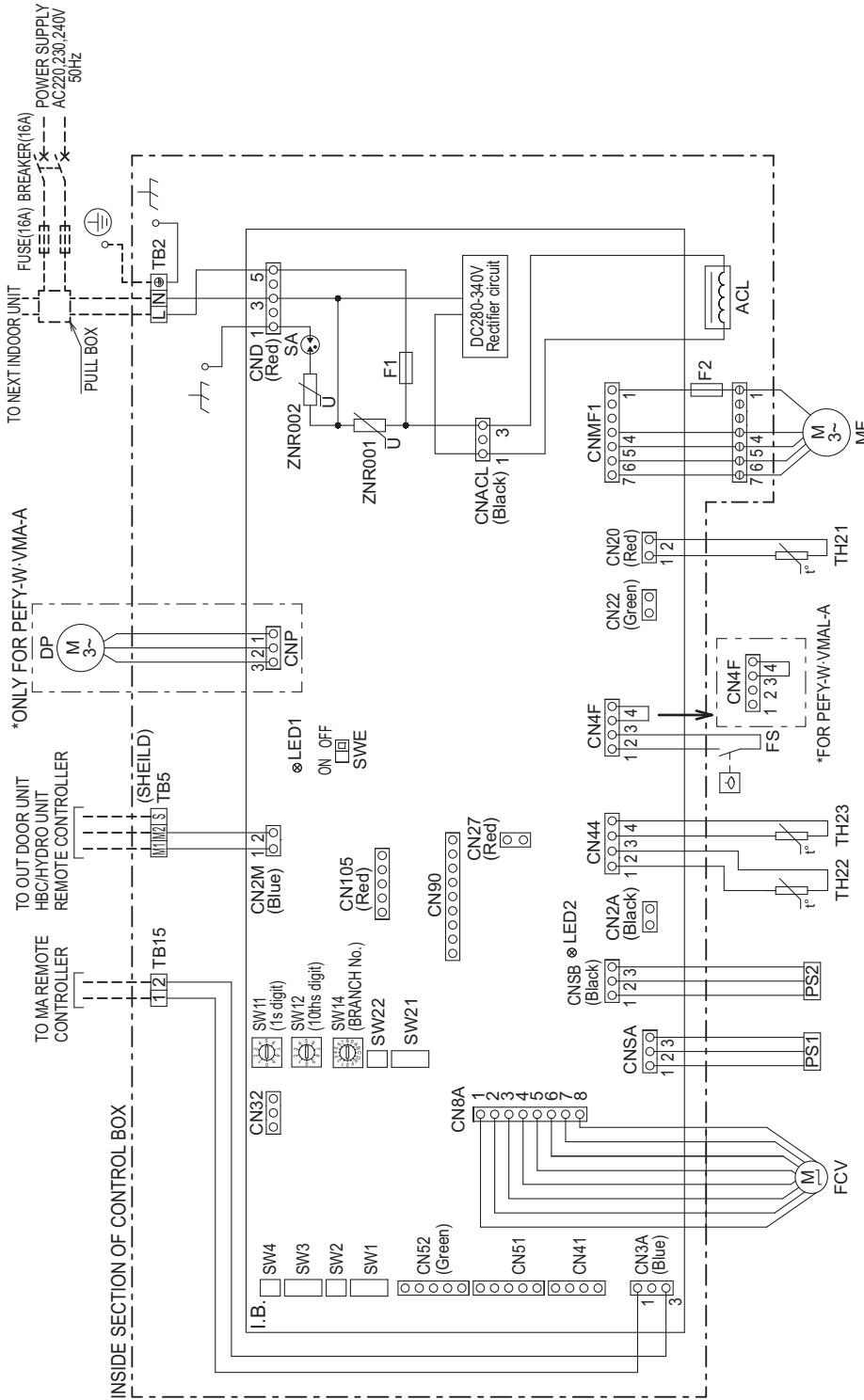


[Fig.5] (Viewed from the direction of the arrow B)

Model	H	J	L	M	N	P	Q	R	S
PEFY-W20,25,32,40VMA2-A	49	330	4	990	10	1100	250-350	1200	1700
PEFY-W50,63,71,80,100,125VMA2-A	54	370	5	1480	12	1600	500-600	1700	2200

[1] Wiring Diagram

1. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMA(L)-A



NOTE 1: Symbols used in wiring diagram are

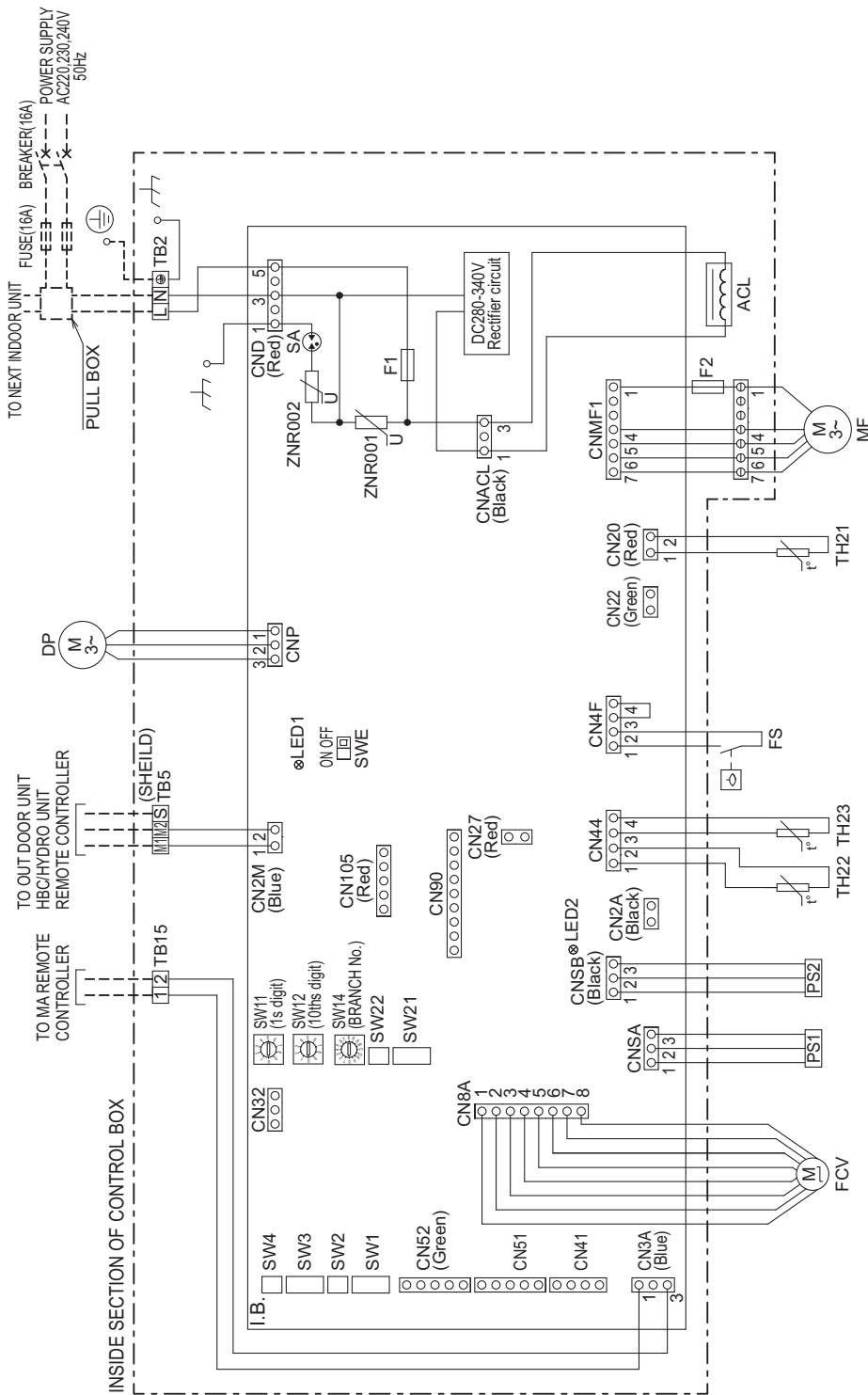
- ○ ○ ○ : Connector, □ : Terminal,
- (Heavy dotted line): Field wiring,

2. Have all electric work done by a licensed electrician according to the local regulations.
 3. Earth leakage circuit breaker should be set up on the wiring of the power supply.
 4. To perform a drainage test for the drain pump turn on the SWE on the control board while the indoor unit is being powered.
- *Be sure to turn off the SWE after completing a drainage test or test run.

SYMBOL EXPLANATION

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL	AC reactor(Power factor improvement)	I.B.	Indoor controller board	I.B.	Indoor controller board
DP	Drain Pump	SA	Arcster	SW1	Switch (for mode selection)
F2	Fuse DC400V 3A	F1	Fuse AC250V 6.3A	SW2	Switch (for capacity code)
FS	Float switch	ZNR001,002	Varistor	SW3	Switch (for mode selection)
MF	Fan Motor	CN2A	Connector (0-10V Analog input)	SW4	Switch (for model selection)
FCV	Flow control valve	CN22	Connector (Optional Thermistor)	SW11	Switch (1s digit address set)
PS1	Pressure sensor (inner water)	CN27	Connector (Damper)	SW12	Switch (10ths digit address set)
PS2	Pressure sensor (outlet water)	CN32	Connector (Remote switch)	SW14	Switch (BRANCH No.)
TB2	Power source terminal block	CN41	Connector (Remote control)	SW21	Switch (for static pressure selection)
TB5	Transmission terminal block	CN51	Connector (Centrally control)	SWE	Switch (Wireless pair No.)
TB15	Transmission terminal block	CN62	Connector (Remote indication)	LED1	LED(Power supply)
TH21	Thermistor (inlet air temp. detection)	CN90	Connector (Wireless)	LED2	LED(Remote controller supply)
TH22	Thermistor (piping temp.detection/inlet water)	CN105	Connector (IT terminal)		
TH23	Thermistor (piping temp.detection/outlet water)				

2. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMA2-A



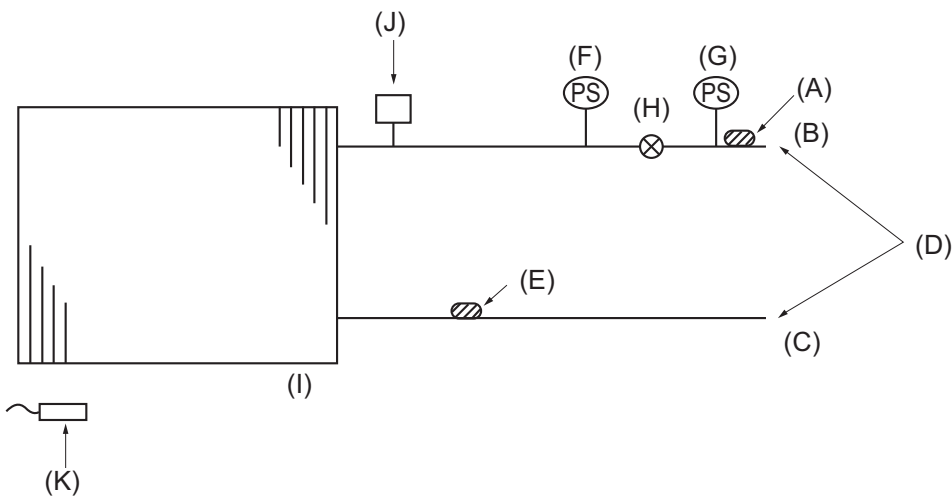
NOTE)1. Symbols used in wiring diagram are

- ○ ○ ○ : Terminal,
 - □ □ □ : Connector,
 - (Heavy dotted line): Field wiring,
2. Have all electric work done by a licensed electrician according to the local regulations.
3. Earth leakage circuit breaker should be set up on the wiring of the power supply.
4. To perform a drainage test for the drain pump turn on the SWE on the control board while the indoor unit is being powered.
*Be sure to turn off the SWE after completing a drainage test or test run.

SYMBOL EXPLANATION

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL	AC reactor(Power factor improvement)	I.B.	Indoor controller board	SW1	Switch (for mode selection)
DP	Drain Pump	SA	Arrester	SW2	Switch (for capacity code)
F2	Fuse DC400V 3A	F1	Fuse AC250V 6.3A	SW3	Switch (for mode selection)
FS	Floot switch	ZNR001,002	Relay	SW4	Switch (for modal selection)
MF	Fan Motor	CN22	Connector (0-10V Analog input)	SW11	Switch (1s digit address set)
FCV	Flow control valve	CN27	Connector (Damper)	SW12	Switch (10ths digit address set)
PS1	Pressure sensor (inner water)	CN32	Connector (Remote switch)	SW14	Switch (BRANCH No.)
PS2	Pressure sensor (outlet water)	CN41	Connector (HA terminal-A)	SW21	Switch (for static pressure selection)
TB2	Power source terminal block	CN44	Connector (Centrally control)	SW22	Switch (Wireless pair No.)
TB5	Transmission terminal block	CN51	Connector (Remote indication)	SWE	Connector (emergency operation)
TB15	Transmission terminal block	CN62	Connector (Wireless)	LED1	LED(Power supply)
TH21	Thermistor (inlet air temp. detection)	CN90	Connector (IT terminal)	LED2	LED(Remote controller supply)
TH22	Thermistor (piping temp.detection/inlet water)	CN105	Connector (IT terminal)		
TH23	Thermistor (piping temp.detection/outlet water)				

[1] Refrigerant system diagram



- (A) Water outlet thermistor TH23
- (B) Water outlet
- (C) Water inlet
- (D) Connections
- (E) Water inlet thermistor TH22
- (F) Pressure sensor (inner water) PS1
- (G) Pressure sensor (outlet water) PS2
- (H) Flow control valve FCV
- (I) Heat exchanger
- (J) Manual air purge valve
- (K) Room temperature thermistor TH21

Capacity	PEFY-W20, 25, 32, 40, 50VMA(L)(2)-A	PEFY-W63, 71, 80, 100, 125VMA(L)(2)-A
Water outlet	I.D. 20 [mm]	I.D. 30 [mm]
Water inlet	I.D. 20 [mm]	I.D. 30 [mm]

[1] Troubleshooting

1. Check methods

1. Component and check points

(1) Thermistor

- Room temperature thermistor (TH21)
- Water inlet thermistor (TH22)
- Water outlet thermistor (TH23)

Disconnect the connector and measure the resistance between terminals with a volt meter.
(Ambient temperature 10°C - 30°C)

Normal	Abnormal
4.3kΩ - 9.6kΩ	Open or short

(Refer to the thermistor characteristic graph below.)

1) Thermistor characteristic graph

Low-temperature thermistor

- Room temperature thermistor (TH21)
- Water inlet pipe thermistor (TH22)
- Water outlet thermistor (TH23)
- Drain sensor (DS)

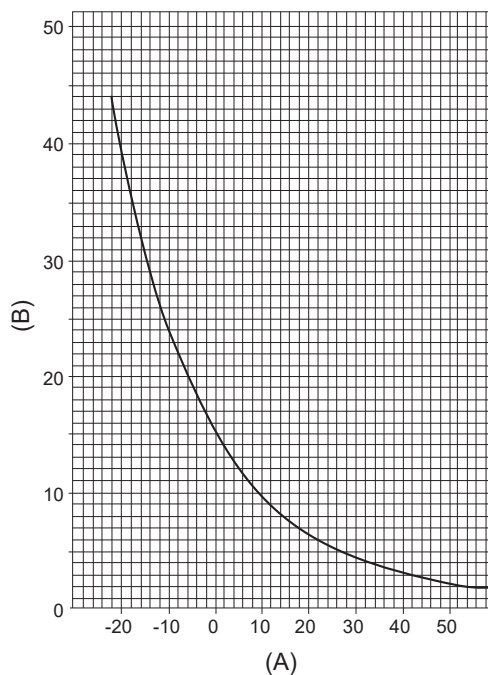
- Thermistor $R_0 = 15\text{ k}\Omega \pm 3\%$
- Multiplier of B = $3480\text{ k}\Omega \pm 2\%$

$$R_t = 15 \exp \left\{ 3480 \left(\frac{1}{273+t} - \frac{1}{273} \right) \right\}$$

- 0°C 15kΩ
- 10°C 9.6kΩ
- 20°C 6.3kΩ
- 25°C 5.2kΩ
- 30°C 4.3kΩ
- 40°C 3.0kΩ

(A) Temperature (°C)

(B) Resistance (kΩ)



(2) Fan motor (CNMF)

Refer to the page on "DC fan motor (fan motor/indoor control board)."

(3) Flow control valve

Disconnect the connector, and measure the resistance between terminals with a tester.
Refer to the next page for details.

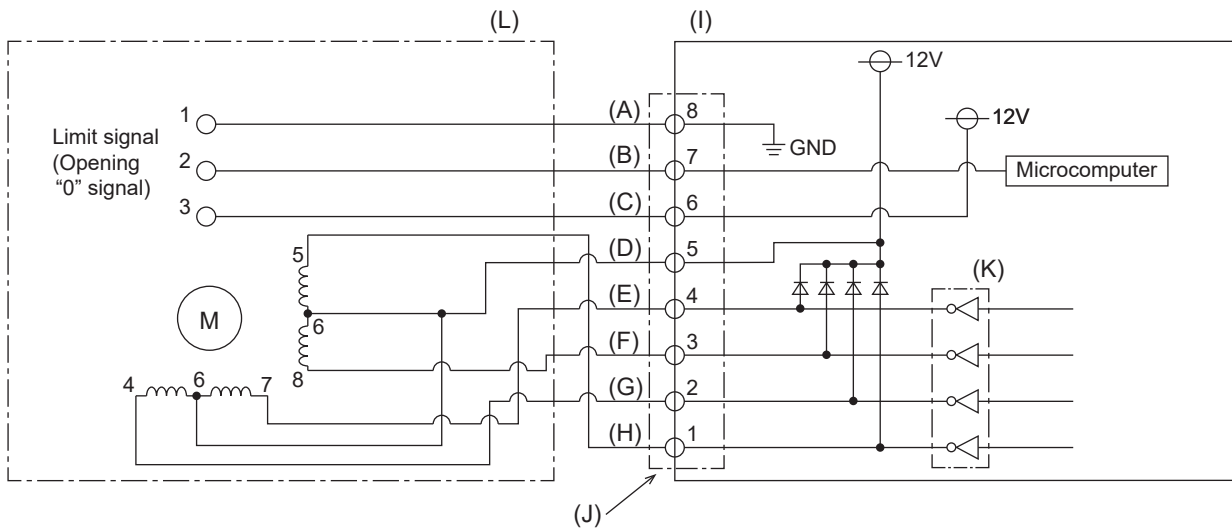
	Normal				Abnormal
	1-5 Purple-Brown	2-5 Orange-Brown	3-5 Blue-Brown	4-5 Green-Brown	
	55Ω / PHASE				Open or short

- | | |
|------------|------------|
| (A) Yellow | (E) Green |
| (B) White | (F) Blue |
| (C) Black | (G) Orange |
| (D) Brown | (H) Purple |

1) Summary of flow control valve (FCV) operation

- The FCV is operated by a stepping motor, which operates by receiving a pulse signal from the indoor control board.
- The FCV position changes in response to the pulse signal.

Indoor control board and FCV connection



- (A) Yellow
- (B) White
- (C) Black
- (D) Brown
- (E) Green
- (F) Blue
- (G) Orange
- (H) Purple
- (I) Control board
- (J) Connection (CN60)
- (K) Drive circuit
- (L) Flow control valve

Pulse signal output and valve operation

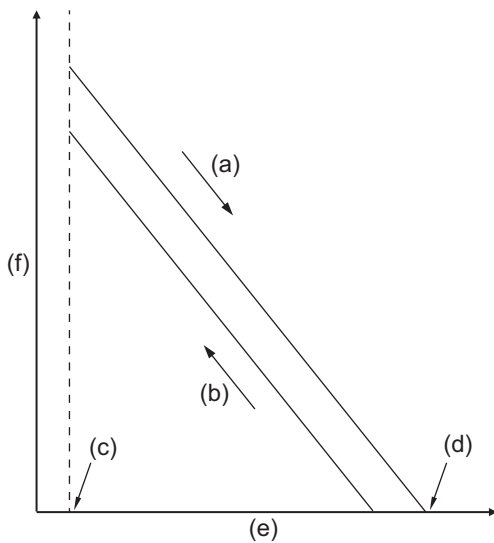
Output (phase) number	Output status			
	1	2	3	4
4	ON	ON	OFF	OFF
5	OFF	ON	ON	OFF
7	OFF	OFF	ON	ON
8	ON	OFF	OFF	ON

The output pulse changes in the following order:

When the valve closes 1 -> 2 -> 3 -> 4 -> 1

When the valve opens 4 -> 3 -> 2 -> 1 -> 4

2) FCV operation



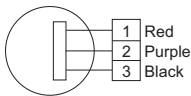
- (a) Close
- (b) Open
- (c) Fully open valve (85 pulses)
- (d) Fully close valve (770 pulses)
- (e) No. of pulses
- (f) Valve opening degree

(4) Pressure sensor

- Pressure sensor (inner water) PS1
- Pressure sensor (outlet water) PS2

- 1) Check that the pressure sensor is connected.
- 2) Check the pressure sensor wiring for breakage.

(5) Drain pump



1. Check if the drain float switch works properly.
2. Check if the drain pump works and drains water properly in cooling operation.
3. If no water drains, confirm that the check code 2502 will not be displayed 10 minutes after the operation starts.

Note: The drain pump for this model is driven by the internal DC motor of controller board, so it is not possible to measure the resistance between the terminals.

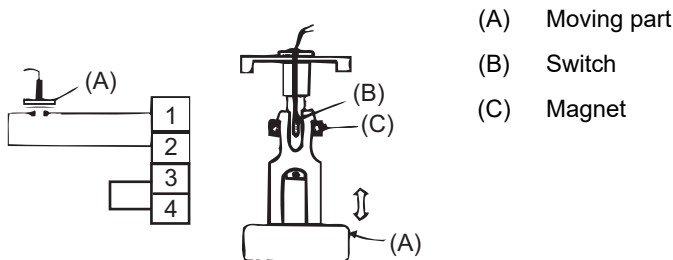
Normal

Red-Black: Input 13V DC → The fan starts to rotate.

Purple-Black: Abnormal (check code 2502) if it outputs 0-13 V square wave (5 pulses/rotation), and the number of rotation is not normal.

(6) Drain float switch (CN4F)

Disconnect the connector, and measure the resistance between terminals with a volt meter.



Position of the moving part	Normal	Abnormal
Up	Short	(any position but short)
Down	Open	(any position but open)

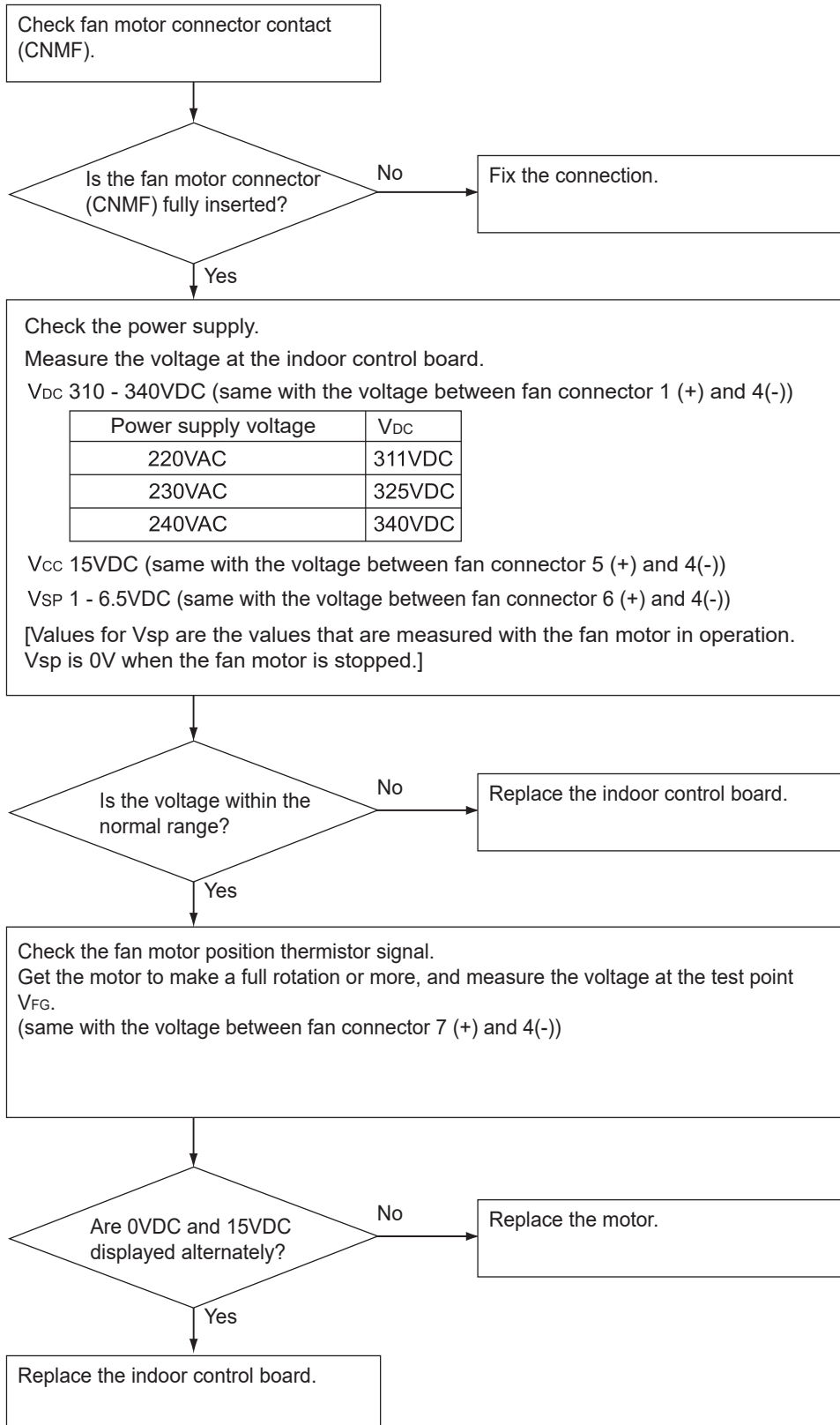
2. DC fan motor (fan motor/indoor control board)

1. CAUTION

- A high voltage is applied to the connector for connection to the fan motor (CNMF).
- Do not unplug the connector CNMF with the unit energized to avoid damage to the indoor control board and fan motor.

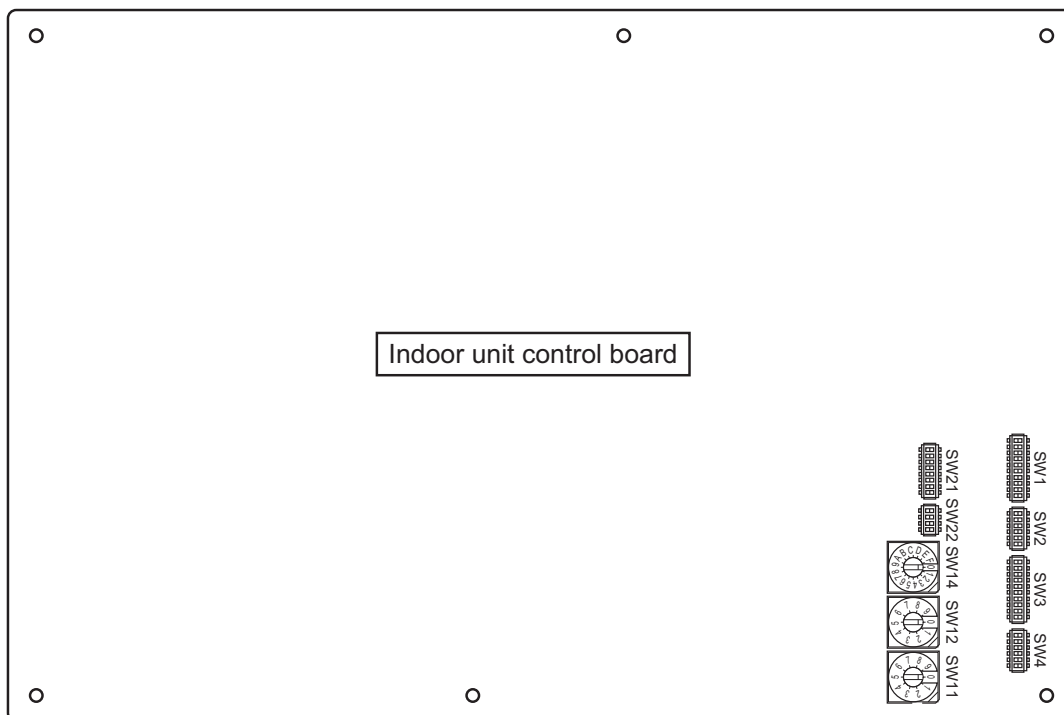
2. Troubleshooting

- Symptom: Indoor unit fan does not run.



3. Address switch setting

Make sure that power source is turning off.



1) In case using network remote controller, address is set by rotary switches.(SW11,SW12)

* It is not necessary setting address in case of using unit remote controller.

Indoor unit do not run without address setting in field.

2) Indoor unit address setting rule is different by each field work.

Refer to install manual of outdoor unit, operate the address setting.

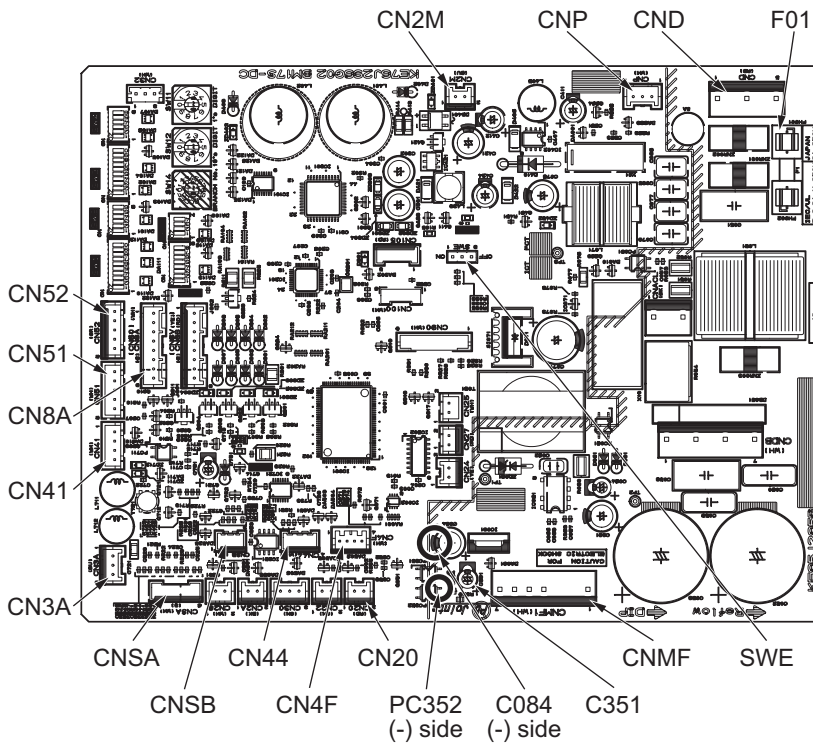
3) Setting the address is combination of SW11(1st digit address setting) and SW12(2nd digit address setting).

Address " 3 " setting is composed SW11 " 3 " and SW12 " 0 " .

Address " 25 " setting is composed SW11 " 5 " and SW12 " 2 " .

4. Voltage test points on the control board

1. PEFY-W20, 25, 32, 40, 50, 63, 71, 80, 100, 125VMA(L)(2)-A



- F01 Fuse (AC 250V 6.3A)
- CND Power supply voltage (220 - 240VAC)
- CN2M For M-NET transmission cable connection (24 - 30VDC)
- SWE Emergency operation
- CN32 Remote start/stop adapter
- CN3A For MA remote controller cable connection (10 - 13 VDC (Between 1 and 3.))
- CN52 Remote display
- CN51 Centralized control
- CN41 JAMA standard HA terminal A
- CN44 Thermistor (water inlet / water outlet temperature)
- CN4F Float switch
- CN20 Thermistor (Inlet temperature)
- CNMF Fan motor output
 - 1 - 4: 310 - 340 VDC
 - 5 - 4: 15 VDC
 - 6 - 4: 0 - 6.5 VDC
 - 7 - 4: Stop 0 or 15 VDC
 - Run 7.5 VDC
 - (0 - 15 pulse)
- CNP Drain-up mechanism output (200VAC)
- CNSA Pressure sensor (inner water)
- CNSB Pressure sensor (outlet water)
- CN8A Flow control valve (FCV)
- (*1)
 - V_{FG} Voltage on the (-) side of PC51 and C25 (Same with the voltage between 7 (+) and 4 (-) of CNMF)
 - V_{CC} Voltage between the C25 pins 15 VDC (Same with the voltage between 5 (+) and 4 (-) of CNMF)
 - V_{sp} Voltage between the C53 pins 0VDC (with the fan stopped) 1 - 6.5VDC (with the fan in operation) (Same with the voltage between 6 (+) and 4 (-) of CNMF)

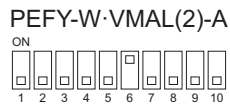
5. Dipswitch setting (Factory setting)

1. Function setting

(1) SW1

Switch position	Function	Switch setting	
		ON	OFF
1	Active Thermistor (Intake air thermistor)	Built-in thermistor on the remote controller	Indoor unit
2	Filter clogging detection	Available	Unavailable
3	Filter life	2500 hr	100 hr
4	Outdoor air intake	Enabled	Disabled
5	Remote display	Thermo-ON signal	Fan output
6	Humidifier operation	During heating mode	During heating operation
7	Fan speed	Low	Very low
8	Fan speed at heating Thermo-OFF	Preset fan speed	Follows the setting of SW1-7
9	Auto restart after power failure	Enabled	Disabled
10	Power start/stop	Enabled	Disabled

Factory setting

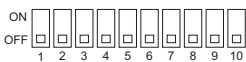


(2) SW3

Switch position	Function	Switch setting	
		ON	OFF
1	Unit type	Cooling only	Heat pump
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	Heating 4-deg up	Disabled	Enabled
9	-	-	-
10	-	-	-

Dipswitch settings must be made while the unit is stopped.

Factory setting



The figure at left shows that the switches 1 through 5 are set to ON and 6 through 10 are set to OFF.

2. Capacity code setting

(1) SW2

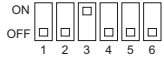
1) Indoor control board

Dipswitch settings must be made while the unit is stopped.

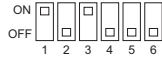
Factory setting

The switches are set to correspond to the unit capacity.

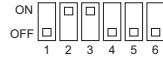
PEFY-W20VMA(L)(2)-A



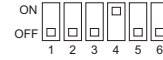
PEFY-W25VMA(L)(2)-A



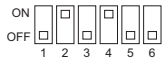
PEFY-W32VMA(L)(2)-A



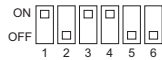
PEFY-W40VMA(L)(2)-A



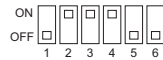
PEFY-W50VMA(L)(2)-A



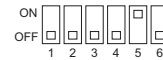
PEFY-W63VMA(L)(2)-A



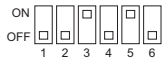
PEFY-W71VMA(L)(2)-A



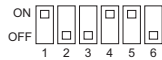
PEFY-W80VMA(L)(2)-A



PEFY-W100VMA(L)(2)-A



PEFY-W125VMA(L)(2)-A



3. Model setting

(1) SW4

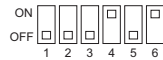
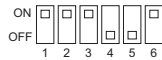
1) Indoor control board

Dipswitch settings must be made while the unit is stopped.

Factory setting

PEFY-W20-125VMA(L)-A

PEFY-W20-125VMA2-A



Note:

Changes made to the dipswitches SW1, SW2, and SW3 will become effective when the unit comes to a stop (remote controller off). There is no need to power cycle the unit.

4. Power voltage setting

(1) SW21-6

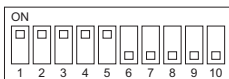
Dipswitch settings must be operated with the main power turned OFF.

Factory setting

Please see the WIRING LABEL on the control box.

Set SW5 to 240V side when the power supply is 240 volts.

When the power supply is 220 and 230 volts, set SW5 to 220V side.



The figure at left shows that the switches 1 through 5 are set to ON and 6 through 10 are set to OFF.

5. External static pressure

Five levels of external static pressure are available for selection.

Set the setting either by using the switches on the control board (SW21-1, SW21-2, and SW21-5) or from the function selection screen on the remote controller.

Note:

•When the static pressure setting was set from the remote controller, the actual setting and the switch setting on the control board may not match because the latest setting from the remote controller overrides the previous setting. To check the latest static pressure setting, check it on the remote controller, not on the switch.

•If the static pressure setting for the duct is lower than that for the unit, the fan of the unit may repeat start/stop, and the outdoor unit may remain in a stopped state. Match the static pressure settings for the unit to that for the duct.

To set the external static pressure with the switches on the control board

External static pressure	SW21-1	SW21-2	SW21-5	Initial setting
W20–W63VMA/W20–W40VMA2: 35 Pa W71–W125VMA/W50–W125VMA2: 40 Pa	OFF	OFF	OFF	○ W20–W100VMA W20–W40VMA2
50 Pa	ON	OFF	OFF	○ W125VMA W50–W125VMA2
70 Pa	OFF	ON	ON	
100 Pa	OFF	OFF	ON	
150 Pa	ON	OFF	ON	

To set the external static pressure from the function selection screen on the remote controller (PAR-33MAA, PAR-40MAA)

Follow the instructions below and the instructions detailed in the remote controller manual for how to set the switches.

1. Set the function setting No. 32 (Switch setting/Function selection) to “2”.
2. Set the function setting No. 8 and No. 10 to appropriate values, according to the external static pressure.

Selection	Function setting No.	Initial setting	Current setting
	No. 32		
Switch setting	1	○	
Function selection	2		

External static pressure	Function setting No.		Initial setting	Current setting
	No. 8	No. 10		
W20–W63VMA/W20–W40VMA2: 35 Pa W71–W125VMA/W50–W125VMA2: 40 Pa	2	1	○ W20–W100VMA W20–W40VMA2	
50 Pa	3	1	○ W125VMA W50–W125VMA2	
70 Pa	1	2		
100 Pa	2	2		
150 Pa	3	2		

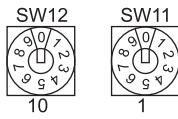
[Important]
Be sure to write down the settings for all functions in the “Current setting” row if any of the initial settings has been changed.

6. 1s and 10ths digits

(1) SW11, SW12 (Rotary switch)

The use of a network remote controller (PAR-F27MEA) requires address setting.
Address settings must be made while the unit is stopped.

Factory setting



7. Connection No. setting

(1) SW14 (Rotary switch)

This switch is used when the unit connected to an R2 series of outdoor unit.

Factory setting



Note:

Changes to the dipswitches SW11, SW12, SW14, and SW15 must be made while the unit is stopped and the remote controller is OFF.

[1] Disassembly Procedure

1. Control box

Exercise caution when removing heavy parts.

1. Removing the control box cover
 - (1) Remove the three fixing screws on the cover (A) to remove it.

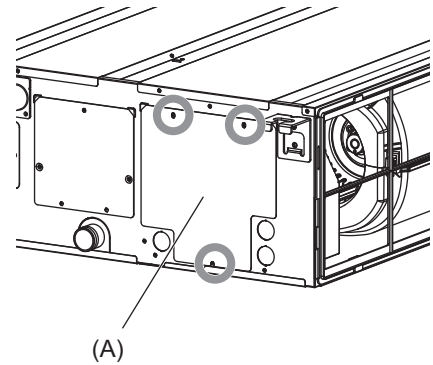


Fig.1

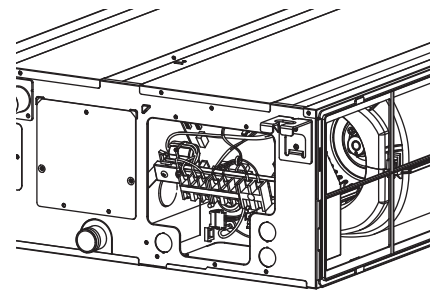


Fig.2

2. Thermistor (Intake air)

Exercise caution when removing heavy parts.

1. Remove the control box cover according to the procedure in **section 1**.
2. Remove the thermistor.
 - (1) Pull out the thermistor holder (B) and thermistor (C) on the control box.

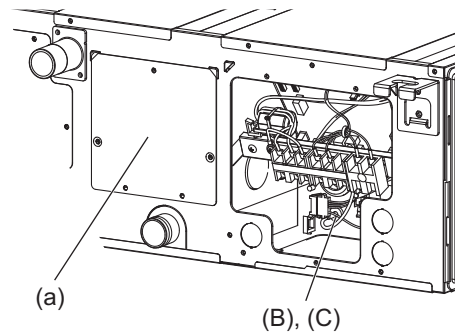


Fig.3

3. Drain pump

Exercise caution when removing heavy parts.

1. Remove the control box cover according to the procedure in **section 1**.
2. Remove the drain pump.
 - (1) Remove the drain pump from connector (E) in control box.
 - (2) Remove the cover (a) and the drain pump.

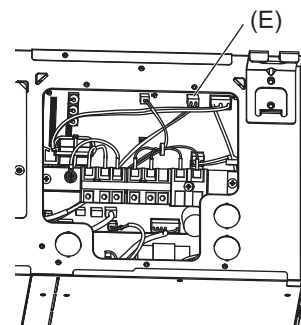


Fig.4

4. Drainpan

Exercise caution when removing heavy parts.

1. Removing the filter and the bottom plate
 - (1) Push down the tab on the filter, and pull out the filter in the direction of the arrow 1.
 - (2) Remove the fixing screws on the bottom plate (D), (E) to remove it.

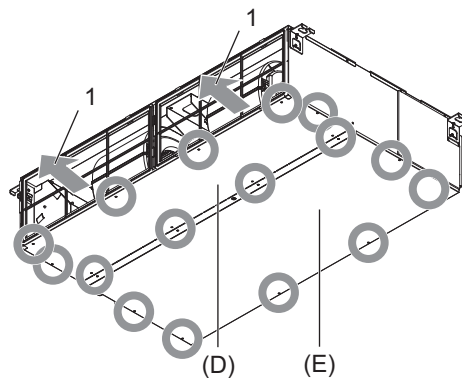


Fig.5

2. Removing the drainpan
 - (1) Pull out the drain pan in the direction of the arrow 2.

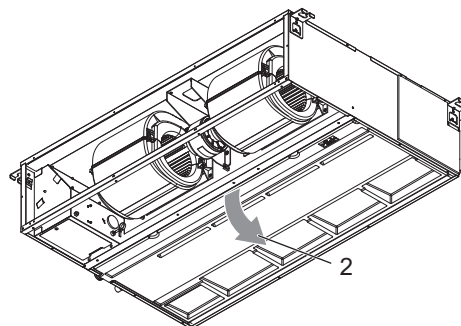


Fig.6

Note
•Drain the water out of the drain pan before removing it.

5. Thermistor (Water outlet) (Water inlet)

Exercise caution when removing heavy parts.

1. Remove the drain pan according to the procedure in **section 4**.
2. Removing the Heat exchanger cover
 - (1) Remove the three fixing screws on the heat exchanger cover (F) to remove it.

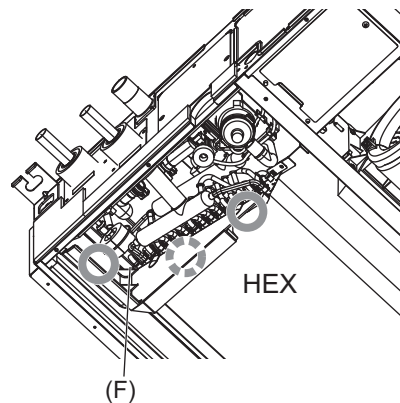


Fig.7

3. Removing the thermistor
 - (1) Remove the thermistor (G) from the thermistor holder (H) on the copper tube.

Thermistor size
Water inlet: $\varnothing 8\text{mm}$
Water outlet: $\varnothing 6\text{mm}$

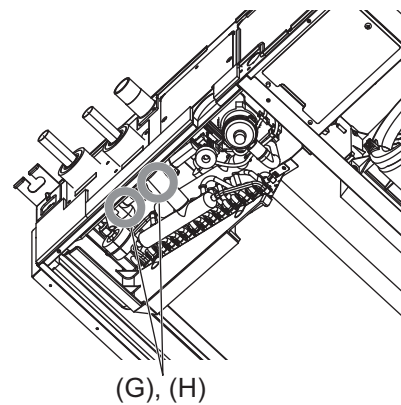


Fig.8

6. Fan and fan motor

Exercise caution when removing heavy parts.

1. Removing the filter and the bottom plate

- (1) Push down the tab on the filter, and pull out the filter in the direction of the arrow 1.
- (2) Remove the fixing screws on the bottom plate (J) to remove it.

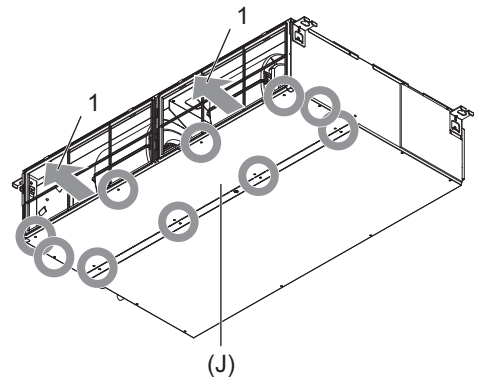


Fig.9

2. Removing the fan casing (bottom half)

- (1) Squeeze the tabs on the fan casing to remove it in the direction of arrow 2.

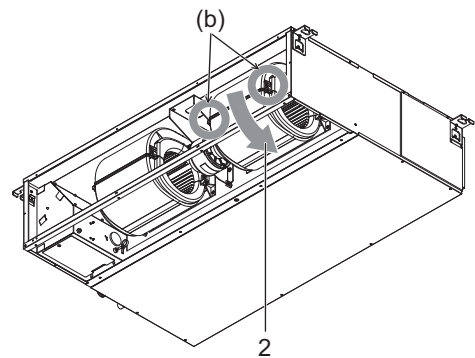


Fig.10

(b) Tab

3. Removing the motor cable

- (1) Remove the motor cable through the rubber bush.

4. Removing the fan motor and the Sirocco fan

- (1) Remove the two motor fixing screws to remove the motor and the Sirocco fan in the direction of arrow 3.

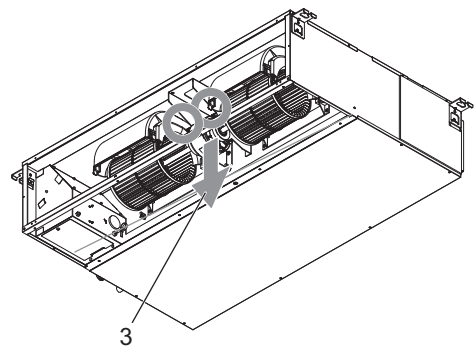


Fig.11

- (2) Remove the four fan case fixing screws to take the top half of the fan casing off.

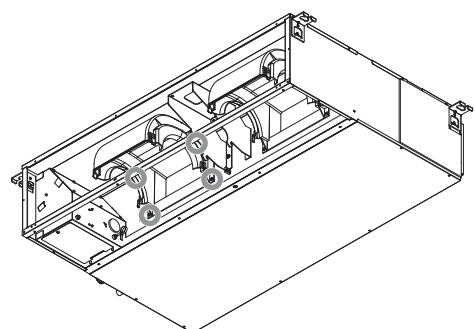


Fig.12

7. Heat exchanger (Pressure sensor and FCV)

Exercise caution when removing heavy parts.

1. Remove the drain pan according to the procedure in **section 4**.
2. Remove the heat exchanger cover according to the procedure in **section 5. 2**.
3. Removing the cover
 - (1) Remove the six fixing screws on the cover (K) to remove it.

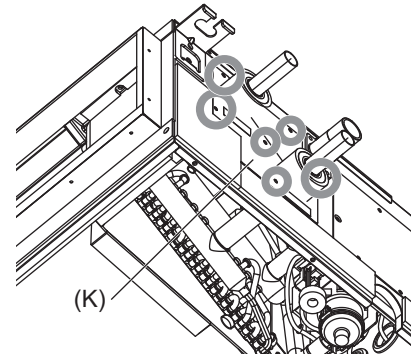


Fig.13

(K) Pipe support plate

4. Removing the Heat exchanger
 - (1) Remove the fixing screws on the heat exchanger (M) to remove it.

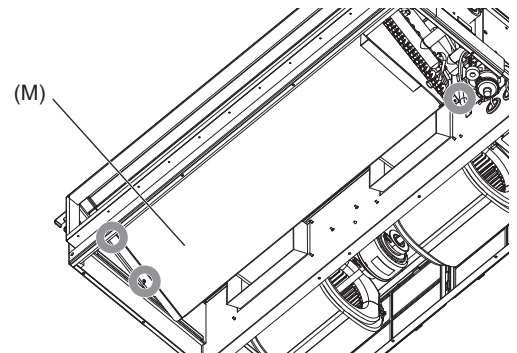


Fig.14

5. Removing the pressure sensor
 - (1) Loosen the flare nut (N) using two wrenches to remove the pressure sensor (O). To prevent damage to the flare piping, use caution not to apply excessive force to it. (Fig. 15)

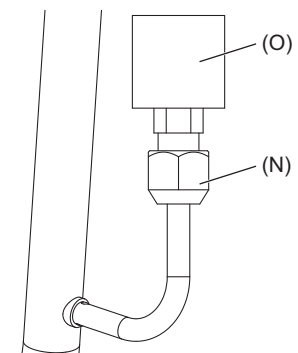


Fig.15

- (2) To attach the pressure sensor, tighten the flare nut to the torque of 16 to 18 [N·m (kgf·cm)] using two wrenches (one should be a torque wrench). Tightening to a higher torque than the value specified above may damage the flare nut.

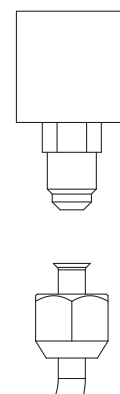


Fig.16

6. Removing the FCV

- (1) Remove the clips (P) on the inlet/outlet of the FCV.
(Fig. 17)
- (2) Remove the inlet/outlet piping connecting the FCV.
(Fig. 17)

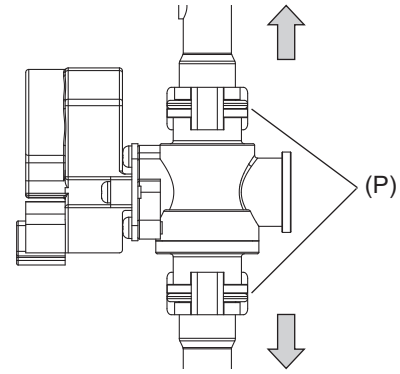


Fig.17

- (3) Remove the nipple (Q) (and O-ring (R)) from the FCV.
(Fig.18)
- (4) After removing the nipple (and O-ring), check the O-ring on the sleeve for damage. If O-ring is damaged, replace the O-ring with a new one.
- (5) Check the nipple grooves for dirt. If dirty, wipe them clean.
- (6) Check the inner surface of the FCV and the inlet/outlet piping for dirt. If dirty, wipe them clean.
- (7) Before attaching the O-ring to the nipple, apply a light coating of the grease that is listed in the service parts list evenly to the entire O-ring.
- (8) Before inserting the nipple (with the O-ring) into the FCV and the inlet/outlet piping, apply a light coating of the specified grease evenly to their entire inner surface.

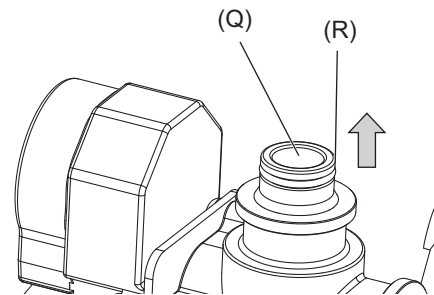


Fig.18

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