Changes for the Better

MITSUBISHI ELECTRIC

CITY MULTI

# CITY MULTI

## DATA BOOK

## R410A Series

2004

# CITY MULTI INDOOR UNIT

## CONTENTS


| | | | |
|---|---|---|---|
| Introduction | | | Ⅰ-2 |
| Ceiling concealed | | PEFY-P-VML-E | Ⅰ-5 |
| | | PEFY-P-VMH-E | |
| | | PEFY-P-VMM-E | Ⅰ-25 |
| | | PEFY-P-VMH-E-F | Ⅰ-45 |
| Ceiling mounted built-in | | PDFY-P-VM-E | Ⅰ-57 |
| Floor standing | Exposed | PFFY-P-VLEM-E | Ⅰ-71 |
| | Concealed | PFFY-P-VLRM-E | |
| Cassette ceiling | 1-way flow | PMFY-P-VBM-E | Ⅰ-79 |
| | 2-way flow | PLFY-P-VLMD-E | Ⅰ-85 |
| | 4-way flow | PLFY-P-VAM-E | Ⅰ-97 |
| Wall mounted | | PKFY-P-VAM-E/VGM-E | Ⅰ-105 |
| Ceiling suspended | | PCFY-P-VGM-E | Ⅰ-115 |

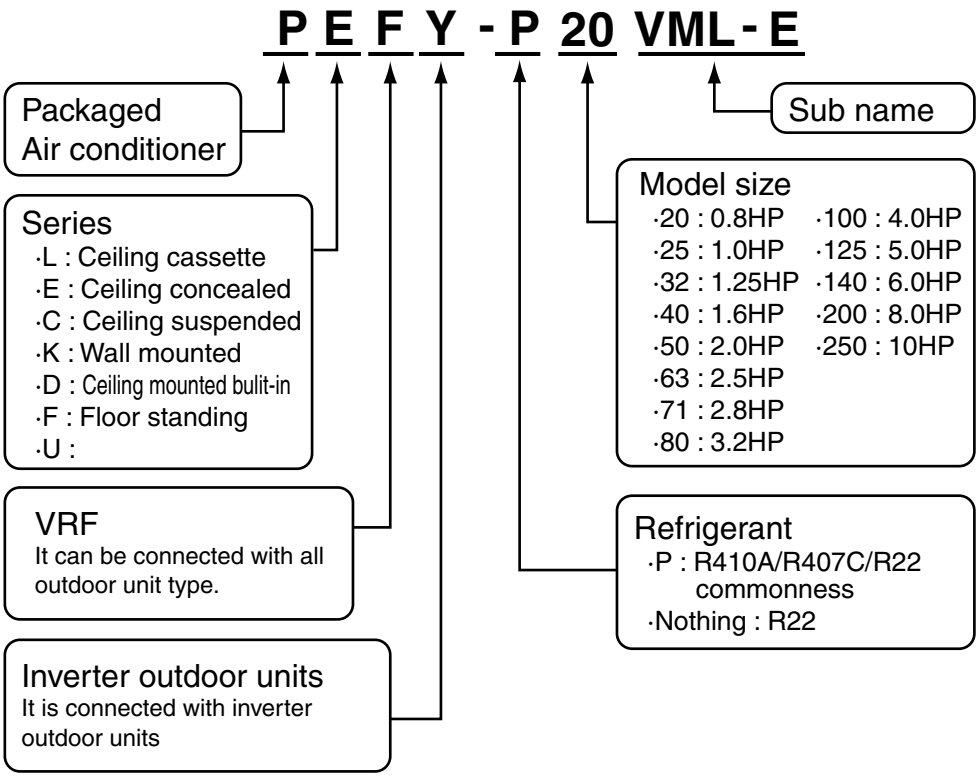
# Introduction

## CITY MULTI

### INDOOR UNITS

| Type | Model Name | 20 | 25 | 32 | 40 | 50 | 63 | 71 | 80 | 100 | 125 | 140 | 200 | 250 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ceiling concealed | PEFY-P-VML-E | ● | ● | ● | | | | | | | | | | |
| | PEFY-P-VMH-E | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | PEFY-P-VMM-E | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | PEFY-P-VMH-E-F | | | | | | | | ● | | | ● | | |
| Ceiling mounted built-in | PDFY-P-VM-E | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Floor standing (Exposed) | PFFY-P-VLEM-E | ● | ● | ● | ● | ● | ● | | | | | | | |
| Floor standing (Concealed) | PFFY-P-VLRM-E | ● | ● | ● | ● | ● | ● | | | | | | | |
| Cassette ceiling (1-way flow) | PMFY-P-VBM-E | ● | ● | ● | ● | | | | | | | | | |
| Cassette ceiling (2-way flow) | PLFY-P-VLMD-E | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | | |
| Cassette ceiling (4-way flow) | PLFY-P-VAM-E | | | ● | ● | ● | ● | | ● | ● | ● | | | |
| Wall mounted | PKFY-P-VAM-E | ● | ● | | | | | | | | | | | |
| | PKFY-P-VGM-E | | | ● | ● | ● | | | | | | | | |
| Ceiling suspended | PCFY-P-VGM-E | | | | ● | | ● | | | ● | ● | | | |

Meaning of model name



Ceiling concealed

PEFY-P-VML-E
PEFY-P-VMH-E

# CONTENTS

1. Specifications ..... Ⅰ-6

2. Sound Levels ..... Ⅰ-8
2-1 Noise levels(VML-E) ..... Ⅰ-8
2-2 NC curves(VML-E) ..... Ⅰ-8
2-3 Fan characteristics curves(VML-E) ..... Ⅰ-8
2-4 Noise levels(VMH-E) ..... Ⅰ-9
2-5 NC curves(VMH-E) ..... Ⅰ-9
2-6 Fan characteristics curves(VMH-E) ..... Ⅰ-14

3. External Dimensions ..... Ⅰ-17

4. Electrical Wiring Diagrams ..... Ⅰ-20

5. Options ..... Ⅰ-23

# 1. Specifications



| | | | PEFY-P20VML-E | PEFY-P25VML-E | PEFY-P32VML-E |
|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / 60Hz | | |
| Cooling capacity | ✻1 | kW | 2.2 | 2.8 | 3.6 |
| | ✻2 | kcal/h | 2,000 | 2,500 | 3,150 |
| Heating capacity | ✻1 | kW | 2.5 | 3.2 | 4.0 |
| Power consumption (50/60Hz) | Cooling | kW | 0.05/0.06 | | 0.07/0.09 |
| | Heating | kW | 0.05/0.06 | | 0.07/0.09 |
| Current | Cooling | A | 0.24/0.28 | | 0.32/0.42 |
| | Heating | A | 0.24/0.28 | | 0.32/0.42 |
| External finish | | | Galvanizing | | |
| Dimension | Height | mm | 225 | | |
| | Width | mm | 720 | | |
| | Depth | mm | 550 | | |
| Net weight | | kg | 18 | | |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | |
| Fan | Type | | Sirocco fan× 1 | | |
| | Airflow rate (Lo-Mid-Hi) | m³/min | 4.8-5.8-7.9 | | 4.8-5.8-9.5 |
| | External static pressure | Pa | 5 | | |
| Motor | Type | | Single phase induction motor | | |
| | Output | kW | 0.023 | | 0.032 |
| Air filter | | | PP Honeycomb fabric (washable) | | |
| Refrigerant pipe dimension | Gas (Brazing) | mm | ø 12.7 | | |
| | Liquid (Brazing) | mm | ø 6.35 | | |
| Drain pipe dimension | | | R1 (External thread) | | |
| Noise level (Lo-Mid-Hi) | ✻5 | dB(A) | 25-29-36 | | 25-29-40 |

| | | | | PEFY-P40VMH-E | PEFY-P50VMH-E | PEFY-P63VMH-E | PEFY-P71VMH-E |
|---|---|---|---|---|---|---|---|
| Power source | | | | ~ 220-240V 50Hz /60Hz | | | |
| Cooling capacity | ✻1 | | kW | 4.5 | 5.6 | 7.1 | 8.0 |
| | ✻2 | | kcal/h | 4,000 | 5,000 | 6,300 | 7,100 |
| Heating capacity | ✻1 | | kW | 5.0 | 6.3 | 8.0 | 9.0 |
| Power consumption (50/60Hz) | Cooling | | kW | 0.19/0.23 | | 0.24/0.30 | 0.26/0.33 |
| | Heating | | kW | 0.19/0.23 | | 0.24/0.30 | 0.26/0.33 |
| Current | Cooling | | A | 0.88/1.06 | | 1.12/1.38 | 1.20/1.51 |
| | Heating | | A | 0.88/1.06 | | 1.12/1.38 | 1.20/1.51 |
| External finish | | | | Galvanizing | | | |
| Dimension | Height | | mm | 380 | | | |
| | Width | | mm | 750 | | | 1000 |
| | Depth | | mm | 900 | | | |
| Net weight | | | kg | 44 | 45 | | 50 |
| Heat exchanger | | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | | Sirocco fan× 1 | | | |
| | Airflow rate (Lo-Hi) | | m³/min | 10.0-14.0 | | 13.5-19.0 | 15.5-22.0 |
| | External static pressure ✻3 | 220V | Pa | 50/100/200 | | | |
| | | 230, 240V | Pa | 100/150/200 | | | |
| Motor | Type | | | Single phase induction motor | | | |
| | Output | ✻4 | kW | 0.08 | | 0.12 | 0.14 |
| Air filter (option) | | | | Synthethic fiber unwoven cloth filter(long life) | | | |
| Refrigerant pipe dimension | Gas (Flare) | | mm | ø 12.7 | ø 12.7 (R410A)<br>ø 15.88 (R22,R407C) | ø 15.88 | |
| | Liquid (Flare) | | mm | ø 6.35 | ø 6.35 (R410A)<br>ø 9.52 (R22,R407C) | ø 9.52 | |
| Drain pipe dimension | | | | 32 (1-1/4 inch) | | | |
| Noise level (Lo-Hi) | | 220V | dB(A) | 27-34 | | 32-38 | 32-39 |
| | ✻5 | 230, 240V | dB(A) | 31-37 | | 36-41 | 35-41 |

Note: ✻1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
✻2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
✻3 The external static pressure is set to 100Pa (at 220V) /150Pa (at 230, 240V) at factory shipment.
✻4 The value are that at 240V.
✻5 It is measured in anechoic room.

| | | | | PEFY-P80VMH-E | PEFY-P100VMH-E | PEFY-P125VMH-E | PEFY-P140VMH-E |
|---|---|---|---|---|---|---|---|
| Power source | | | | ~ 220-240V 50Hz /60Hz | | | |
| Cooling capacity | | ※1 | kW | 9.0 | 11.2 | 14.0 | 16.0 |
| | | ※2 | kcal/h | 8,000 | 10,000 | 12,500 | 14,000 |
| Heating capacity | | ※1 | kW | 10.0 | 12.5 | 16.0 | 18.0 |
| Power consumption (50/60Hz) | Cooling | | kW | 0.32/0.40 | 0.48/0.58 | | 0.48/0.59 |
| | Heating | | kW | 0.32/0.40 | 0.48/0.58 | | 0.48/0.59 |
| Current | Cooling | | A | 1.47/1.83 | 2.34/2.66 | | 2.35/2.70 |
| | Heating | | A | 1.47/1.83 | 2.34/2.66 | | 2.35/2.70 |
| External finish | | | | Galvanizing | | | |
| Dimension | Height | | mm | 380 | | | |
| | Width | | mm | 1000 | 1200 | | |
| | Depth | | mm | 900 | | | |
| Net weight | | | kg | 50 | 70 | | |
| Heat exchanger | | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | | Sirocco fan× 1 | Sirocco fan× 2 | | |
| | Airflow rate (Lo-Hi) | | $m^3$/min | 18.0-25.0 | 26.5-38.0 | | 28.0-40.0 |
| | External static pressure ※3 | 220V | Pa | 50/100/200 | | | |
| | | 230, 240V | Pa | 100/150/200 | | | |
| Motor | Type | | | Single phase induction motor | | | |
| | Output | ※4 | kW | 0.18 | 0.26 | | |
| Air filter (option) | | | | Synthethic fiber unwoven cloth filter(long life) | | | |
| Refrigerant pipe dimension | Gas (Flare) | | mm | ø 15.88 | ø 15.88 (R410A)<br>ø 19.05 (R22,R407C) | | |
| | Liquid (Flare) | | mm | ø 9.52 | | | |
| Drain pipe dimension | | | | 32 (1-1/4 inch) | | | |
| Noise level (Lo-Hi) ※7 | 220V | | dB(A) | 35-41 | 34-42 | | |
| | 230, 240V | | dB(A) | 38-43 | 38-44 | | |

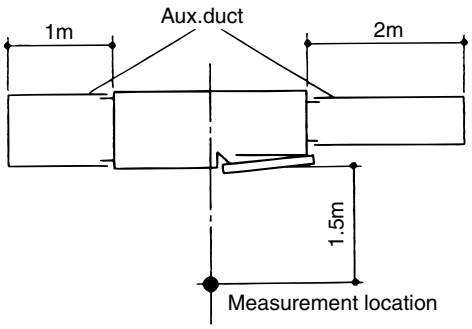
| | | | | PEFY-P200VMH-E | PEFY-P250VMH-E |
|---|---|---|---|---|---|
| Power source | | | | 3N ~ 380-415V 50Hz / 60Hz | |
| Cooling capacity | | ※1 | kW | 22.4 | 28.0 |
| | | ※2 | kcal/h | 20,000 | 25,000 |
| Heating capacity | | ※1 | kW | 25.0 | 31.5 |
| Power consumption (50/60Hz) | Cooling | | kW | 0.99/1.14 | 1.23/1.41 |
| | Heating | | kW | 0.99/1.14 | 1.23/1.41 |
| Current | Cooling | | A | 1.62/1.86 | 2.0/2.3 |
| | Heating | | A | 1.62/1.86 | 2.0/2.3 |
| External finish | | | | Galvanizing | |
| Dimension | Height | | mm | 470 | |
| | Width | | mm | 1250 | |
| | Depth | | mm | 1120 | |
| Net weight | | | kg | 100 | |
| Heat exchanger | | | | Cross fin (Aluminum plate fin and copper tube) | |
| Fan | Type | | | Sirocco fan× 2 | |
| | Airflow rate | | $m^3$/min | 58.0 | 72.0 |
| | External static pressure ※5 | 380V | Pa | 110/220 | |
| | | 400, 415V | Pa | 130/260 | |
| Motor | Type | | | 3-phase induction motor | |
| | Output | ※6 | kW | 0.76 | 1.08 |
| Air filter (option) | | | | Synthethic fiber unwoven cloth filter(long life) | |
| Refrigerant pipe dimension | Gas (Brazing) | | mm | ø 19.05 (R410A)<br>ø 25.4 (R22,R407C) | ø 22.2 (R410A)<br>ø 28.58 (R22,R407C) |
| | Liquid (Brazing) | | mm | ø 9.52 (R410A)<br>ø 12.7 (R22,R407C) | |
| Drain pipe dimension | | | | 32 (1-1/4 inch) | |
| Noise level | ※7 | 380V | dB(A) | 42(110Pa)/45(220Pa) | 50(110Pa)/52(220Pa) |
| | | 400, 415V | dB(A) | 44(130Pa)/47(260Pa) | 52(130Pa)/54(260Pa) |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 The external static pressure is set to 100Pa (at 220V) /150Pa (at 230, 240V) at factory shipment.
※4 The value are that at 240V.
※5 The external static pressure is set to 110Pa (at 380V) /130Pa (at 400, 415V) at factory shipment.
※6 The value are that at 415V.
※7 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels(VML-E)

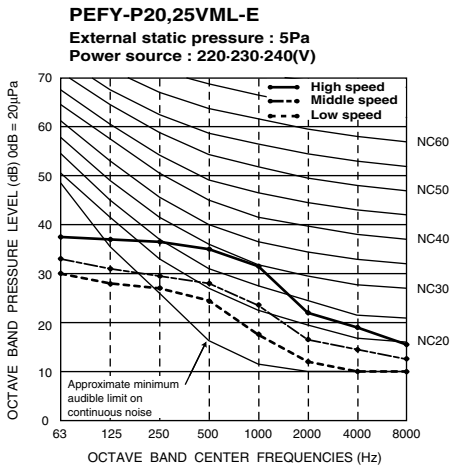
① Rear inlet model1

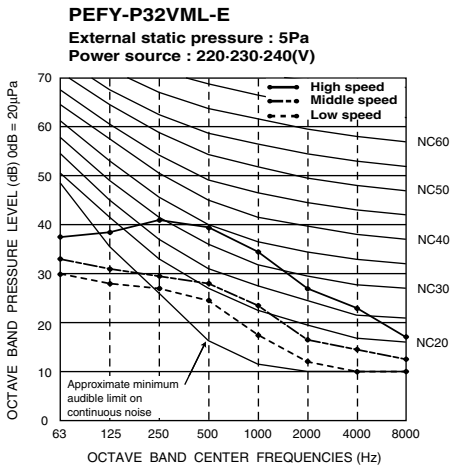



Noise level at anechoic room (Low-Mid-High) Unit : dB(A)

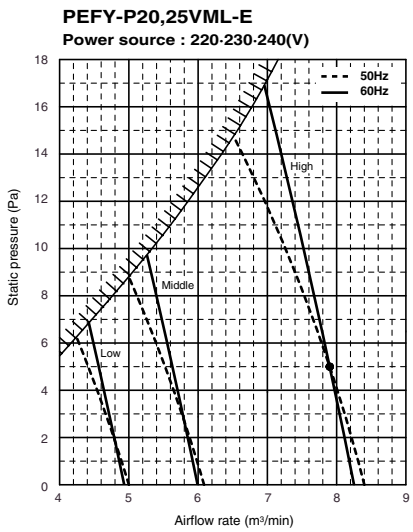
| Model | Noise level (A weighted) |
|---|---|
| PEFY-P20VML-E<br>PEFY-P25VML-E | 25-29-36 |
| PEFY-P32VML-E | 25-29-40 |

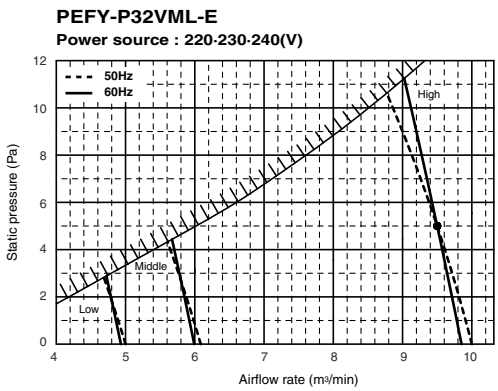
## 2-2. NC curves(VML-E)



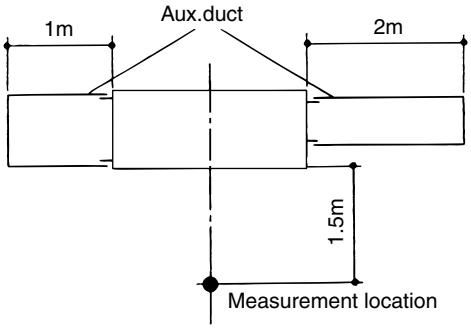




## 2-3. Fan characteristics curves(VML-E)



## 2-4. Noise levels(VMH-E)



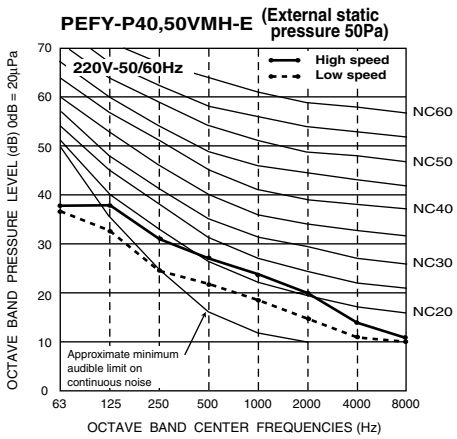

Noise level at anechoic room (Low-High) Unit : dB(A)

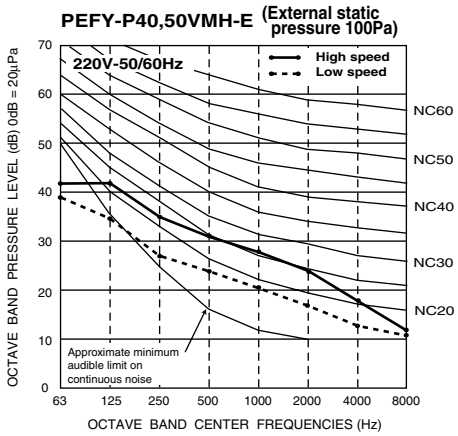
| Model | | External static pressure❊ | | |
|---|---|---|---|---|
| | | Low | Mid | High |
| PEFY-P40, 50 VMH-E | 220V | 25-30 | 27-34 | 30-40 |
| | 230, 240V | 30-34 | 31-37 | 31-41 |
| PEFY-P63VMH-E | 220V | 31-36 | 32-38 | 36-43 |
| | 230, 240V | 35-39 | 36-41 | 38-44 |
| PEFY-P71VMH-E | 220V | 30-36 | 32-39 | 35-43 |
| | 230, 240V | 34-39 | 35-41 | 37-44 |
| PEFY-P80VMH-E | 220V | 32-39 | 35-41 | 37-43 |
| | 230, 240V | 37-41 | 38-43 | 39-45 |
| PEFY-P100, 125, 140VMH-E | 220V | 32-40 | 34-42 | 36-46 |
| | 230, 240V | 36-42 | 38-44 | 38-47 |
| PEFY-P200VMH-E | 380V | 42 | – | 45 |
| | 400, 415V | 44 | – | 47 |
| PEFY-P250VMH-E | 380V | 50 | – | 52 |
| | 400, 415V | 52 | – | 54 |

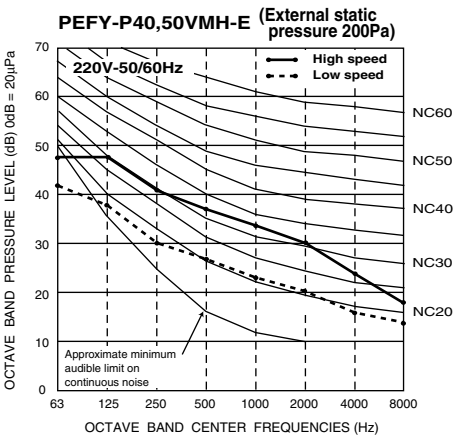
❊ PEFY-P40~140VMH-E
Low : 50Pa (at 220V) / 100Pa (at 230, 240V)
Mid : 100Pa (at 220V) / 150Pa (at 230, 240V)
High : 200Pa (at 220, 230, 240V)

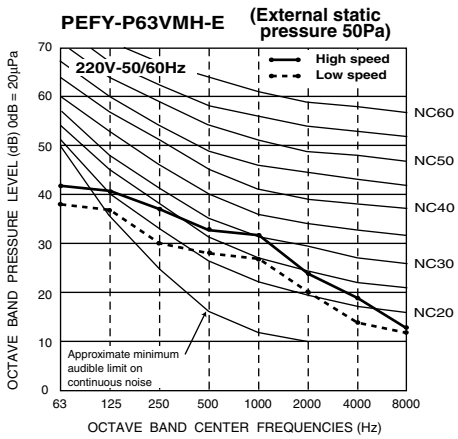
❊ PEFY-P200, 250VMH-E
Low : 110Pa (at 380V) / 130Pa (at 400, 415V)
High : 220Pa (at 380V) / 260Pa (at 400, 415V)

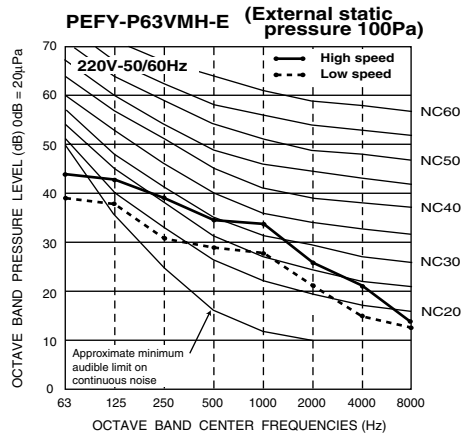
## 2-5. NC curves(VMH-E)

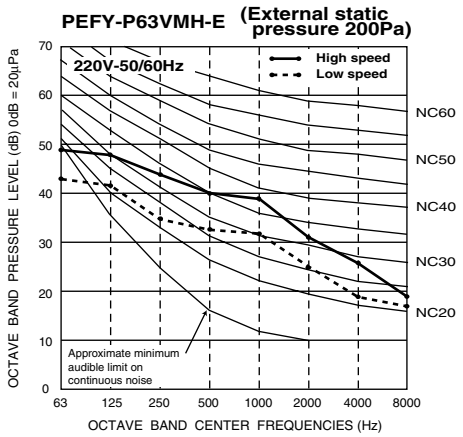


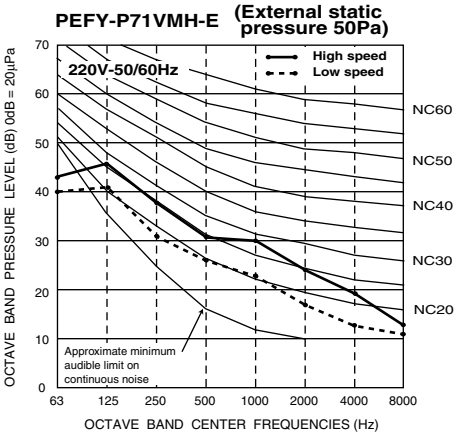



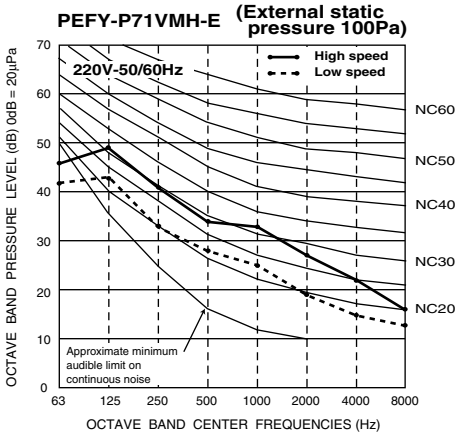



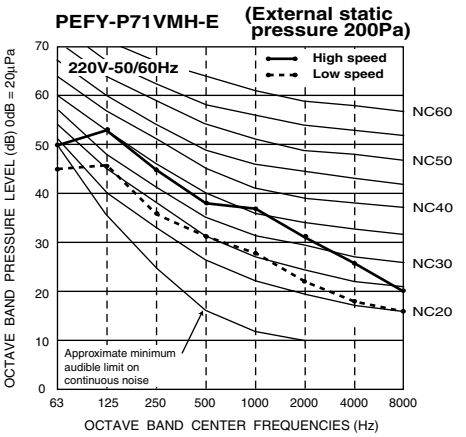



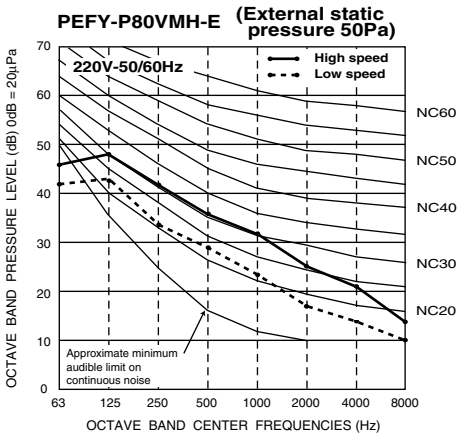

PEFY-P63VMH-E (External static pressure 100Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

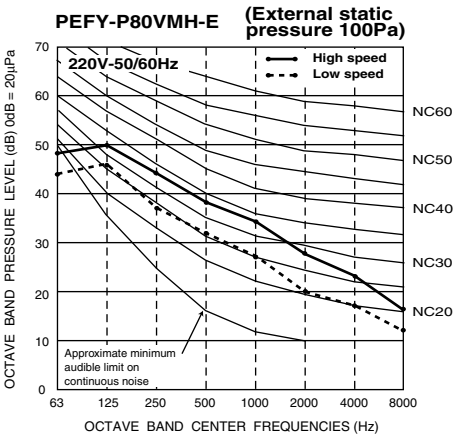

PEFY-P63VMH-E (External static pressure 200Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

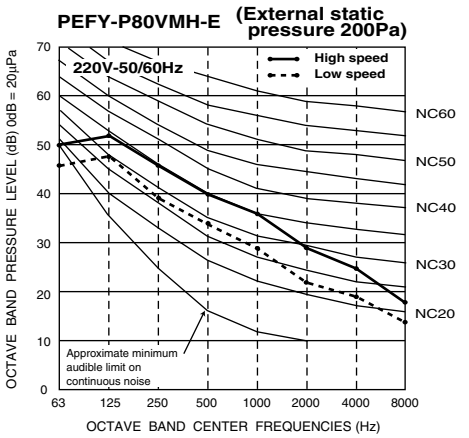

PEFY-P71VMH-E (External static pressure 50Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P71VMH-E (External static pressure 100Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

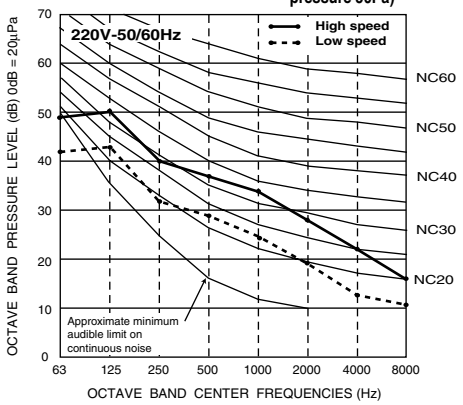

PEFY-P71VMH-E (External static pressure 200Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P80VMH-E (External static pressure 50Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

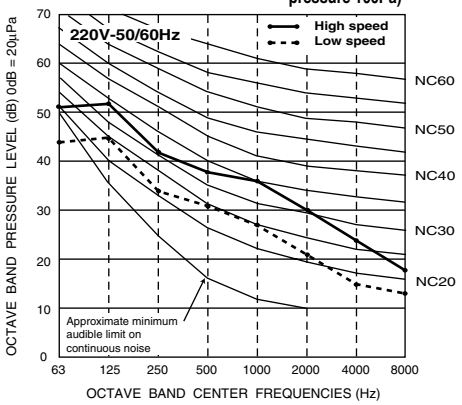

PEFY-P80VMH-E (External static pressure 100Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P80VMH-E (External static pressure 200Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

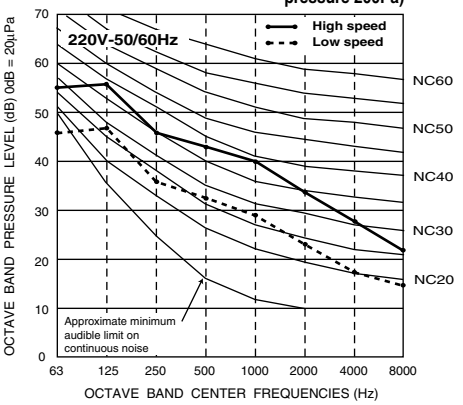
**PEFY-P100,125,140VMH-E (External static pressure 50Pa)**



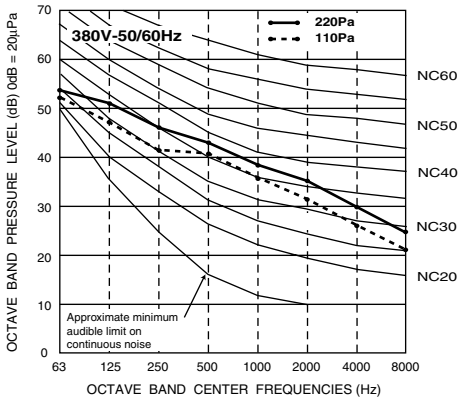

**PEFY-P100,125,140VMH-E (External static pressure 100Pa)**



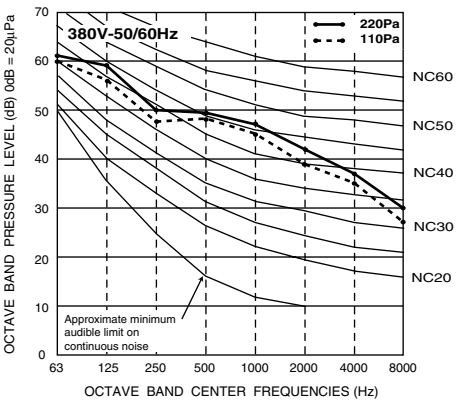

**PEFY-P100,125,140VMH-E (External static pressure 200Pa)**



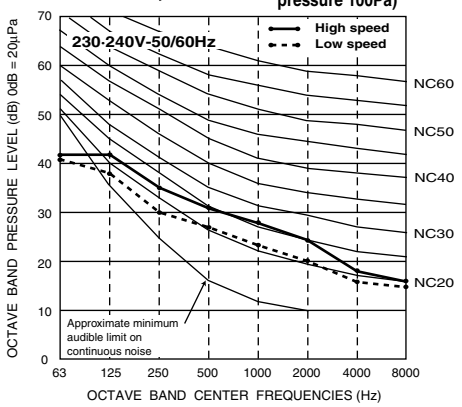

**PEFY-P200VMH-E**



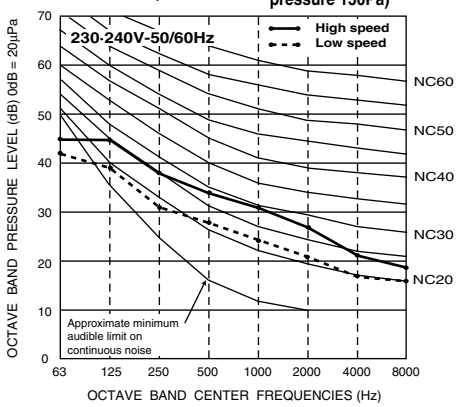

**PEFY-P250VMH-E**



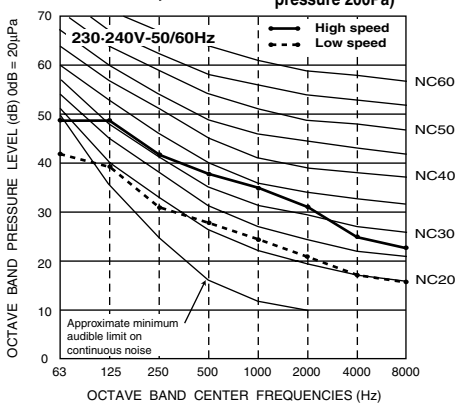

**PEFY-P40,50VMH-E (External static pressure 100Pa)**

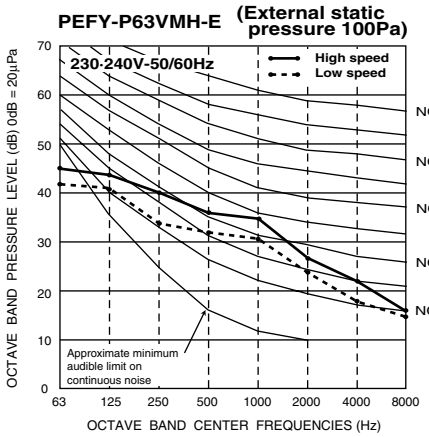


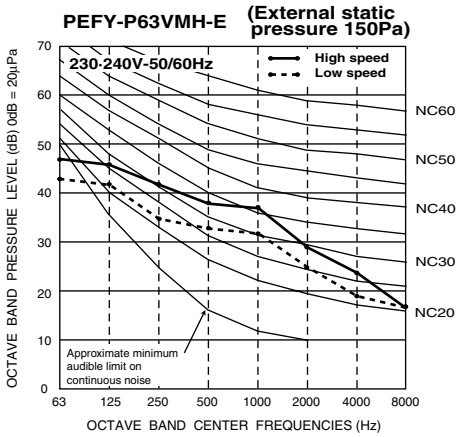

**PEFY-P40,50VMH-E (External static pressure 150Pa)**

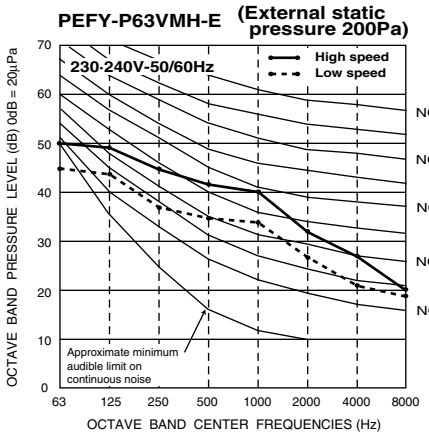


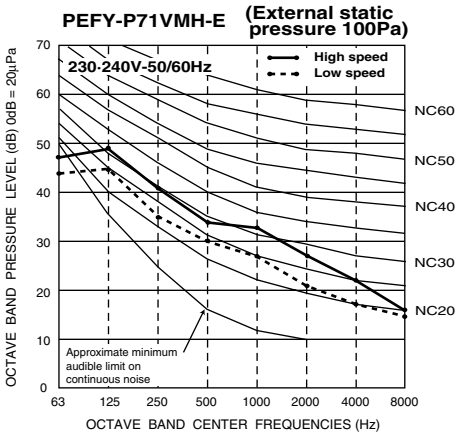

**PEFY-P40,50VMH-E (External static pressure 200Pa)**

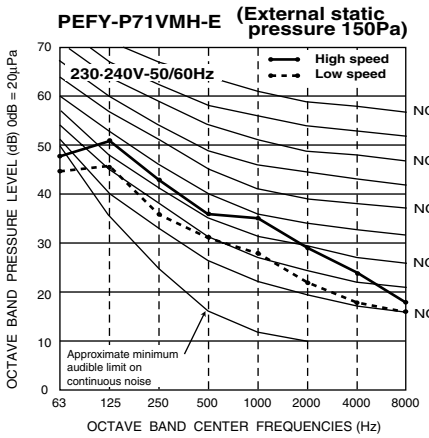


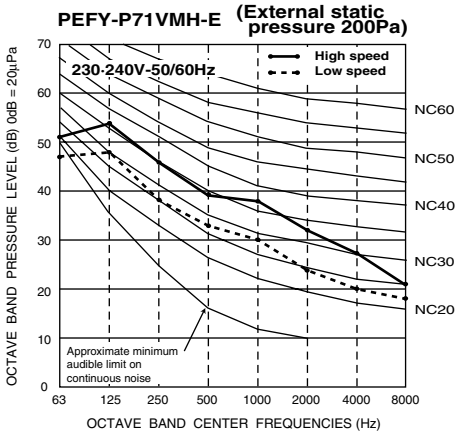

PEFY-P63VMH-E (External static pressure 100Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

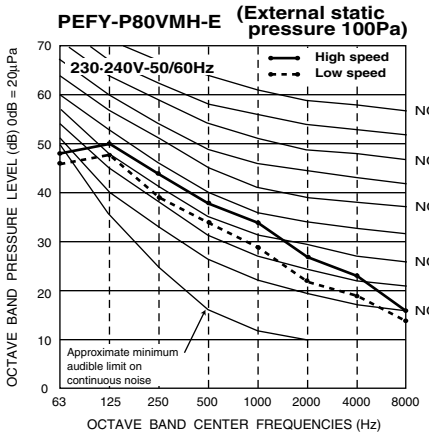

PEFY-P63VMH-E (External static pressure 150Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

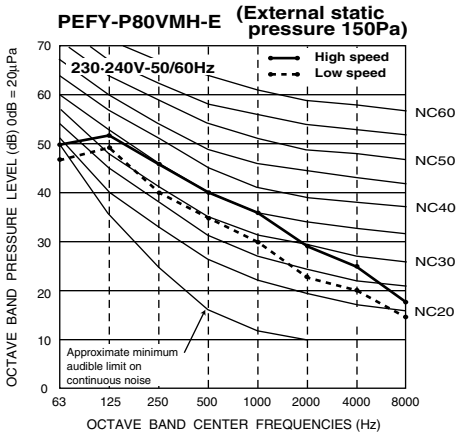

PEFY-P63VMH-E (External static pressure 200Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P71VMH-E (External static pressure 100Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

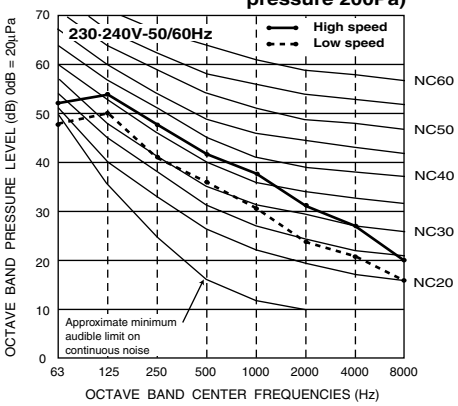

PEFY-P71VMH-E (External static pressure 150Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P71VMH-E (External static pressure 200Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

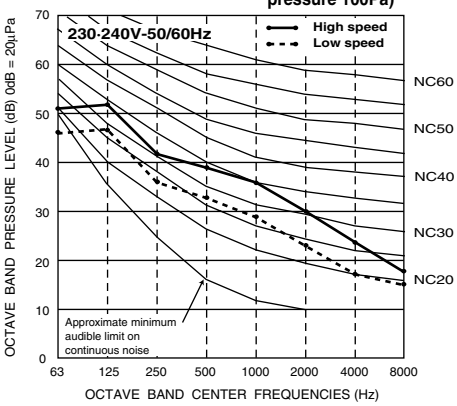

PEFY-P80VMH-E (External static pressure 100Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P80VMH-E (External static pressure 150Pa)
230·240V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

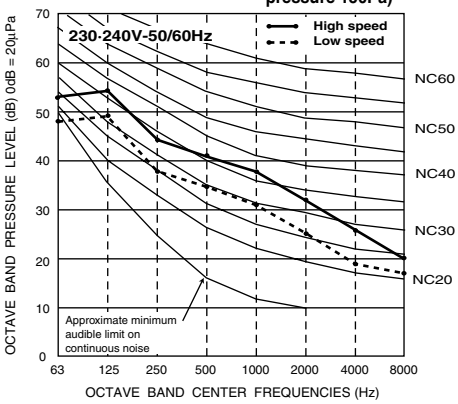
**PEFY-P80VMH-E (External static pressure 200Pa)**



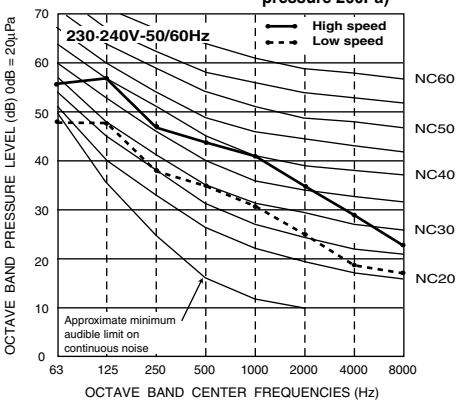

**PEFY-P100,125,140VMH-E (External static pressure 100Pa)**



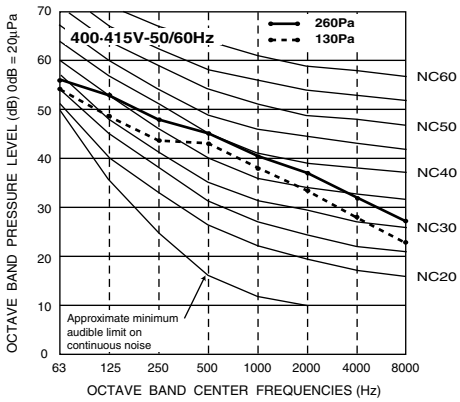

**PEFY-P100,125,140VMH-E (External static pressure 150Pa)**



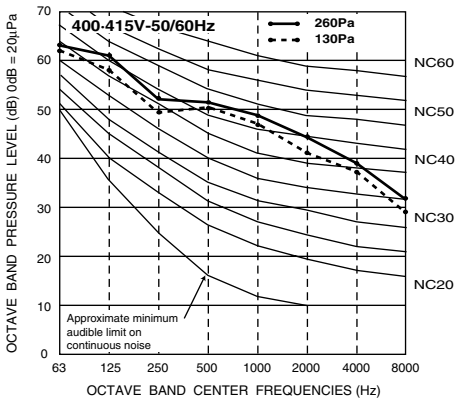

**PEFY-P100,125,140VMH-E (External static pressure 200Pa)**




**PEFY-P200VMH-E**

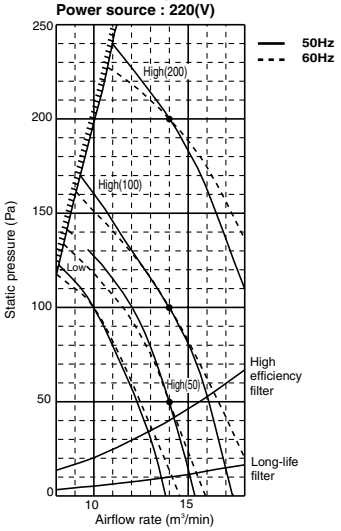



**PEFY-P250VMH-E**

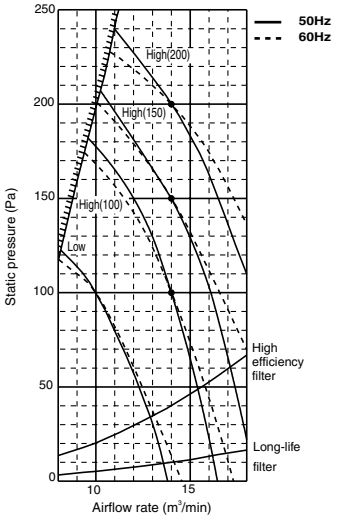


## 2-6. Fan characteristics curves(VMH-E)

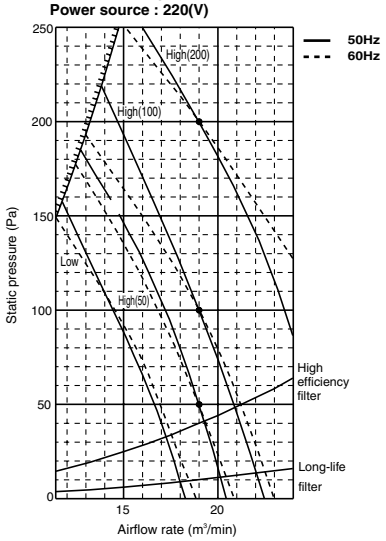
**PEFY-P40,50VMH-E**
**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**



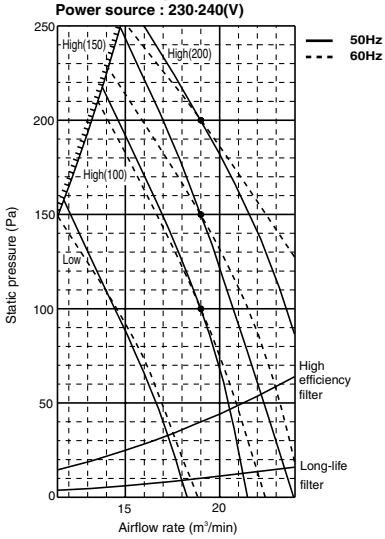

**PEFY-P40,50VMH-E**
**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230,240(V)**



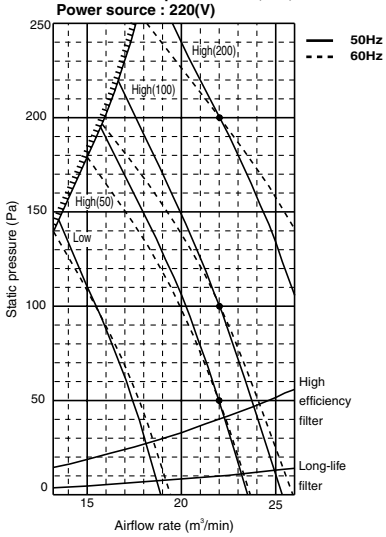

**PEFY-P63VMH-E**
**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**



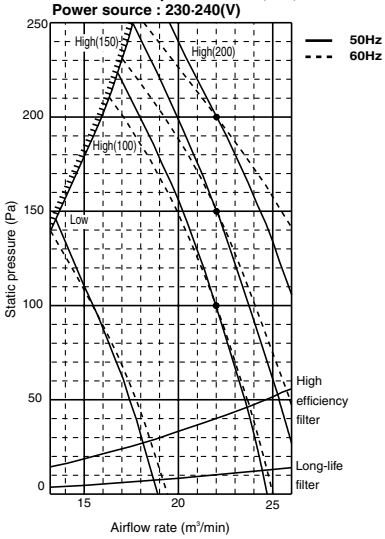

**PEFY-P63VMH-E**
**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230·240(V)**




**PEFY-P71VMH-E**
**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**

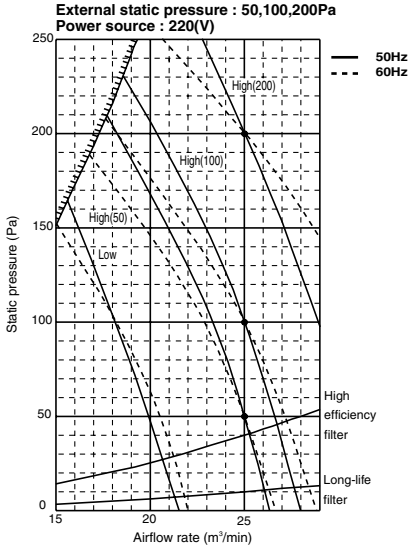



**PEFY-P71VMH-E**
**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230·240(V)**



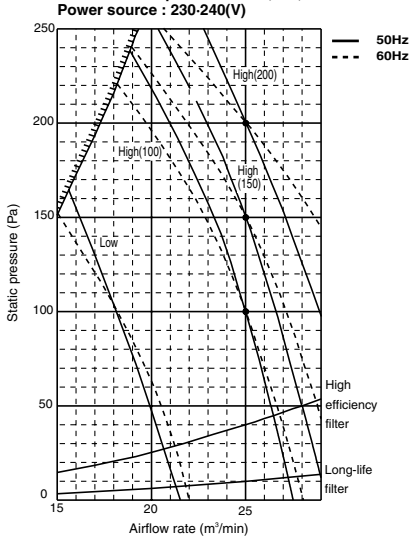
**PEFY-P80VMH-E**

**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**



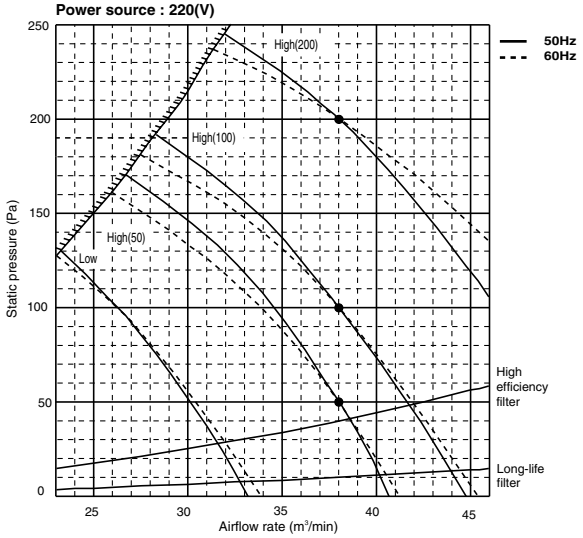

**PEFY-P80VMH-E**

**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230·240(V)**



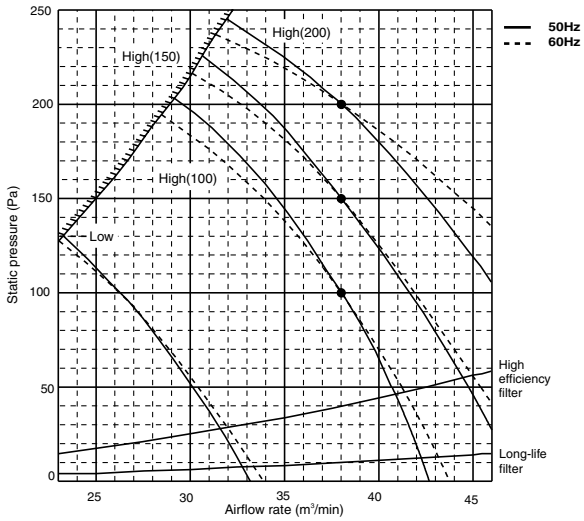

**PEFY-P100·125VMH-E**

**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**



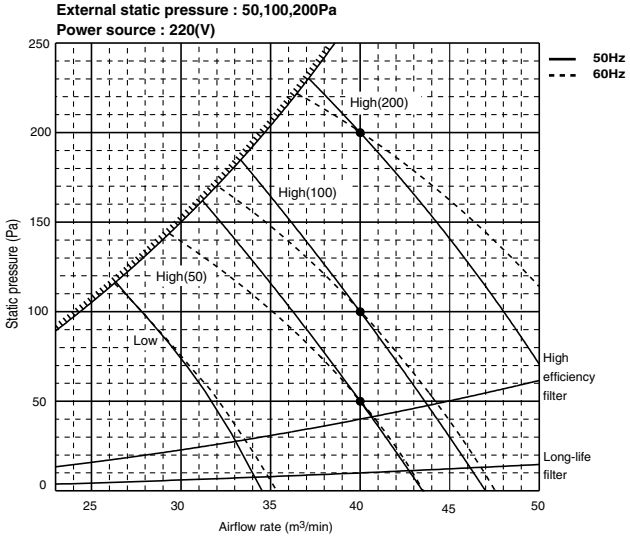

**PEFY-P100·125VMH-E**

**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230·240(V)**



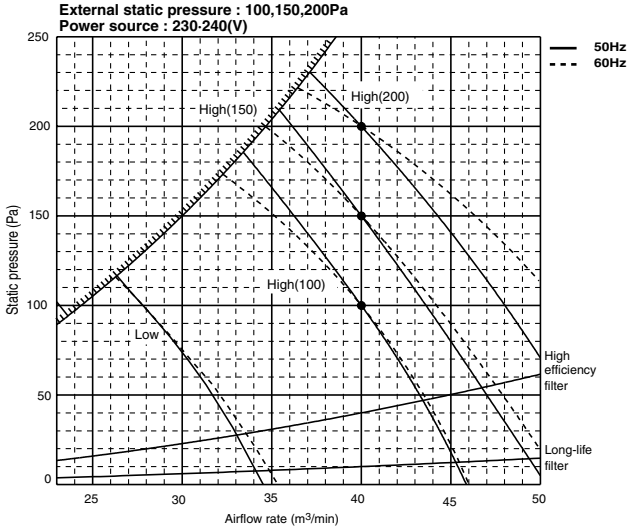

**PEFY-P140VMH-E**

**Suction : Back inlet**
**External static pressure : 50,100,200Pa**
**Power source : 220(V)**



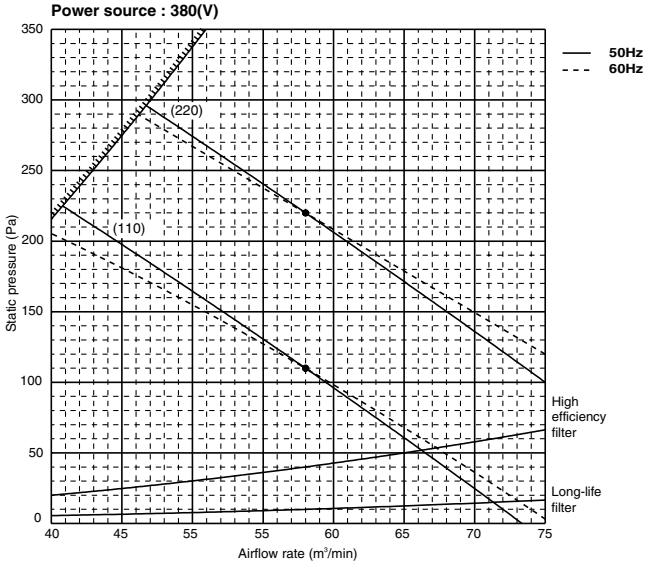

**PEFY-P140VMH-E**

**Suction : Back inlet**
**External static pressure : 100,150,200Pa**
**Power source : 230·240(V)**



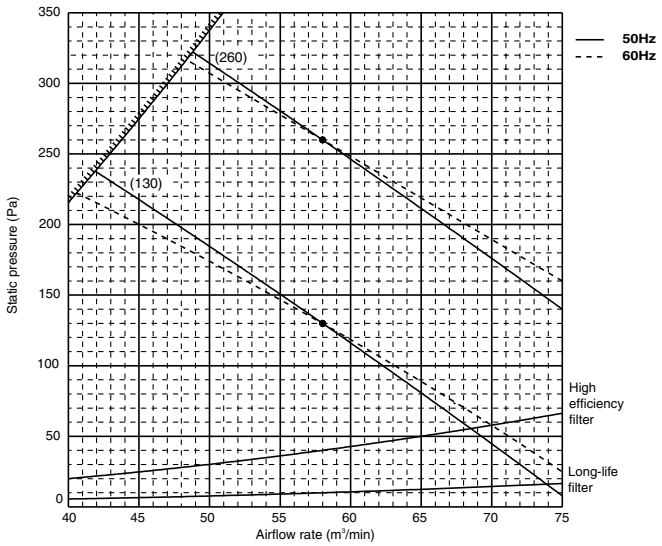
### PEFY-P200VMH-E

**Suction : Back inlet**
**External static pressure : 110,220Pa**
**Power source : 380(V)**



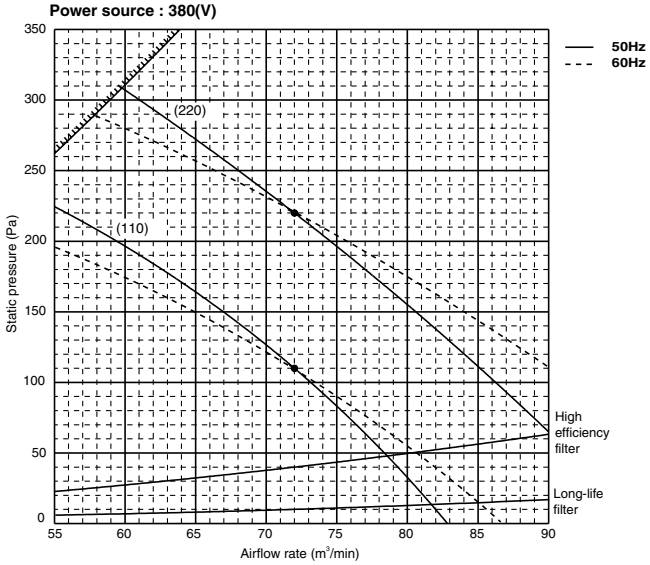

### PEFY-P200VMH-E

**Suction : Back inlet**
**External static pressure : 130,260Pa**
**Power source : 400·415(V)**



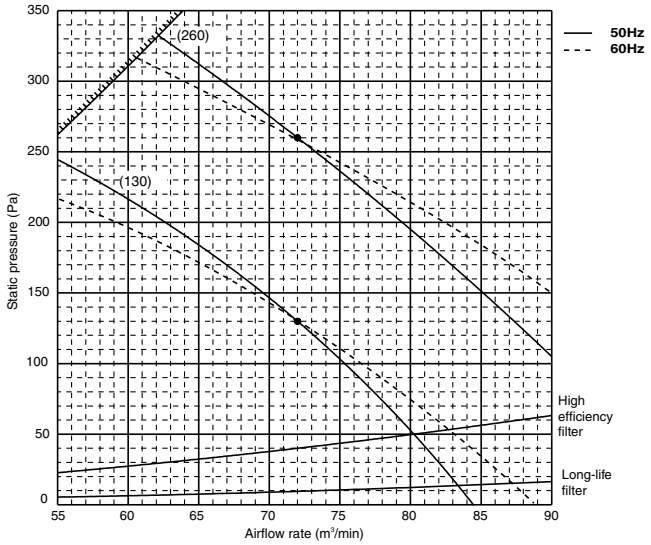

### PEFY-P250VMH-E

**Suction : Back inlet**
**External static pressure : 110,220Pa**
**Power source : 380(V)**




### PEFY-P250VMH-E

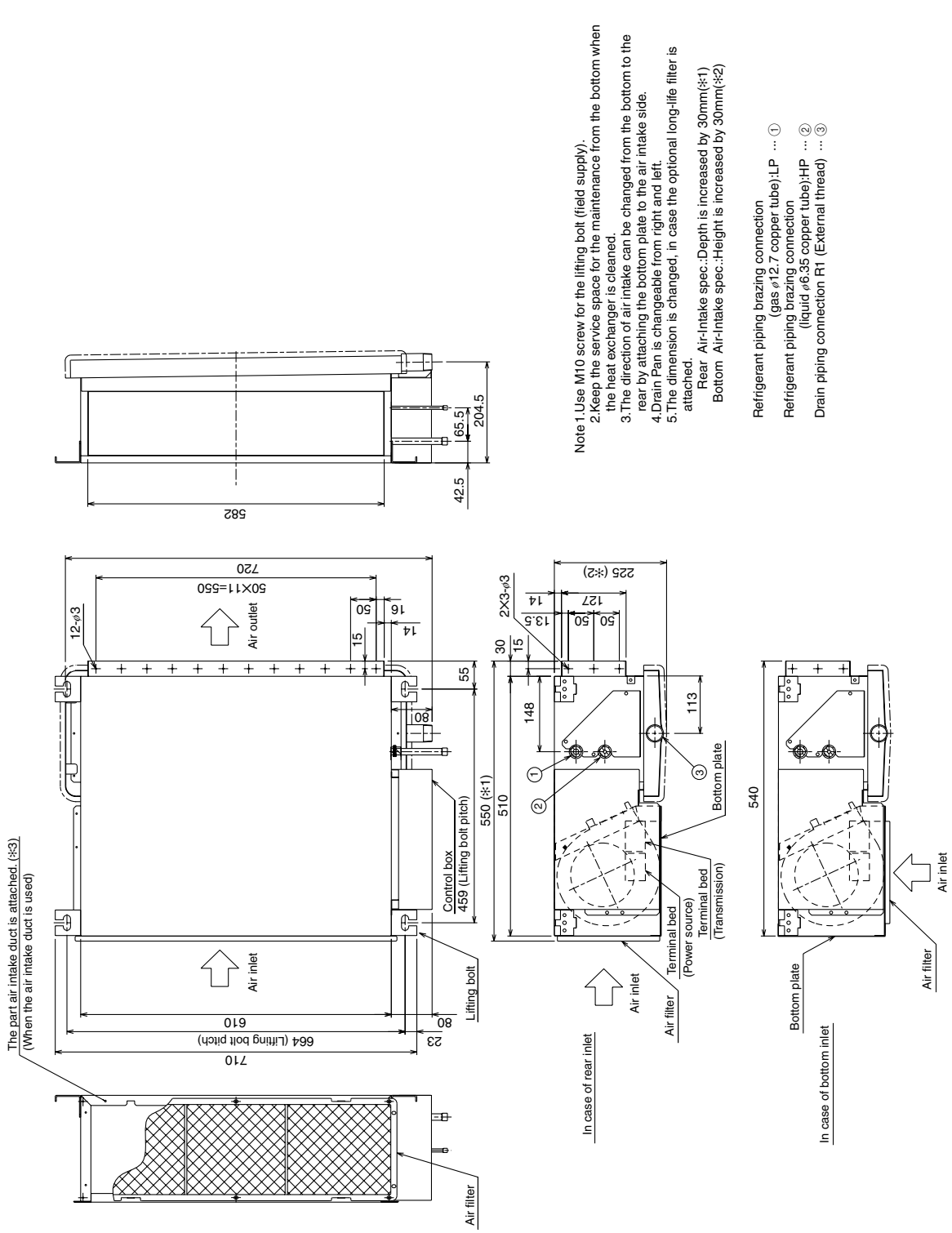
**Suction : Back inlet**
**External static pressure : 130,260Pa**
**Power source : 400·415(V)**



# 3. External Dimensions

**PEFY-P20,25,32VML-E**

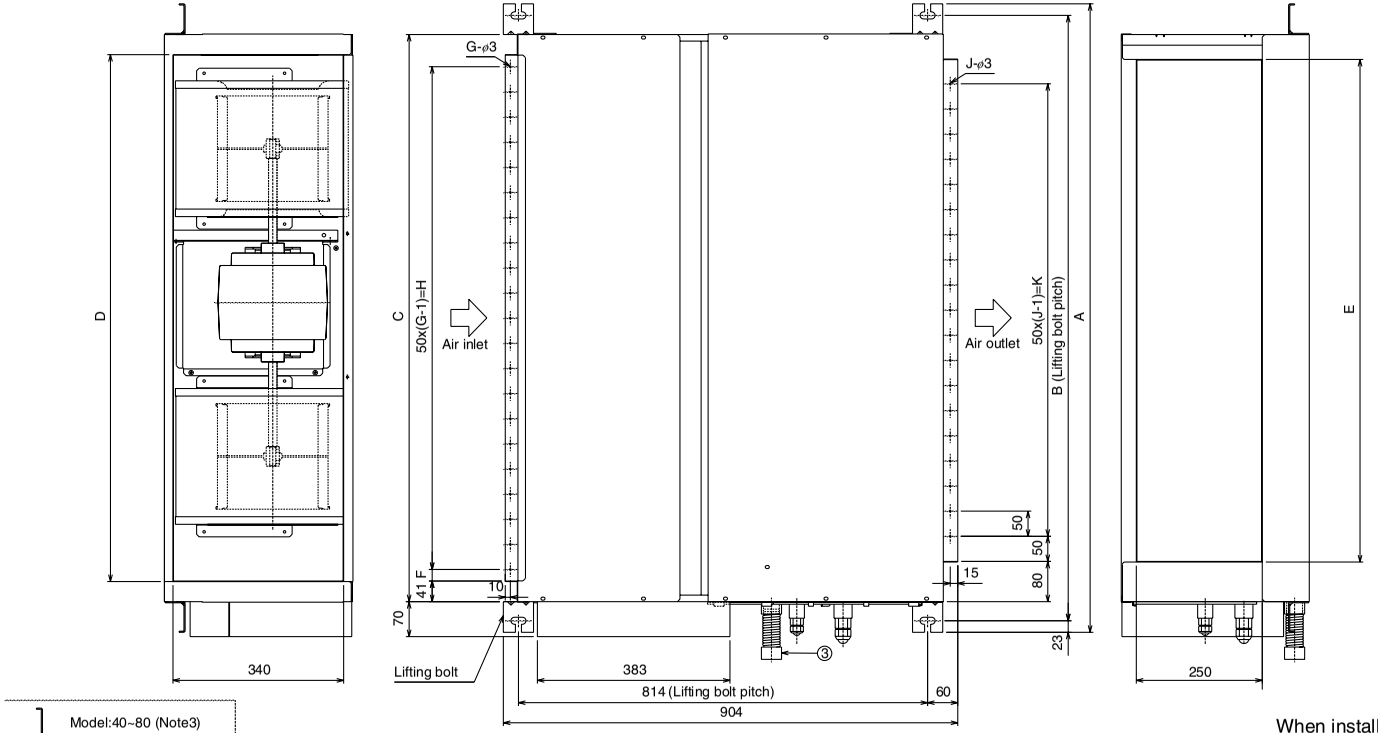
Unit : mm

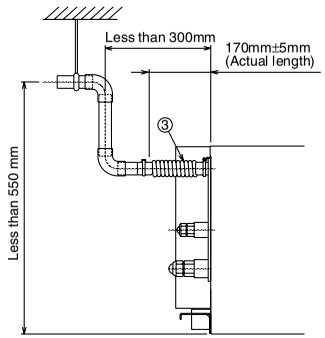



Note 1.Use M10 screw for the lifting bolt (field supply).
2.Keep the service space for the maintenance from the bottom when the heat exchanger is cleaned.
3.The direction of air intake can be changed from the bottom to the rear by attaching the bottom plate to the air intake side.
4.Drain Pan is changeable from right and left.
5.The dimension is changed, in case the optional long-life filter is attached.
Rear Air-Intake spec.:Depth is increased by 30mm(※1)
Bottom Air-Intake spec.:Height is increased by 30mm(※2)

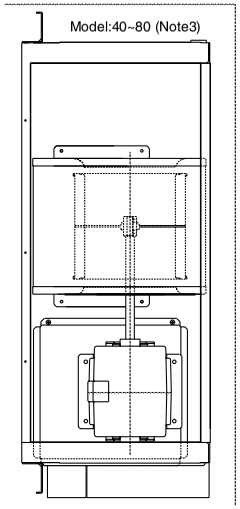
Refrigerant piping brazing connection (gas φ12.7 copper tube);LP ··· ①
Refrigerant piping brazing connection (liquid φ6.35 copper tube);HP ··· ②
Drain piping connection R1 (External thread) ··· ③

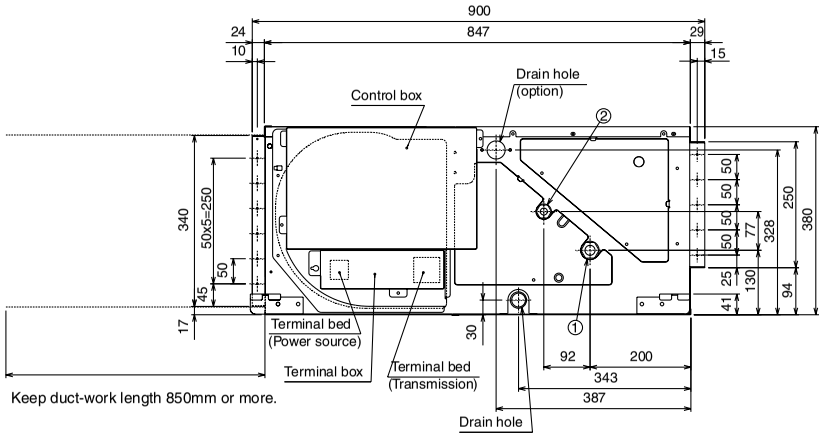
## PEFY-P40,50,63,71,80, 100,125,140VMH-E




When installing the drain water lifting-up mech(option).




| Model | A | B | C | D | E | F | G | H | J | K | L | M | N | P(Liquid) | P(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P40VMH-E | 800 | 754 | 680 | 600 | 550 | 50 | 11 | 500 | 10 | 450 | 780 | ø12.7 | ø6.35 | 17 | 27 |
| P50VMH-E | 800 | 754 | 680 | 600 | 550 | 50 | 11 | 500 | 10 | 450 | 780 | ※1 ø12.7<br>※2 ø15.88 | ※1 ø6.35<br>※2 ø9.52 | ※1 22<br>※2 22 | ※1 29<br>※2 29 |
| P63VMH-E | 800 | 754 | 680 | 600 | 550 | 50 | 11 | 500 | 10 | 450 | 780 | ø15.88 | ø9.52 | 22 | 29 |
| P71·80VMH-E | 1050 | 1004 | 930 | 850 | 800 | 25 | 17 | 800 | 15 | 700 | 1030 | ø15.88 | ø9.52 | 22 | 29 |
| P100·125 ·140VMH-E | 1250 | 1204 | 1130 | 1050 | 1000 | 25 | 21 | 1000 | 19 | 900 | 1230 | ※1 ø15.88<br>※2 ø19.05 | ※1 ø9.52<br>※2 ø9.52 | ※1 22<br>※2 22 | ※1 36<br>※2 36 |

※1:R410A outdoor unit
※2:The other outdoor unit

Note : 1. Use M10 screw for the lifting bolt (field supply).
2. Keep the service space for the maintenance from the bottom when the heat exchanger is cleaned.
3. This chart indicates for PEFY-P100·125·140VMH-E models, which have 2 fans.
PEFY-P40·50·63·71·80 models have 1 fan.
4. Make sure to install the air filter(field supply) on the air intake side.
In case field supplied air filter is used, attach it where the filter service is easily done.
5.On Model :50, 100, 125, 140, you would use flare nut packed with the Indoor Unit,
when connnecting the Outdoor Unit for R407C, R22.
6.In order to increase the strength of the flare nut, the size of some of them has been increased.

Refrigerant piping flare connection (gas M copper tube) : LP ··· ①
Refrigerant piping flare connection (liquid N copper tube) : HP ··· ②
Drain hose 32mm(1-1/4inch) <flexible joint 200mm> (accessory) ··· ③

Unit : mm

## PEFY-P200, 250VMH-E

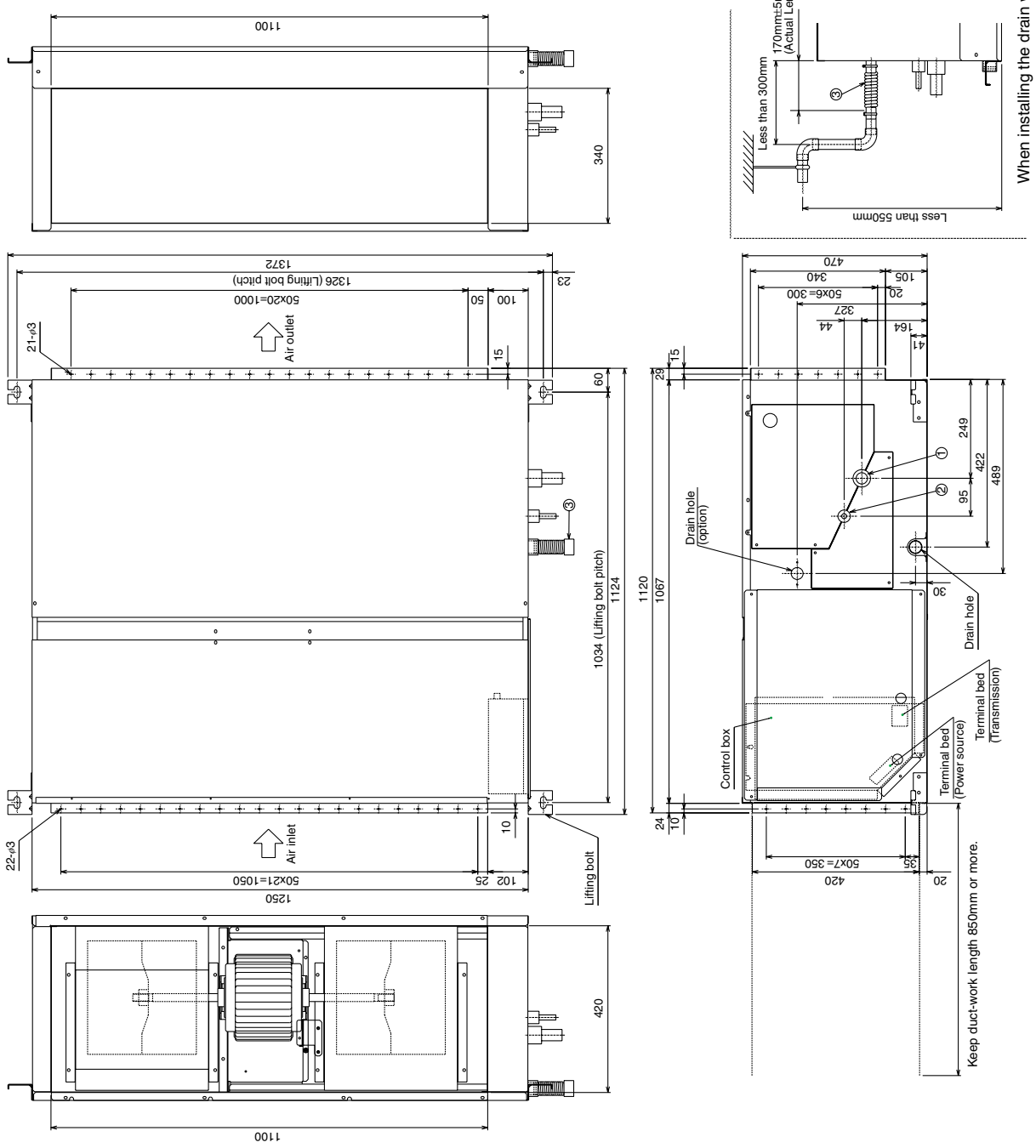
Unit : mm

Note : 1. Use M10 screw for the lifting bolt (field supply).
2. Keep the service space for the maintenance from the bottom when the heat exchanger is cleaned.
3. Make sure to install the air filter(field supply)on the air intake side. In case field supplied air filter is used, attach it where the filter service is easily done.
4. On this model, you would use pipe packed with the Indoor Unit, when connecting the Outdoor Unit for R407C, R22.

| Model | | A | B |
|---|---|---|---|
| P200VMH-E | ※1 | ø19.05 | ø9.52 |
| | ※2 | ø25.4 | ø12.7 |
| P250VMH-E | ※1 | ø22.2 | ø9.52 |
| | ※2 | ø28.58 | ø12.7 |

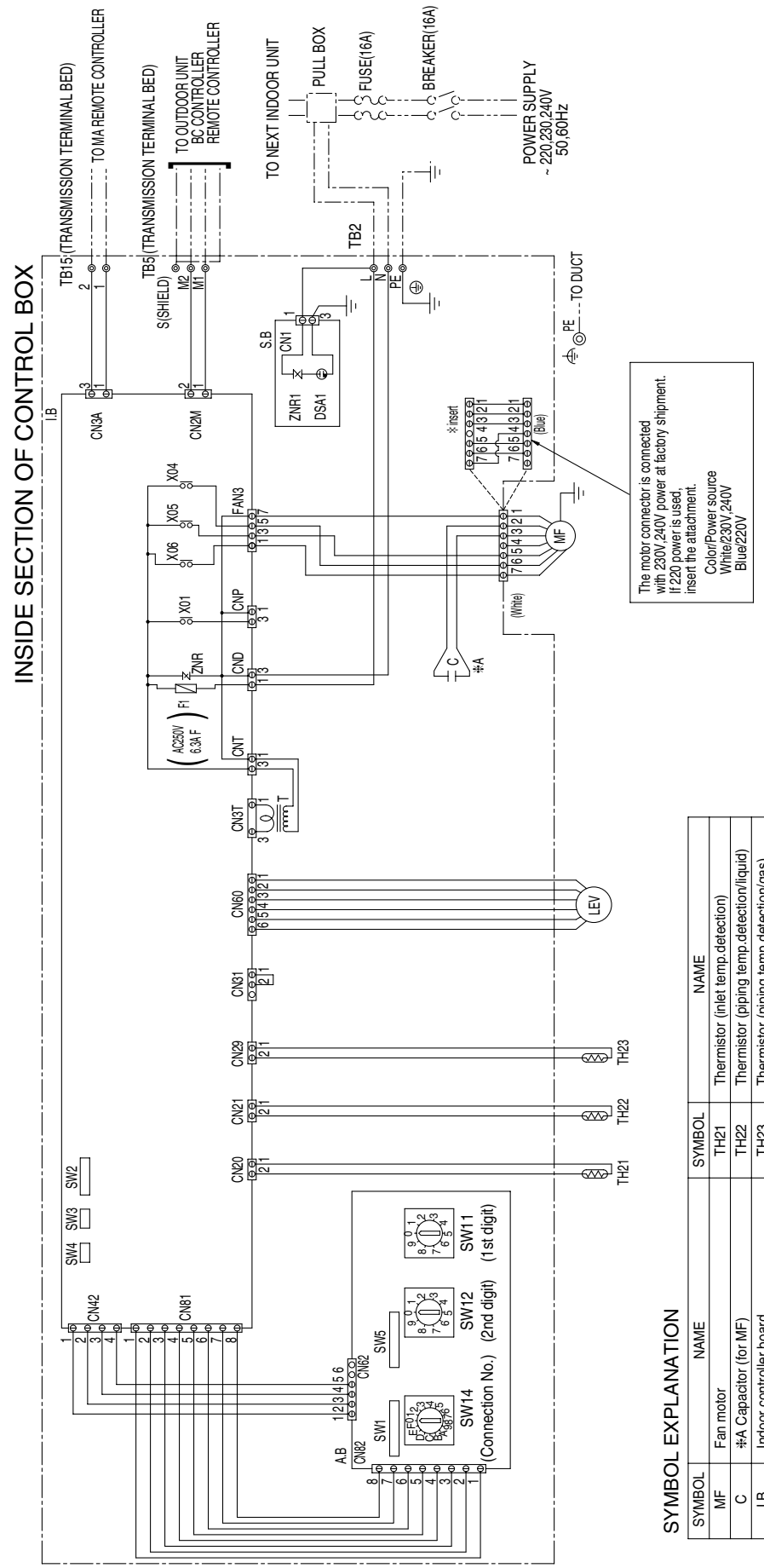
※1:R410A outdoor unit
※2:The other outdoor unit

Refrigerant piping brazing connection (gas A copper tube) : LP ....①
Refrigerant piping brazing connection (liquid B copper tube) : HP ....②
Drain hose 32mm(1-1/4inch) <flexible joint 200mm>(accessory) ....③



# 4. Electrical Wiring Diagrams

## PEFY-P20~32VML-E



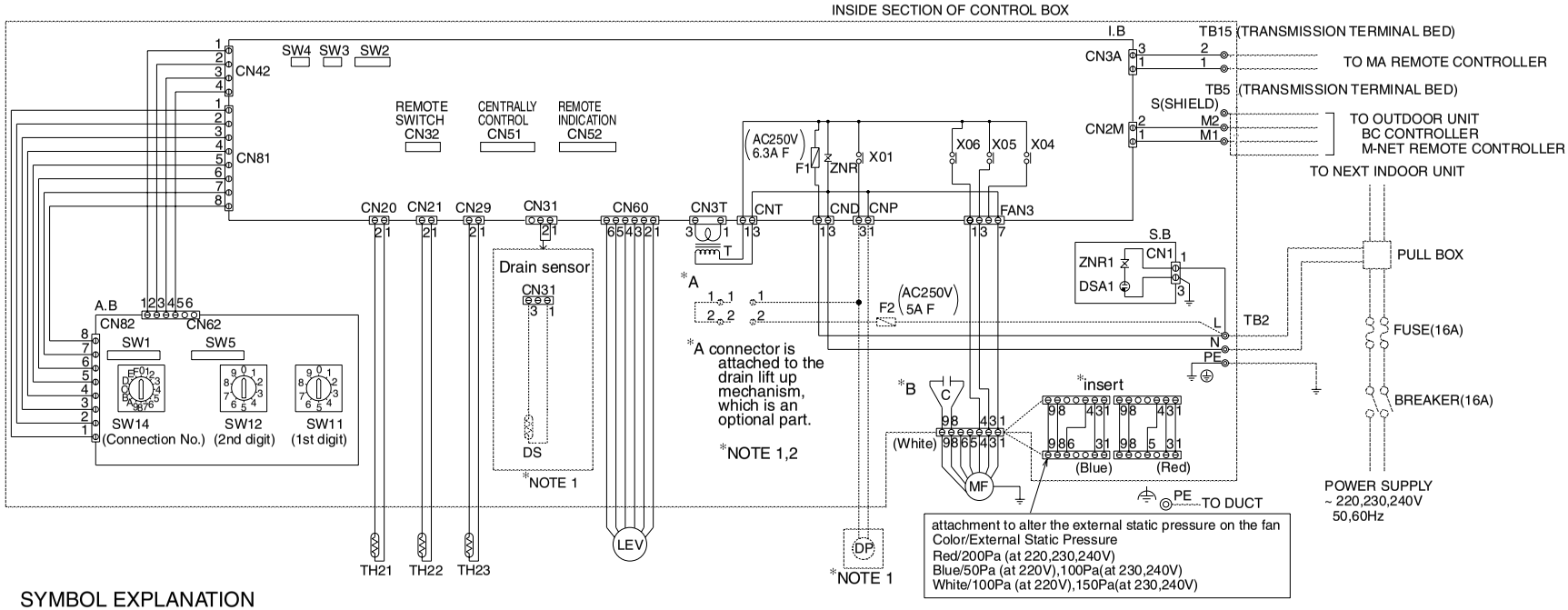

NOTE : 1.The wirings to TB2,TB5 shown in dotted line are field work.
2.Mark ◎ indicates terminal bed, ⊖ connector, ⊖ board insertion connector or fastening connector of control board.

※A Capacitor
MODELS 20/25 1.5μF
MODEL 32 2.0μF

### SYMBOL EXPLANATION

| SYMBOL | NAME |
|---|---|
| MF | Fan motor |
| C | ※A Capacitor (for MF) |
| I.B | Indoor controller board |
| A.B | Address board |
| TB2 | Power source terminal bed |
| TB5 | Transmission terminal bed |
| TB15 | Transmission terminal bed |
| F1 | Fuse AC250V 6.3A F |
| T | Transformer |
| LEV | Electronic linear expan. valve |
| S.B | Surge absorber board |
| X04~X06 | Aux.relay |

| SYMBOL | NAME |
|---|---|
| TH21 | Thermistor (inlet temp.detection) |
| TH22 | Thermistor (piping temp.detection/liquid) |
| TH23 | Thermistor (piping temp.detection/gas) |
| SW11(A.B) | Switch (1st digit address set) |
| SW12(A.B) | Switch (2nd digit address set) |
| SW14(A.B) | Switch (connection No.set) |
| SW1(A.B) | Switch(for mode selection) |
| SW2(I.B) | Switch(for capacity code) |
| SW3(I.B) | Switch(for mode selection) |
| SW4(I.B) | Switch(for model selection) |
| SW5(A.B) | Switch(for voltage selection) |




## SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | S.B | Surge absorber board |
| C | *B Capacitor (for MF) | TH21 | Thermistor (inlet temp.detection) |
| I.B | Indoor controller board | TH22 | Thermistor (piping temp.detection/liquid) |
| A.B | Address board | TH23 | Thermistor (piping temp.detection/gas) |
| TB2 | Power source terminal bed | SW11(A.B) | Switch (1st digit address set) |
| TB5 | Transmission terminal bed | SW12(A.B) | Switch (2nd digit address set) |
| TB15 | Transmission terminal bed | SW14(A.B) | Switch (connection No.set) |
| F1 | Fuse AC250V 6.3A F | SW1(A.B) | Switch(for mode selection) |
| <F2> | Fuse AC250V 5A F | SW2(I.B) | Switch(for capacity code) |
| T | Transformer | SW3(I.B) | Switch(for mode selection) |
| <DP> | Drain Pump | SW4(I.B) | Switch(for model selection) |
| LEV | Electronic linear expan. valve | SW5(A.B) | Switch(for voltage selection) |
| <DS> | Drain sensor | X04~X06 | Aux.relay |

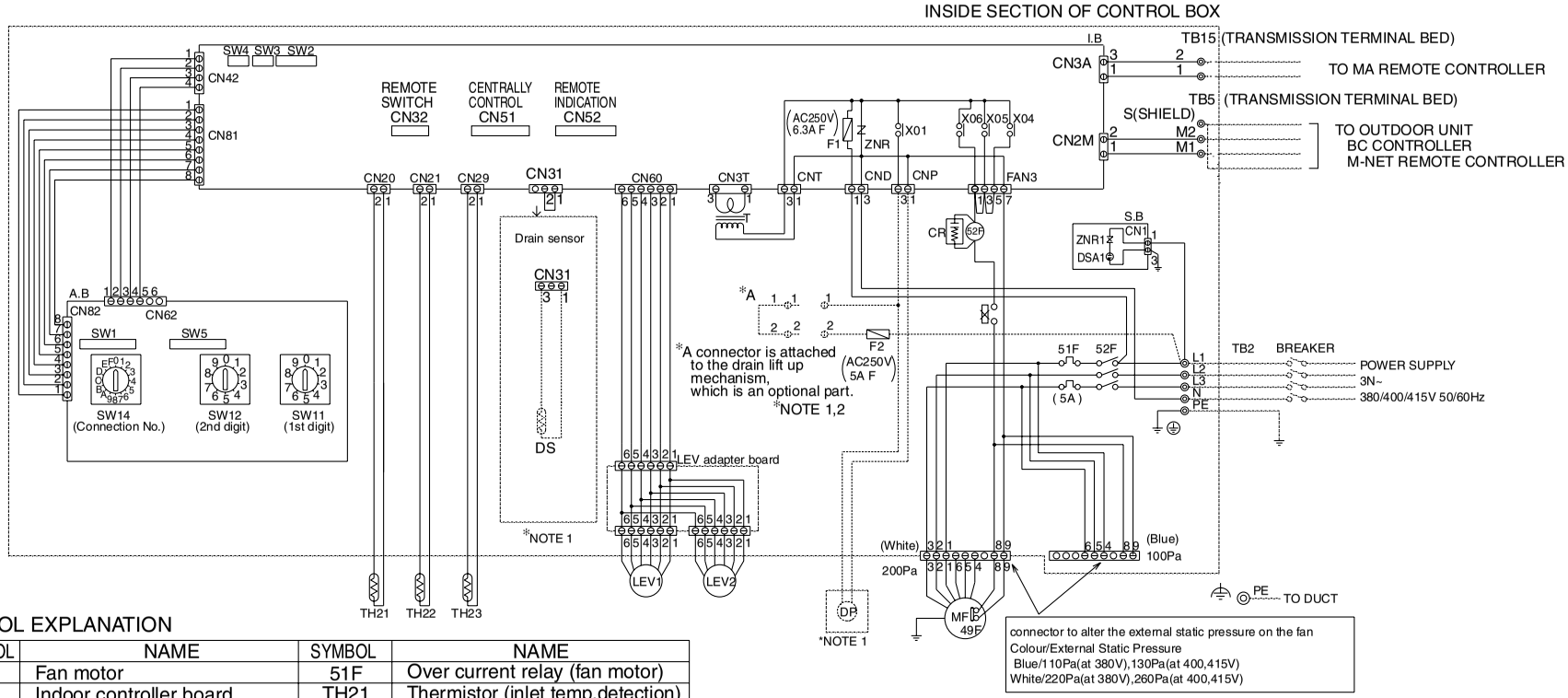
inside < > is the optional parts

*B Capacitor

| | |
|---|---|
| MODELS 40/50 | 3.0μF |
| MODEL 63 | 4.0μF |
| MODELS 71/80 | 5.0μF |
| MODELS 100/125/140 | 7.0μF |

NOTE : 1. The part of the broken line indicates the circuit for optional parts.
2. *A in the chart is the connector for a drain pump test run operation.
(The Drain Pump operates continuously if the connector is inserted and the power is supplied.)
After the test run, make sure to remove the *A connector.
3. The wirings to TB2,TB5 (shown in dotted line) are field work.
4. Mark ◎ indicates terminal bed, ⊖ connector, ⊡ board insertion connector or fastening connector of control board.

# PEFY-P200·250VMH-E




SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | 51F | Over current relay (fan motor) |
| I.B | Indoor controller board | TH21 | Thermistor (inlet temp.detection) |
| A.B | Address board | TH22 | Thermistor (piping temp.detection/liquid) |
| TB2 | Power source terminal bed | TH23 | Thermistor (piping temp.detection/gas) |
| TB5 | Transmission terminal bed | SW11(A.B) | Switch (1st digit address set) |
| TB15 | Transmission terminal bed | SW12(A.B) | Switch (2nd digit address set) |
| F1 | Fuse AC250V 6.3A F | SW14(A.B) | Switch (connection No.set) |
| <F2> | Fuse AC250V 5A F | SW1(A.B) | Switch(for mode selection) |
| T | Transformer | SW2(I.B) | Switch(for capacity code) |
| <DP> | Drain Pump | SW3(I.B) | Switch(for mode selection) |
| LEV1,LEV2 | Electronic linear expan. valve | SW4(I.B) | Switch(for model selection) |
| <DS> | Drain sensor | SW5(A.B) | Switch(for voltage selection) |
| S.B | Surge absorber board | X04-X06 | Aux.relay |
| 52F | Contactor (fan motor) | 49F | Inner thermostat |

inside < > is the optional parts

CAUTION : 1.To protect Fan motor from abnormal current, Over current relays<51F> is installed. Therefore, do not change factory set value of Over current relays.

NOTE : 1.The part of the broken line indicates the circuit for optional parts.
2. *A in the chart is the connector for a drain pump test run operation. (The Drain Pump operates continuously if the connector is inserted and the power is supplied.)
After the test run, make sure to remove the *A connector.
3.The wirings to TB2,TB5 shown in dotted line are field work.
4.Mark ◎ indicates terminal bed, ⊖ connector, ⊡ board insertion connector or fastening connector of control board.

# 5. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Long life filter | PAC-KE32LAF-F | P20/P25/P32 |
| | PAC-KE86LAF | P40/P50/P63 |
| | PAC-KE88LAF | P71/P80 |
| | PAC-KE89LAF | P100/P125/P140 |
| | PAC-KE85LAF | P200/P250 |
| Filter box | PAC-KE63TB-F | P40/P50/P63 |
| | PAC-KE80TB-F | P71/P80 |
| | PAC-KE140TB-F | P100/P125/P140 |
| | PAC-KE250TB-F | P200/P250 |
| Drain water lift-up kit | PAC-KE04DM-F | P40/P50/P63/P71/P80/P100<br>P125/P140/P200/P250 |

Ceiling concealed PEFY-P-VMM-E

# CONTENTS



1. Specifications ..... Ⅰ-26

2. Sound Levels ..... Ⅰ-28

2-1 Noise levels(VMM-E) ..... Ⅰ-28
2-2 NC curves(VMM-E) ..... Ⅰ-28
2-3 Fan characteristics curves(VMM-E) ..... Ⅰ-35

3. External Dimensions ..... Ⅰ-37

4. Electrical Wiring Diagrams ..... Ⅰ-42

5. Options ..... Ⅰ-44

# 1. Specifications

PEFY-P-VMM-E

| | | | PEFY-P20VMM-E | PEFY-P25VMM-E | PEFY-P32VMM-E | PEFY-P40VMM-E |
|---|---|---|---|---|---|---|
| Power source | | | ~220-240V 50Hz | | | |
| Cooling capacity | ※1 | kW | 2.2 | 2.8 | 3.6 | 4.5 |
| | ※2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 |
| Heating capacity | ※1 | kW | 2.5 | 3.2 | 4.0 | 5.0 |
| Power consumption (50Hz) | Cooling | kW | 0.15 | | 0.17 | 0.19 |
| | Heating | kW | 0.15 | | 0.17 | 0.19 |
| Current | Cooling | A | 0.73 | | 0.81 | 0.92 |
| | Heating | A | 0.73 | | 0.81 | 0.92 |
| External finish | | | Galvanizing | | | |
| Dimension | Height | mm | 295 | | | |
| | Width | mm | 815 | | | 935 |
| | Depth | mm | 700 | | | |
| Net weight | | kg | 27 | | | 33 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | Sirocco fan× 1 | | | Sirocco fan× 2 |
| | Airflow rate (Lo-Mid-Hi) | m³/min | 6.0-7.2-8.5 | | 7.5-9.0-10.5 | 10.0-12.0-14.0 |
| | External static pressure | Pa | 30/50/100 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.075 | | | |
| Air filter | | | PP Honeycomb fabric (washable) | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | |
| | Liquid (Flare) | mm | ø 6.35 | | | |
| Drain pipe dimension | | | R1 (External thread) | | | |
| Noise level (Lo-Mid-Hi) | ※3 | dB(A) | 27-30-32 | | 28-32-35 | 31-34-37 |

| | | | PEFY-P50VMM-E | PEFY-P63VMM-E | PEFY-P71VMM-E | PEFY-P80VMM-E |
|---|---|---|---|---|---|---|
| Power source | | | ~220-240V 50Hz | | | |
| Cooling capacity | ※1 | kW | 5.6 | 7.1 | 8.0 | 9.0 |
| | ※2 | kcal/h | 5,000 | 6,300 | 7,100 | 8,000 |
| Heating capacity | ※1 | kW | 6.3 | 8.0 | 9.0 | 10.0 |
| Power consumption (50Hz) | Cooling | kW | 0.20 | 0.22 | 0.25 | |
| | Heating | kW | 0.20 | 0.22 | 0.25 | |
| Current | Cooling | A | 0.98 | 1.07 | 1.15 | |
| | Heating | A | 0.98 | 1.07 | 1.15 | |
| External finish | | | Galvanizing | | | |
| Dimension | Height | mm | 295 | | | |
| | Width | mm | 935 | 1175 | | |
| | Depth | mm | 700 | | | |
| Net weight | | kg | 33 | 42 | | |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | Sirocco fan×2 | | | |
| | Airflow rate (Lo-Hi) | m³/min | 12.0-14.5-17.0 | 13.5-16.2-19.0 | 14.5-18.0-21.0 | |
| | External static pressure | Pa | 30/50/100 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.075 | 0.078 | | |
| Air filter | | | PP Honeycomb fabric (washable) | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 (R410A)<br>ø 15.88 (R22,R407C) | ø 15.88 | | |
| | Liquid (Flare) | mm | ø 6.35 (R410A)<br>ø 9.52 (R22,R407C) | ø 9.52 | | |
| Drain pipe dimension | | | R1 (External thread) | | | |
| Noise level (Lo-Mid-Hi) | ※3 | dB(A) | 31-35-38 | | 32-36-39 | |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 It is measured in anechoic room.

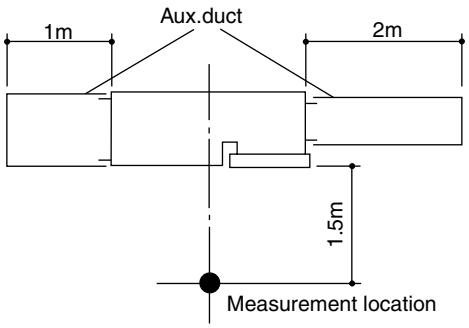
| | | | PEFY-P100VMM-E | PEFY-P125VMM-E | PEFY-P140VMM-E |
|---|---|---|---|---|---|
| Power source | | | ~220-240V 50Hz | | |
| Cooling capacity | ※1 | kW | 11.2 | 14.0 | 16.0 |
| | ※2 | kcal/h | 10,000 | 12,500 | 14,000 |
| Heating capacity | ※1 | kW | 12.5 | 16.0 | 18.0 |
| Power consumption (50/60Hz) | Cooling | kW | 0.29 | 0.40 | 0.42 |
| | Heating | kW | 0.29 | 0.40 | 0.42 |
| Current | Cooling | A | 1.34 | 1.90 | 1.95 |
| | Heating | A | 1.34 | 1.90 | 1.95 |
| External finish | | | Galvanizing | | |
| Dimension | Height | mm | 325 | | |
| | Width | mm | 1415 | | 1715 |
| | Depth | mm | 740 | | |
| Net weight | | kg | 62 | 65 | 70 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | |
| Fan | Type | | Sirocco fan×2 | | |
| | Airflow rate (Lo-Hi) | $m^3$/min | 23.0-33.0 | 28.0-40.0 | 29.5-42.0 |
| | External static pressure | Pa | 50/130 | | |
| Motor | Type | | Single phase induction motor | | |
| | Output | kW | 0.200 | 0.280 | |
| Air filter | | | PP Honeycomb fabric (washable) | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 15.88 (R410A)<br>ø 19.05 (R22,R407C) | | |
| | Liquid (Flare) | mm | ø 9.52 | | |
| Drain pipe dimension | | | R1 (External thread) | | |
| Noise level (Lo-Mid-Hi) | ※3 | dB(A) | 40-44 | 42-45 | 42-45 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels(VMM-E)

Ceiling concealed (VMM-E series)



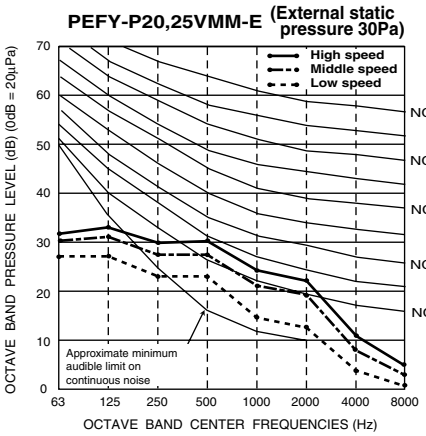

Noise level at anechoic room (Low-Middle-High) Unit : dB(A)

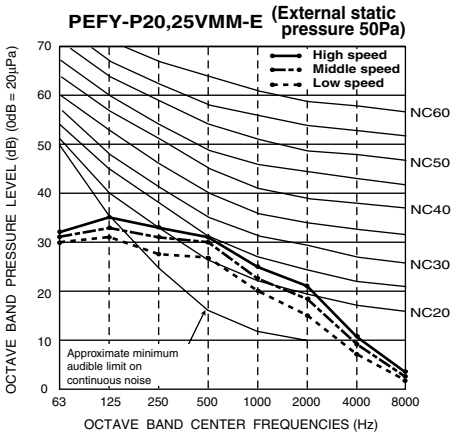
| Model | External static pressure❊ | | |
|---|---|---|---|
| | Low | Mid | High |
| PEFY-P20VMM-E<br>PEFY-P25VMM-E | 23-28-31 | 27-30-32 | 29-34-39 |
| PEFY-P32VMM-E | 26-30-33 | 28-32-35 | 32-36-39 |
| PEFY-P40VMM-E | 29-32-35 | 31-34-37 | 33-37-41 |
| PEFY-P50VMM-E | 29-34-37 | 31-35-38 | 34-38-41 |
| PEFY-P63VMM-E | 30-34-37 | 31-35-38 | 34-38-41 |
| PEFY-P71VMM-E<br>PEFY-P80VMM-E | 31-34-37 | 32-36-39 | 35-39-42 |
| PEFY-P100VMM-E | 40-44 | - | 43-47 |
| PEFY-P125VMM-E | 42-45 | - | 44-47 |
| PEFY-P140VMM-E | 42-45 | - | 44-47 |

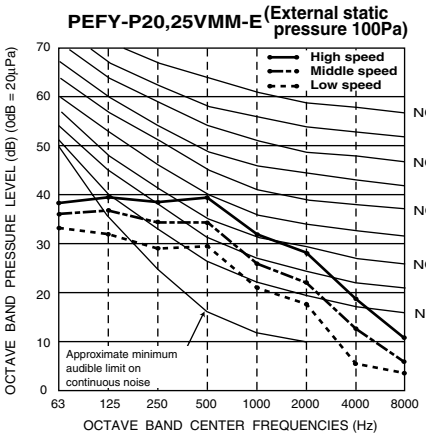
❊ PEFY-P20~80VMM-E
Low : 30Pa Mid : 50Pa High : 100Pa
❊ PEFY-P100~140VMM-E
Low : 50Pa High : 130Pa

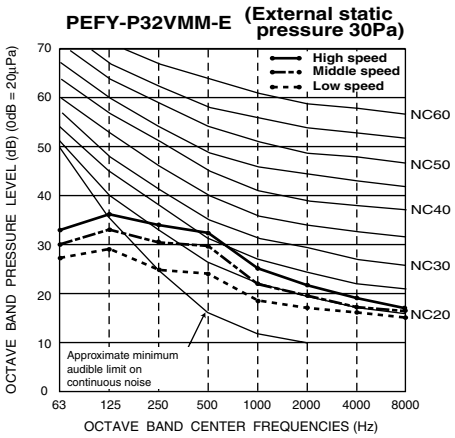
## 2-2. NC curves(VMM-E)

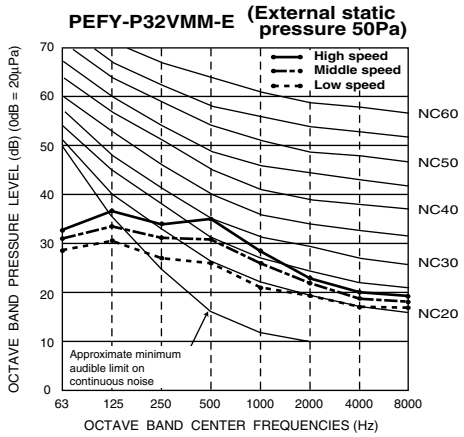
### 1) Back inlet

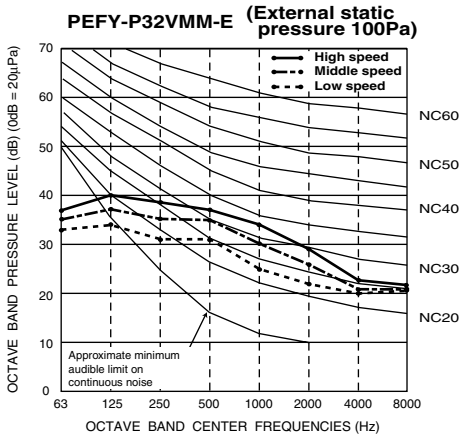


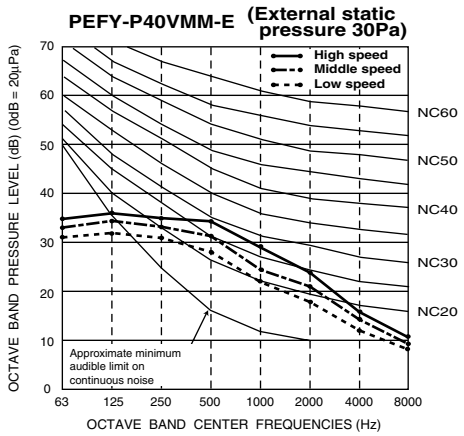



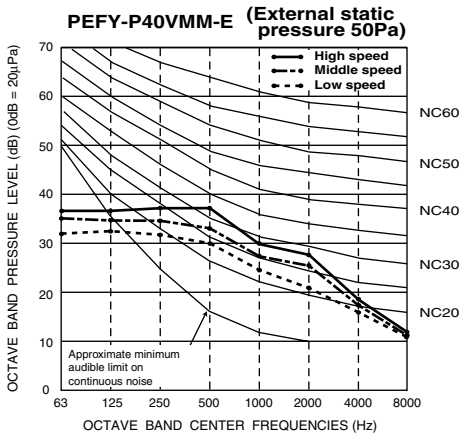



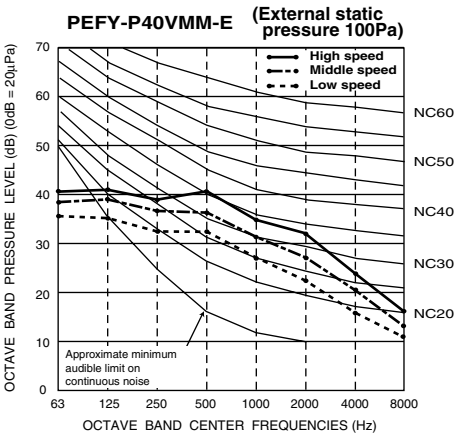



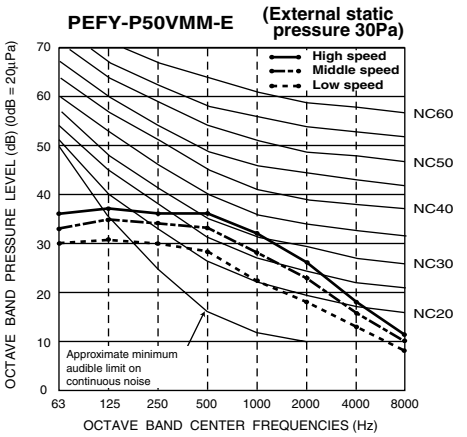

PEFY-P32VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

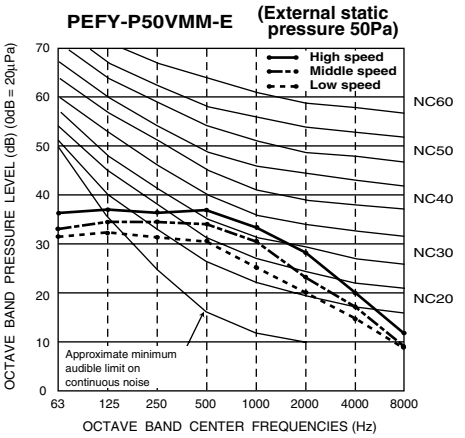

PEFY-P32VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

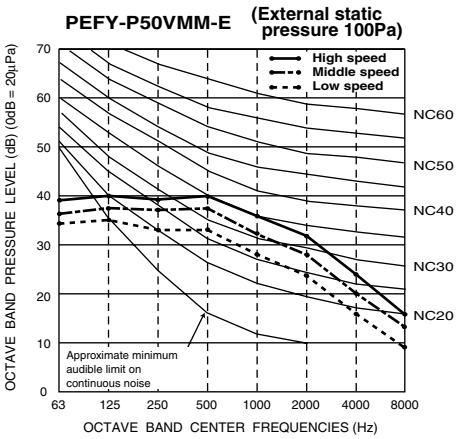

PEFY-P40VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P40VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

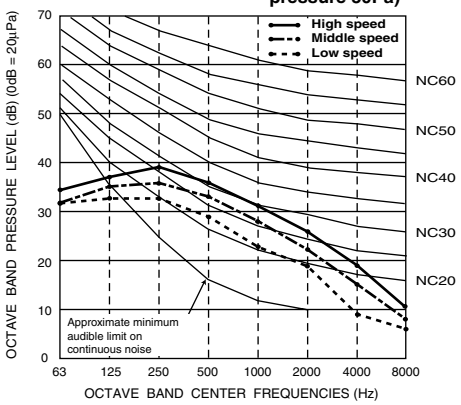

PEFY-P40VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P50VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

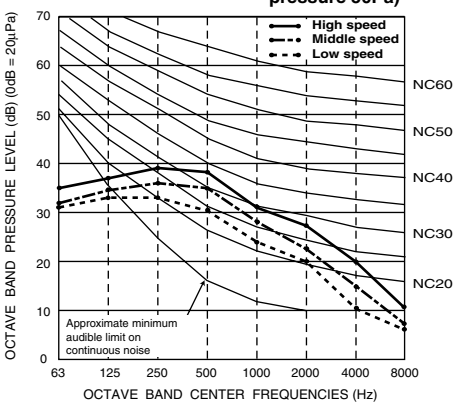

PEFY-P50VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P50VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

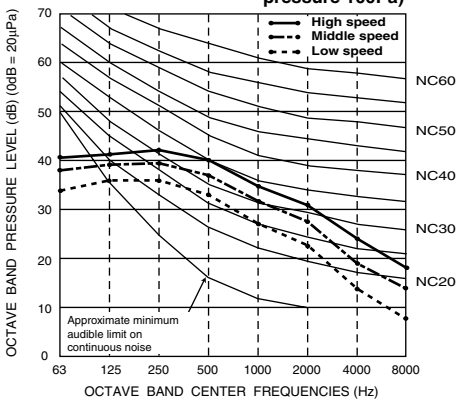
**PEFY-P63VMM-E (External static pressure 30Pa)**



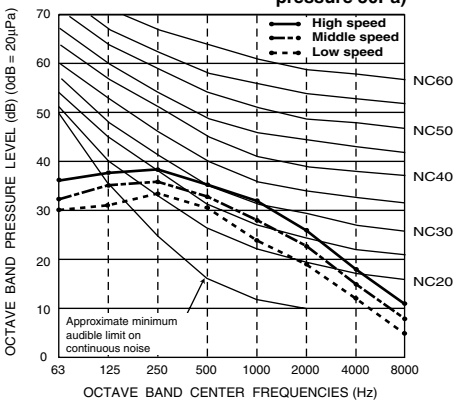

**PEFY-P63VMM-E (External static pressure 50Pa)**



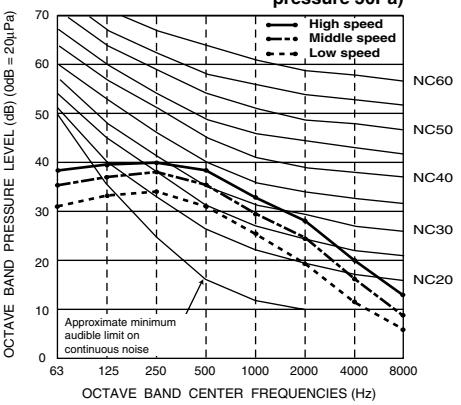

**PEFY-P63VMM-E (External static pressure 100Pa)**



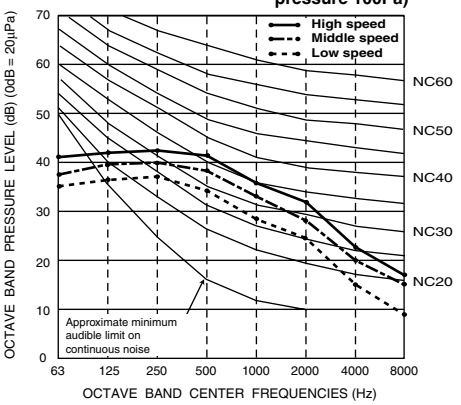

**PEFY-P71,80VMM-E (External static pressure 30Pa)**



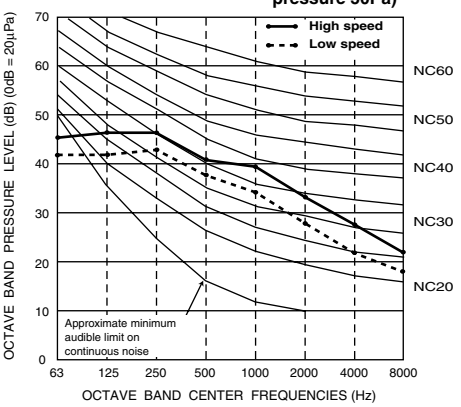

**PEFY-P71,80VMM-E (External static pressure 50Pa)**



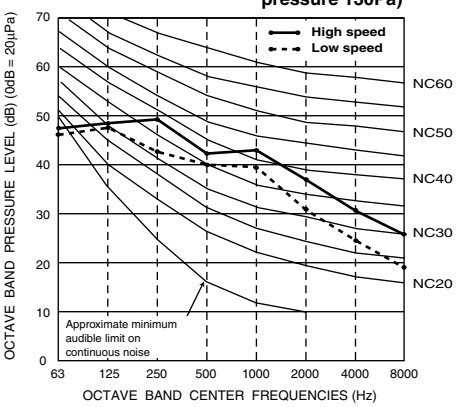

**PEFY-P71,80VMM-E (External static pressure 100Pa)**

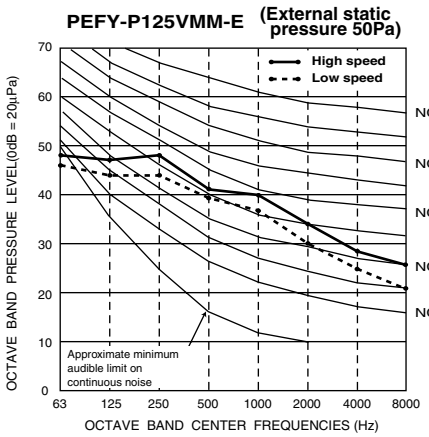


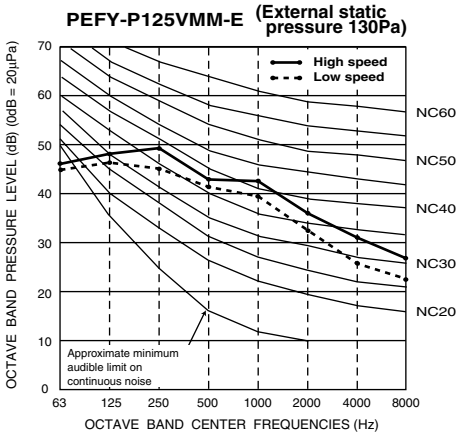

**PEFY-P100VMM-E (External static pressure 50Pa)**

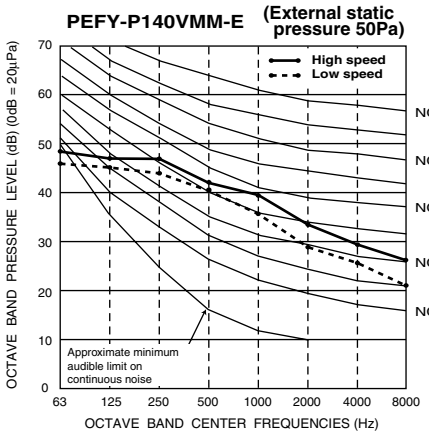


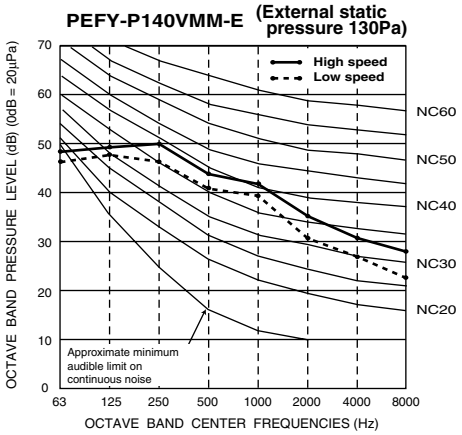

**PEFY-P100VMM-E (External static pressure 130Pa)**



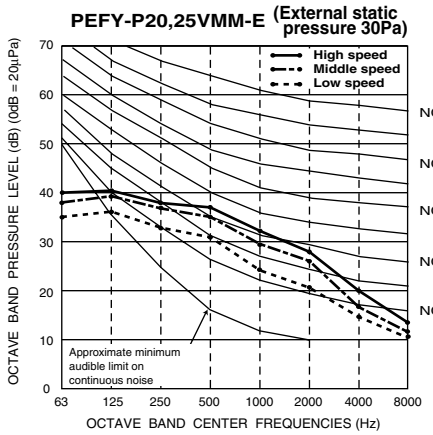


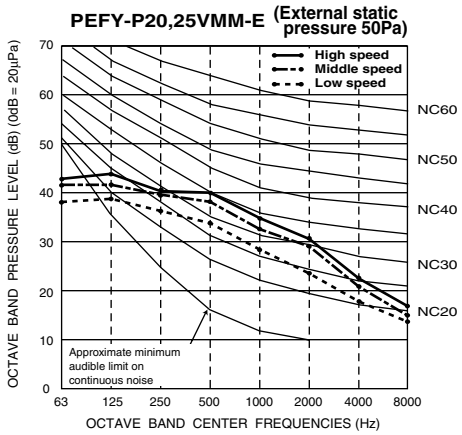



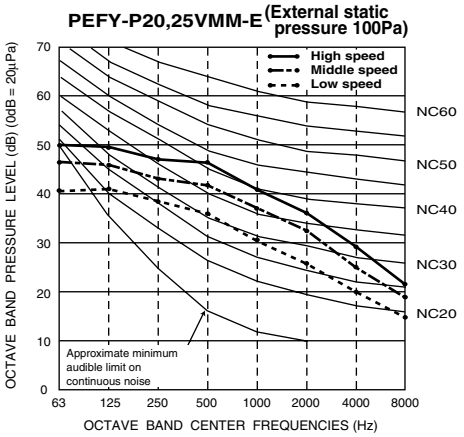



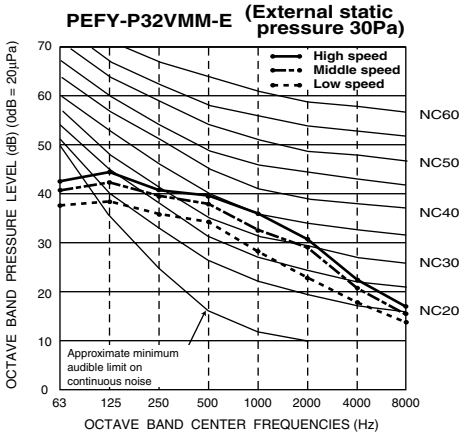



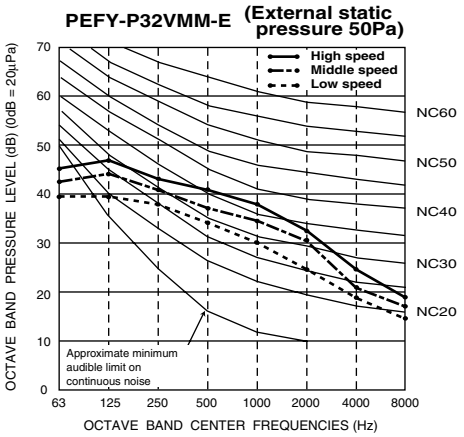

## 2) Bottom inlet

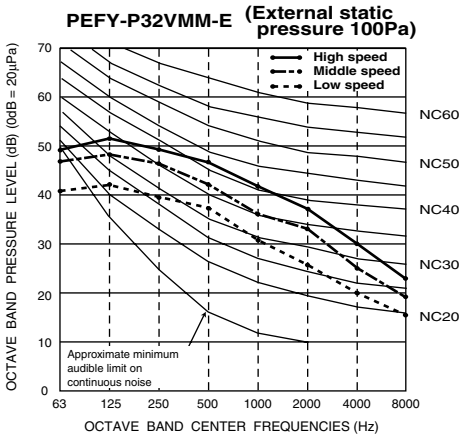


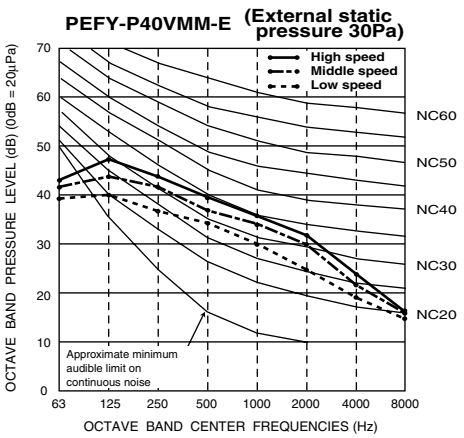



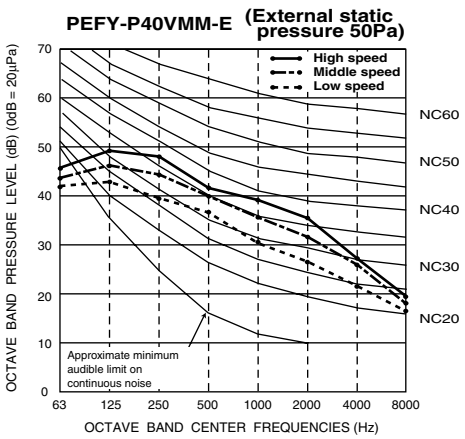

PEFY-P20,25VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

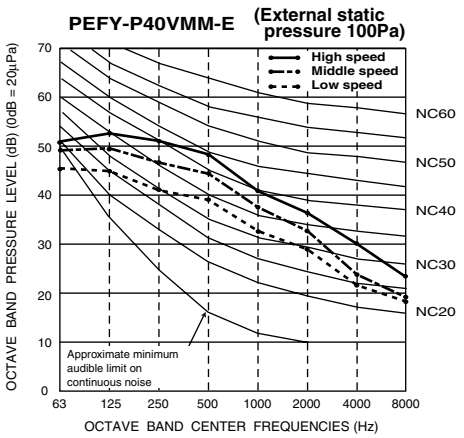

PEFY-P32VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

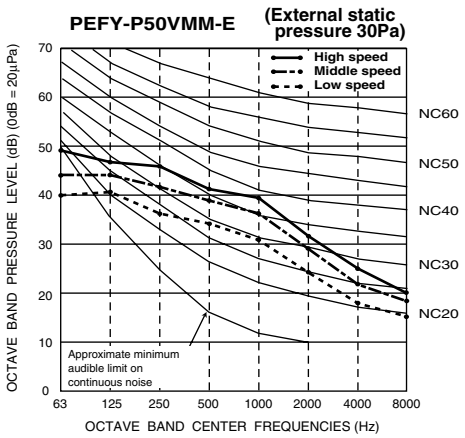

PEFY-P32VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

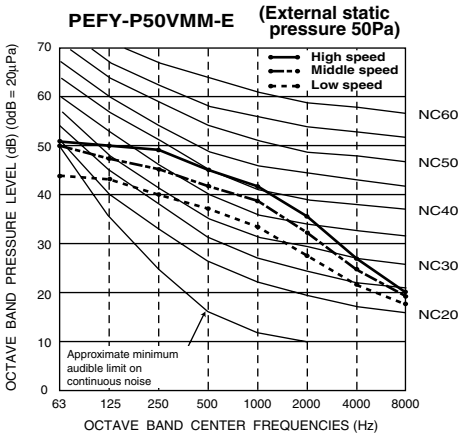

PEFY-P32VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

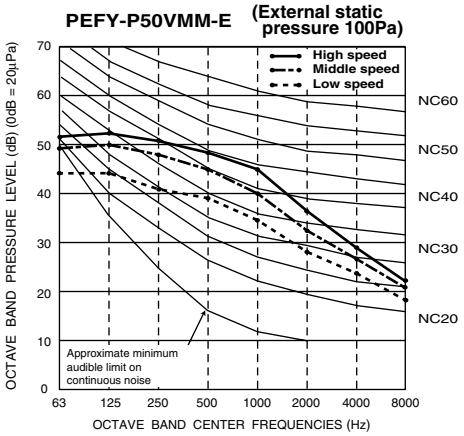

PEFY-P40VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

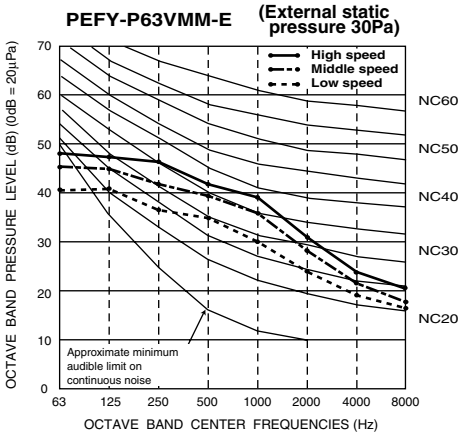

PEFY-P40VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

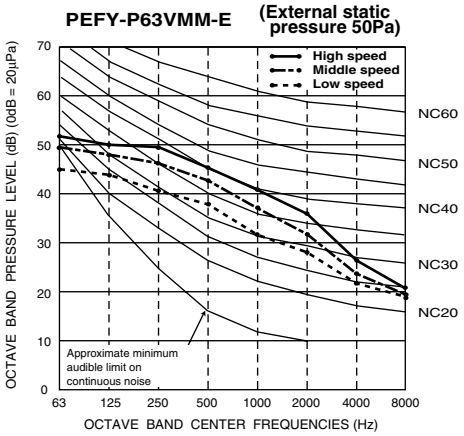

PEFY-P40VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

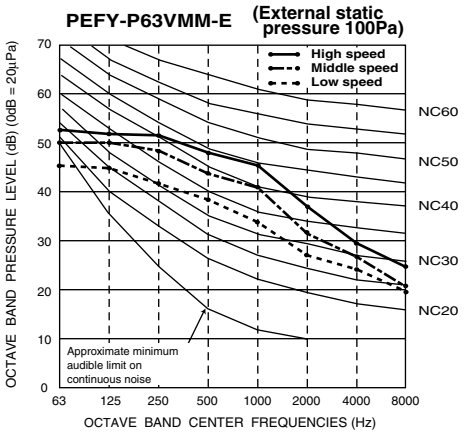

PEFY-P50VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

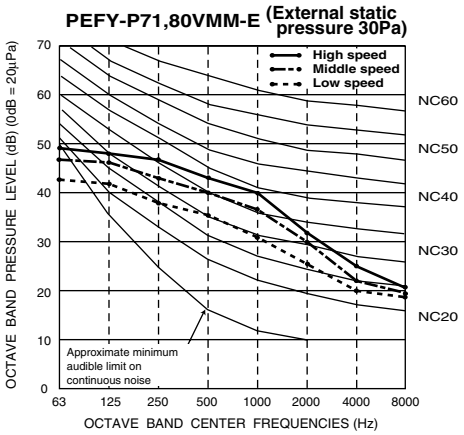

PEFY-P50VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

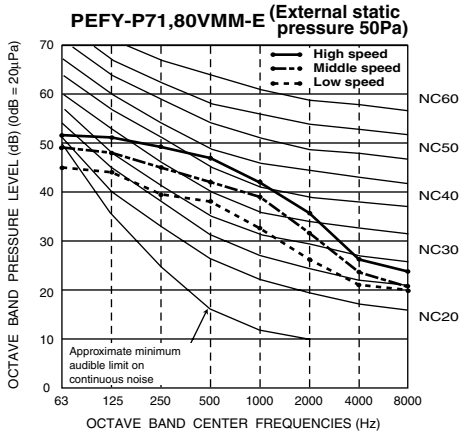

PEFY-P50VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

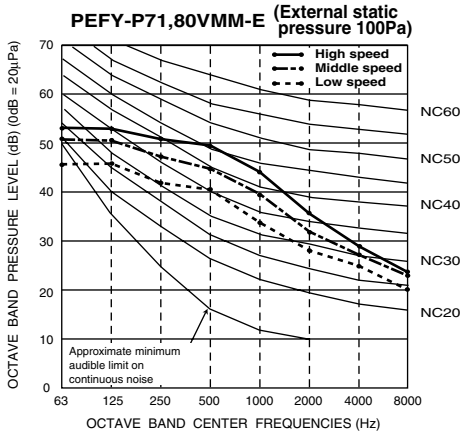

PEFY-P63VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

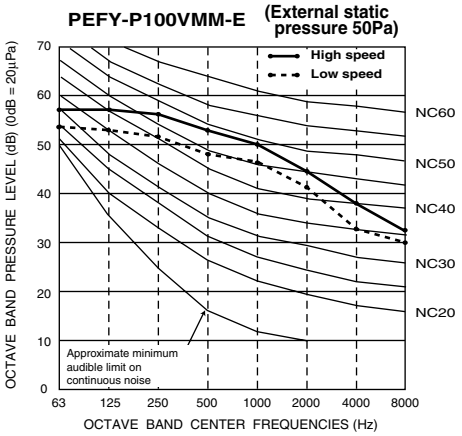

PEFY-P63VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

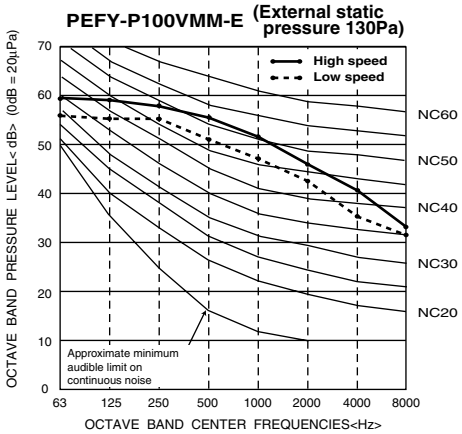

PEFY-P63VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

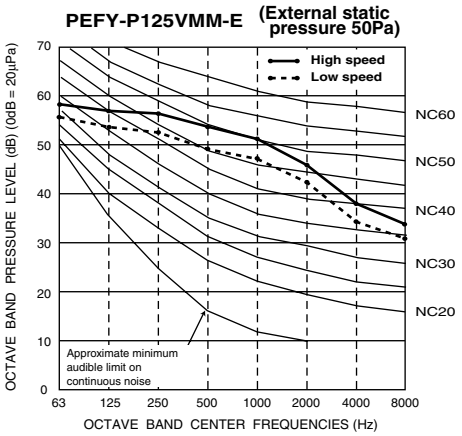

PEFY-P71,80VMM-E (External static pressure 30Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

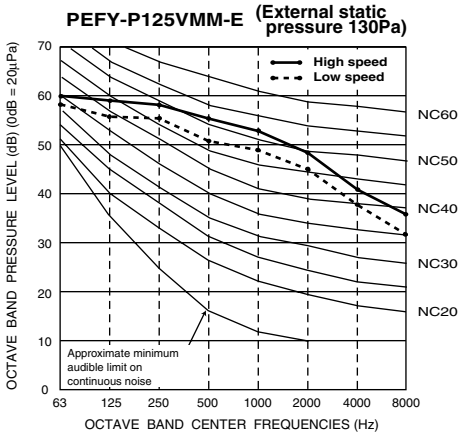

PEFY-P71,80VMM-E (External static pressure 50Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

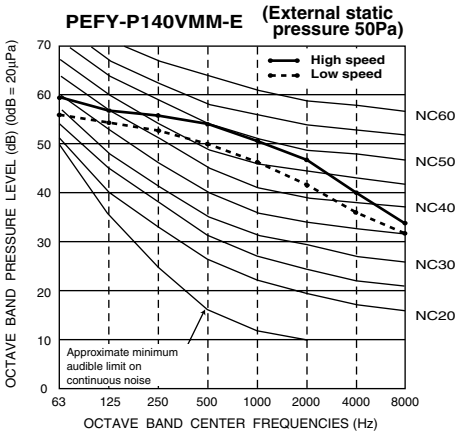

PEFY-P71,80VMM-E (External static pressure 100Pa)
High speed
Middle speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

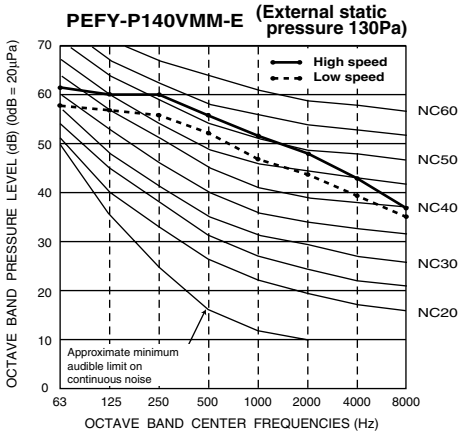

PEFY-P100VMM-E (External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P100VMM-E (External static pressure 130Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL< dB> (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES<Hz>


PEFY-P125VMM-E (External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

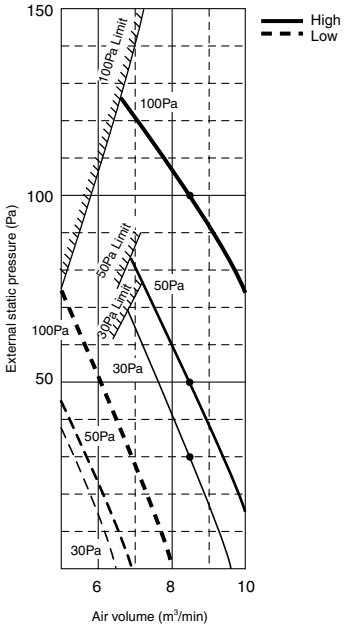

PEFY-P125VMM-E (External static pressure 130Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P140VMM-E (External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

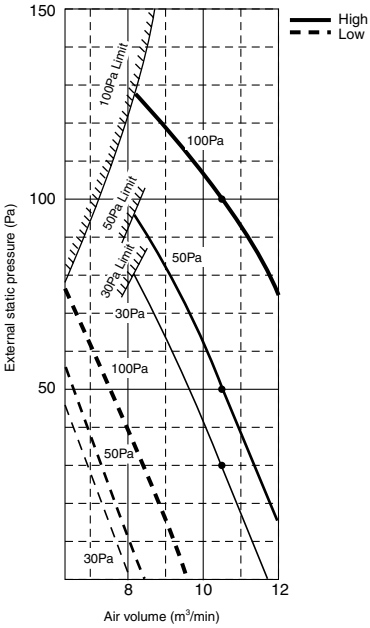

PEFY-P140VMM-E (External static pressure 130Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) (0dB = 20μPa)
OCTAVE BAND CENTER FREQUENCIES (Hz)

## 2-3. Fan characteristics curves(VMM-E)

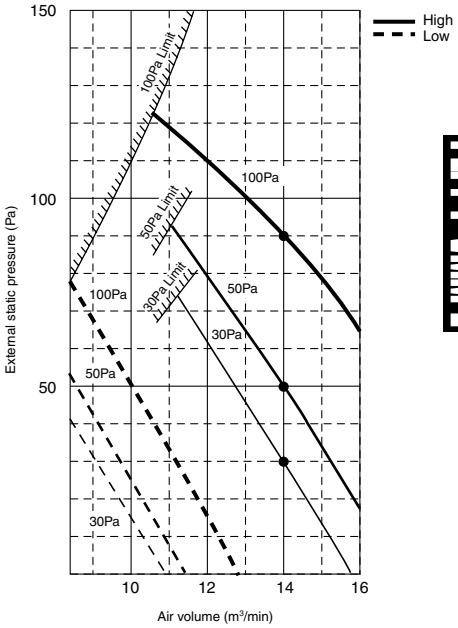
**PEFY-P20,25VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220-240(V)**



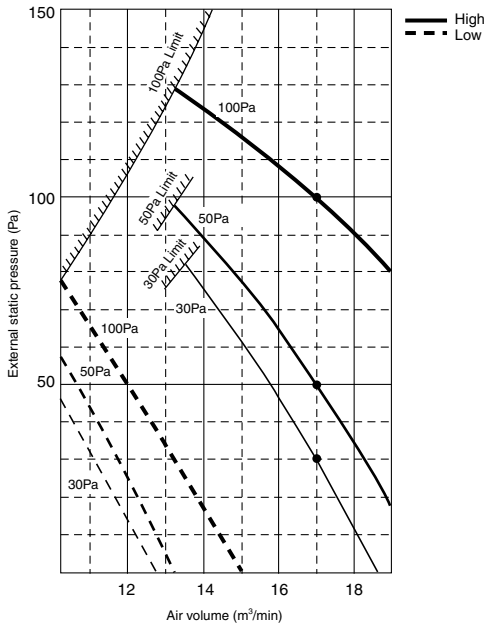

**PEFY-P32VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220-240(V)**



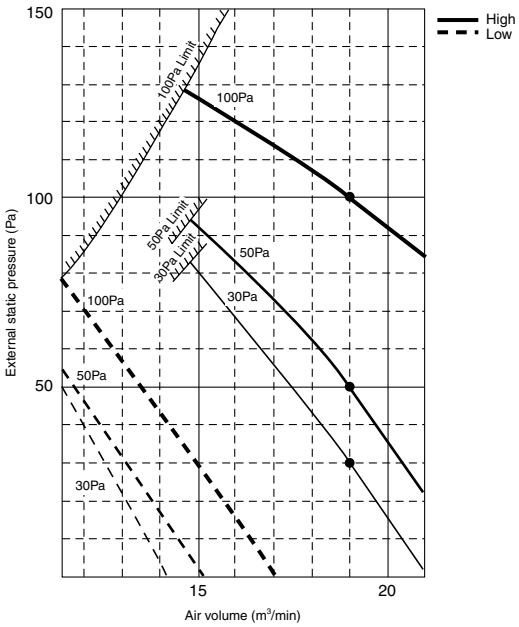

**PEFY-P40VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220-240(V)**



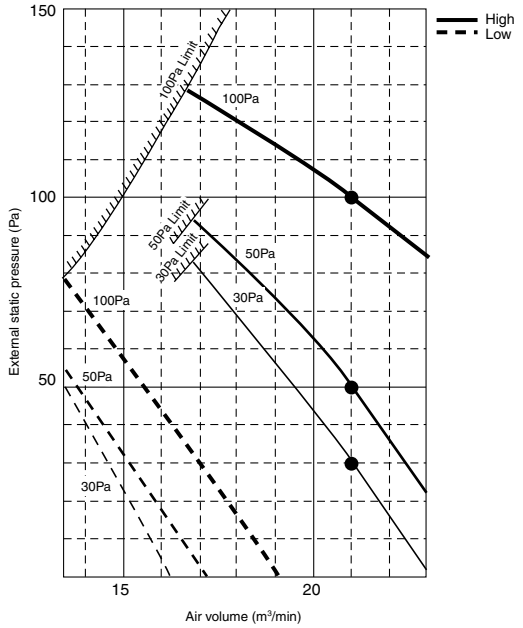

**PEFY-P50VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220-240(V)**



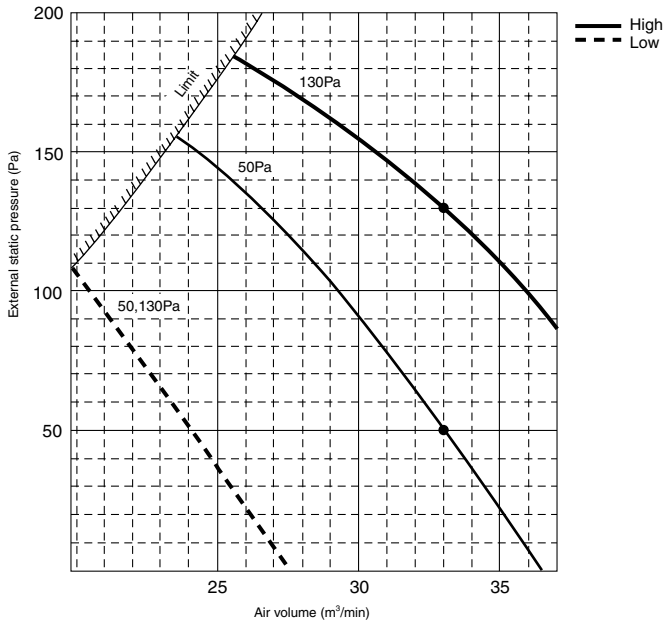

**PEFY-P63VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220-240(V)**



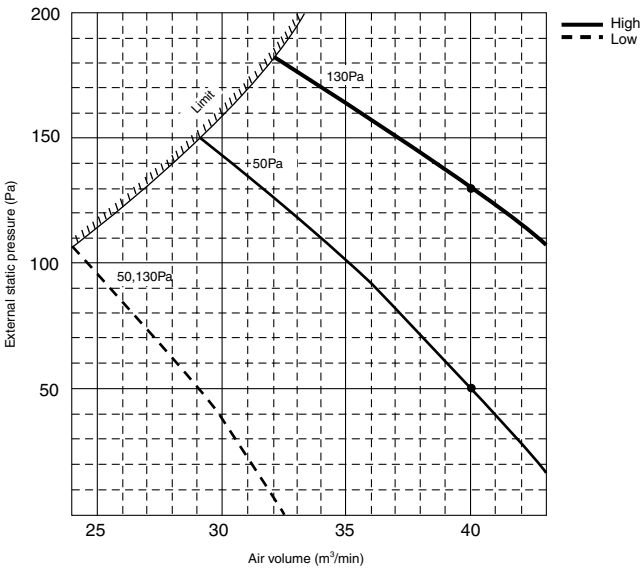
**PEFY-P71,80VMM-E**
**External static pressure : 30,50,100Pa**
**Power source : 220·240(V)**



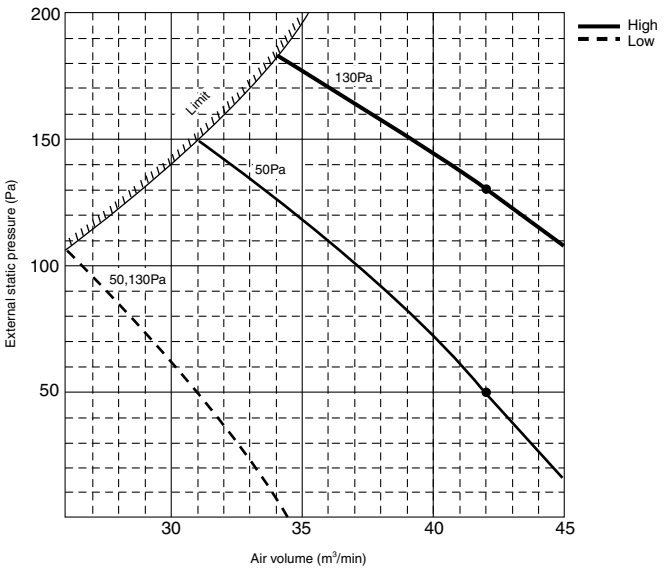

**PEFY-P100VMM-E**
**External static pressure : 50,130Pa**
**Power source : 220·240(V)**




**PEFY-P125VMM-E**
**External static pressure : 50,130Pa**
**Power source : 220·240(V)**



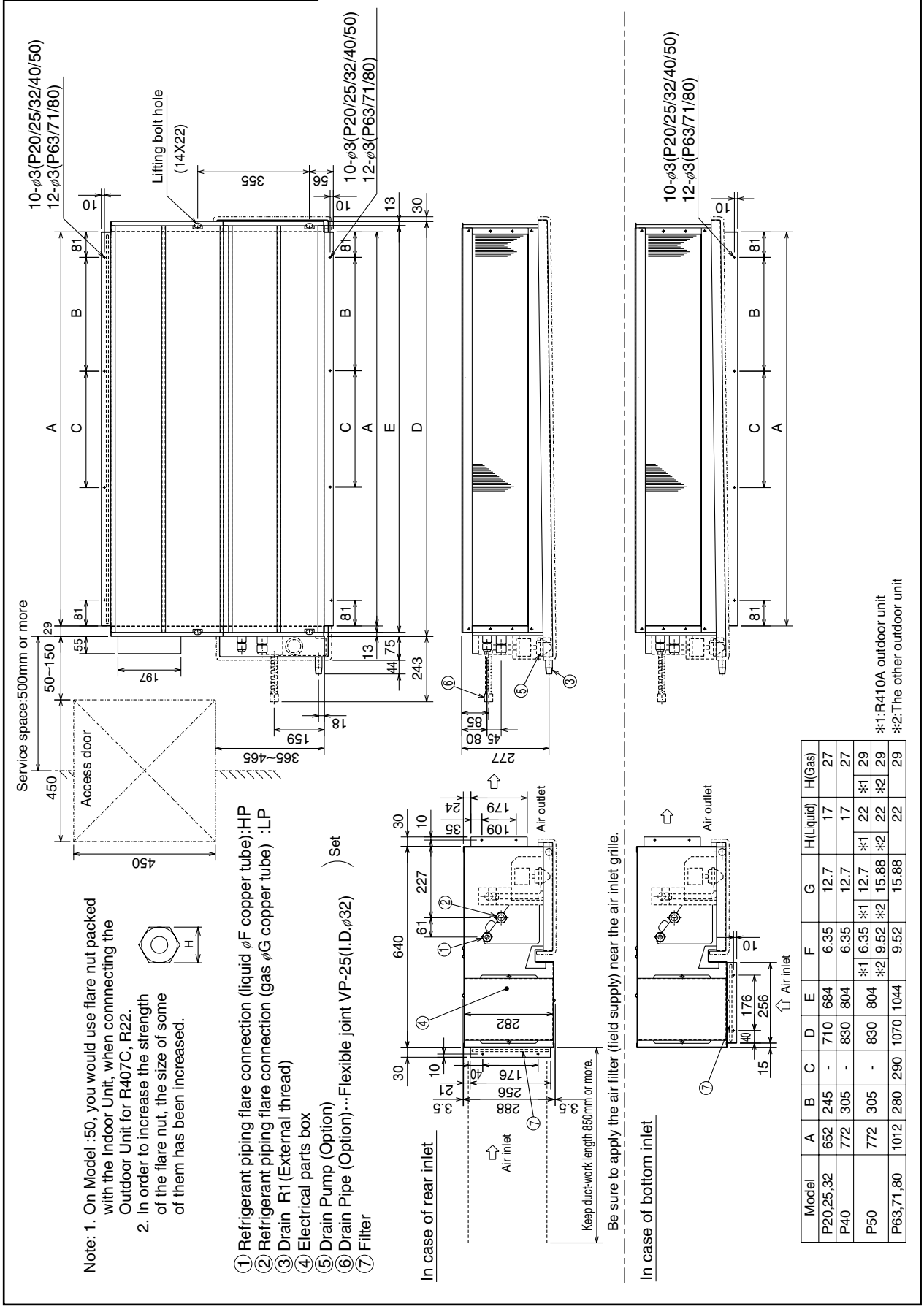

**PEFY-P140VMM-E**
**External static pressure : 50,130Pa**
**Power source : 220·240(V)**



# 3. External Dimensions

**PEFY-P20,25,32,40,50,63,71,80VMM-E**

Unit : mm



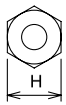

| Model | A | B | C | D | E | F | G | H(Liquid) | H(Gas) |
|---|---|---|---|---|---|---|---|---|---|
| P20,25,32 | 652 | 245 | - | 710 | 684 | 6.35 | 12.7 | 17 | 27 |
| P40 | 772 | 305 | - | 830 | 804 | 6.35 | 12.7 | 17 | 27 |
| P50 | 772 | 305 | - | 830 | 804 | ※1 6.35<br>※2 9.52 | ※1 12.7<br>※2 15.88 | ※1 22<br>※2 22 | ※1 29<br>※2 29 |
| P63,71,80 | 1012 | 280 | 290 | 1070 | 1044 | 9.52 | 15.88 | 22 | 29 |

※1:R410A outdoor unit
※2:The other outdoor unit

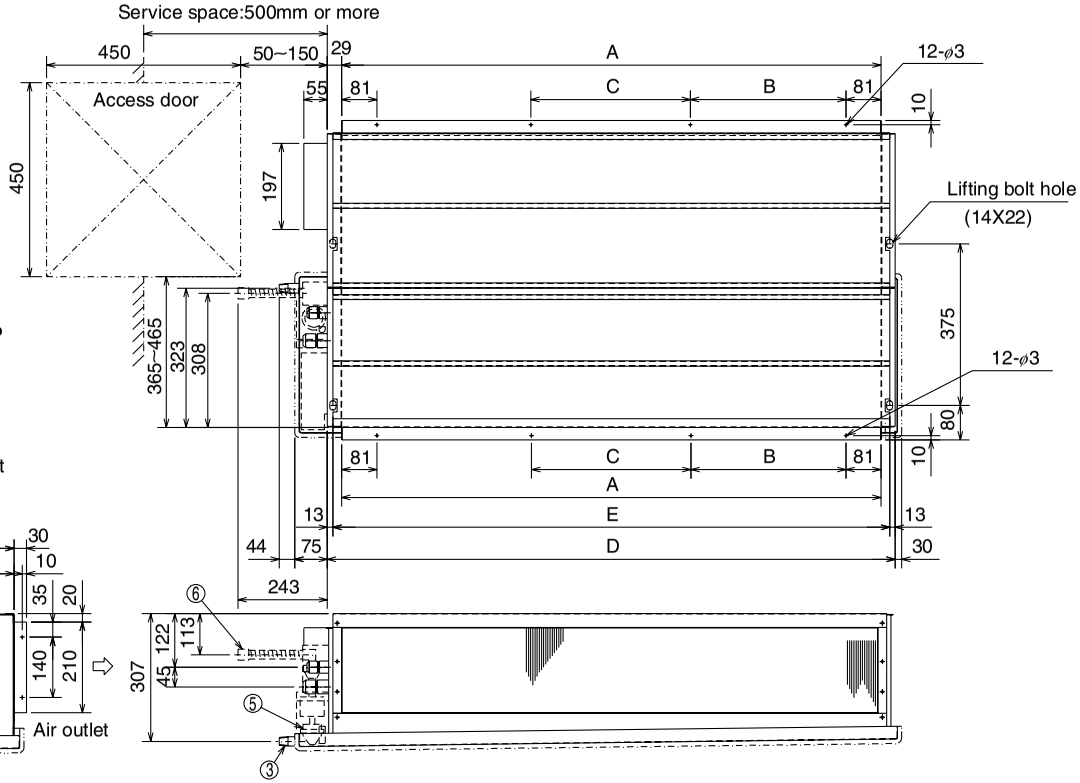
PEFY-P-VMM-E

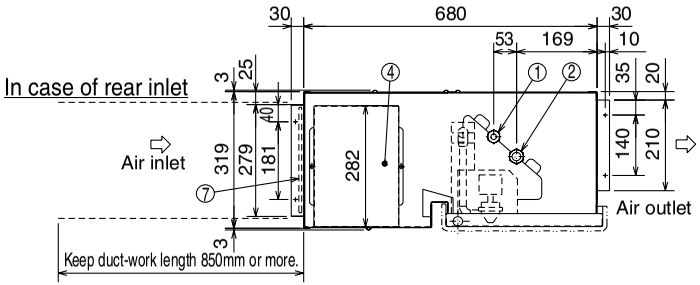
PEFY-P100,125,140VMM-E

Note: 1. On this model, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
2. In order to increase the strength of the flare nut, the size of some of them has been increased.

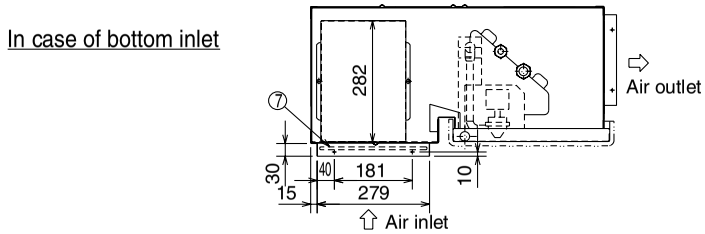


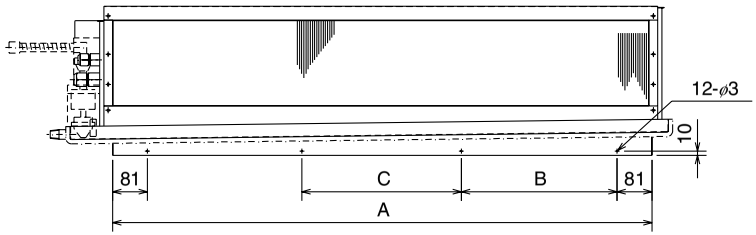

① Refrigerant piping flare connection (liquid ⌀9.52 copper tube):HP
② Refrigerant piping flare connection (gas ⌀15.88<R410A outdoor unit> copper tube):LP
⌀19.05<The other outdoor unit>
③ Drain 25A (male screw)
④ Electrical parts box
⑤ Drain Pump (Option)
⑥ Drain Pipe (Option)···Flexible joint VP25(I.D. ⌀32) } Set
⑦ Filter




Be sure to apply the air filter (field supply) near the air inlet grille.



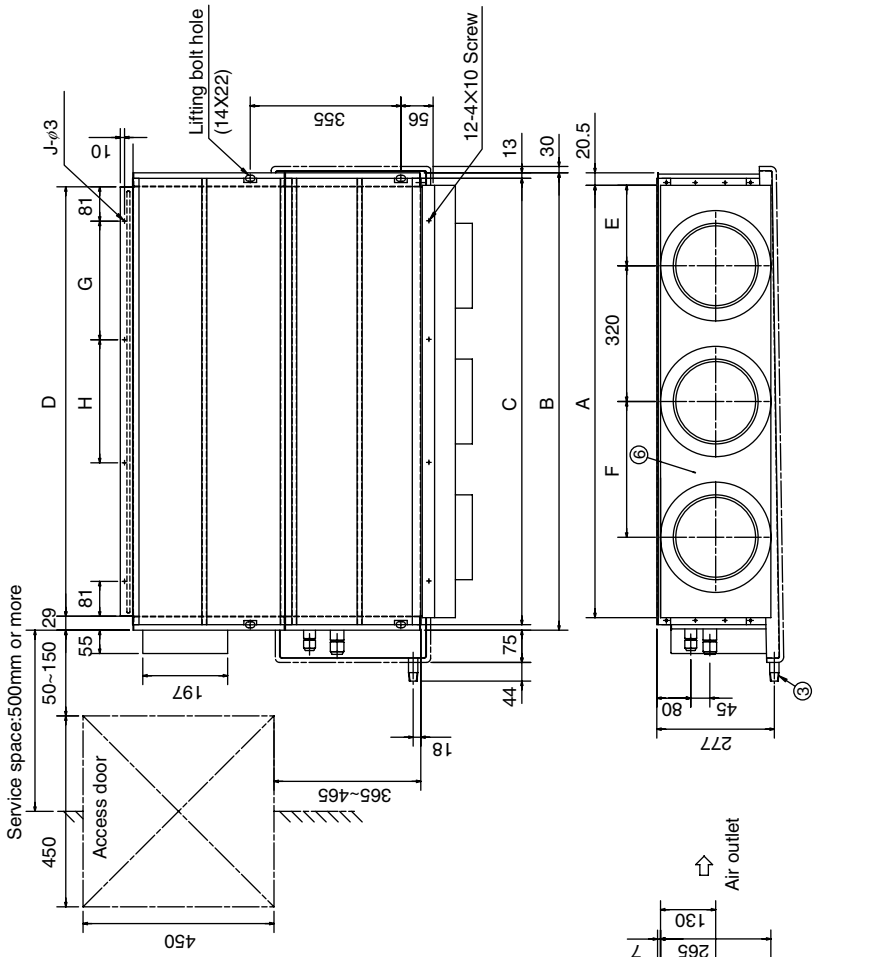




| Model | A | B | C | D | E | F(Liquid) | F(Gas) |
|---|---|---|---|---|---|---|---|
| P100·125 | 1252 | 360 | 370 | 1310 | 1284 | 22 | 36 |
| P140 | 1552 | 460 | 470 | 1610 | 1584 | 22 | 36 |

Unit : mm

**PEFY-P20,25,32,40,50,61,71,80VMM-E with circular duct flange**

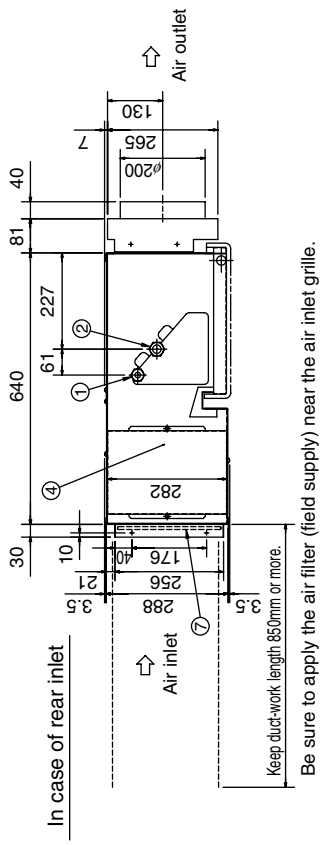
Unit : mm




| Model | A | B | C | D | E | F | G | H | J |
|---|---|---|---|---|---|---|---|---|---|
| P20,25,32 | 669 | 710 | 684 | 652 | 174.5 | — | 245 | — | 10 |
| P40,50 | 789 | 830 | 804 | 772 | 234.5 | — | 305 | — | 10 |
| P63,71,80 | 1029 | 1070 | 1044 | 1012 | 194.5 | 320 | 280 | 290 | 12 |

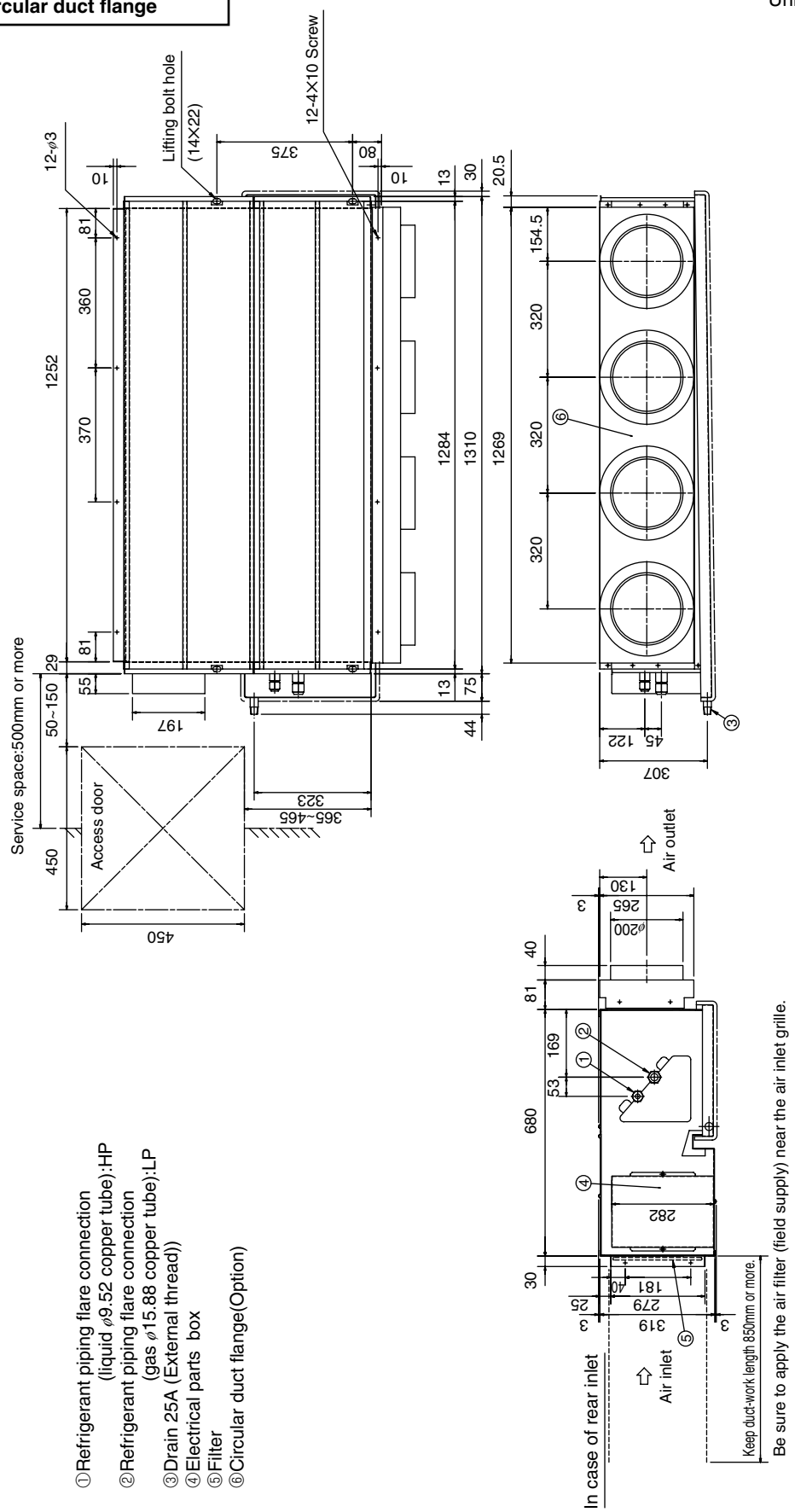
①Refrigerant piping flare connection (liquid ø K copper tube):HP
②Refrigerant piping flare connection (gas ø L copper tube):LP
③Drain R1(External thread)
④Electrical parts box
⑤Filter
⑥Circular duct flange(Option)

| Model | K | L |
|---|---|---|
| P20,25,32 | 6.35 | 12.7 |
| P40,50 | 6.35 | 12.7 |
| P63,71,80 | 9.52 | 15.88 |



**PEFY-P100,125VMM-E**
**with circular duct flange**

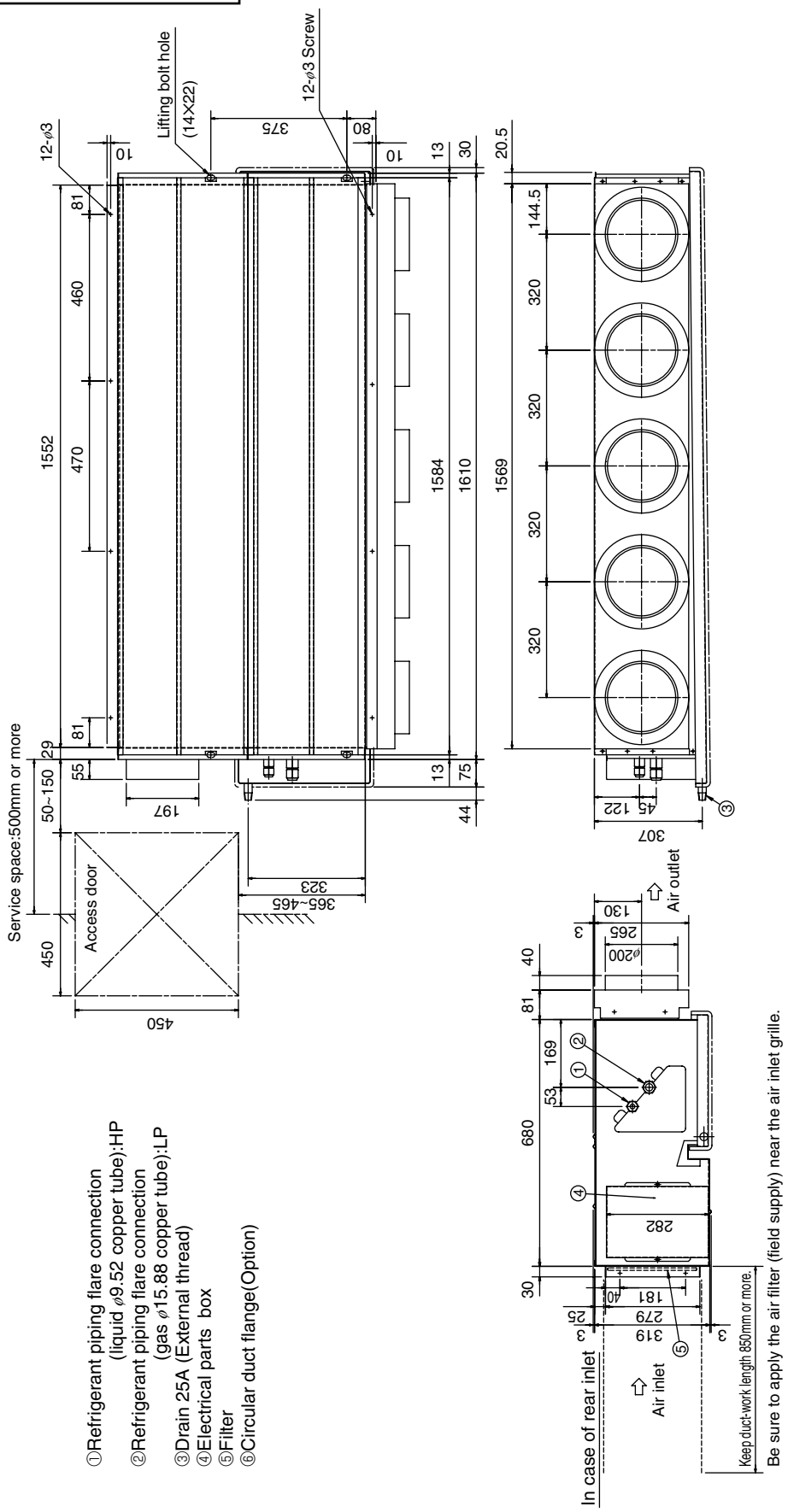
Unit : mm




①Refrigerant piping flare connection (liquid φ9.52 copper tube):HP
②Refrigerant piping flare connection (gas φ15.88 copper tube):LP
③Drain 25A (External thread))
④Electrical parts box
⑤Filter
⑥Circular duct flange(Option)

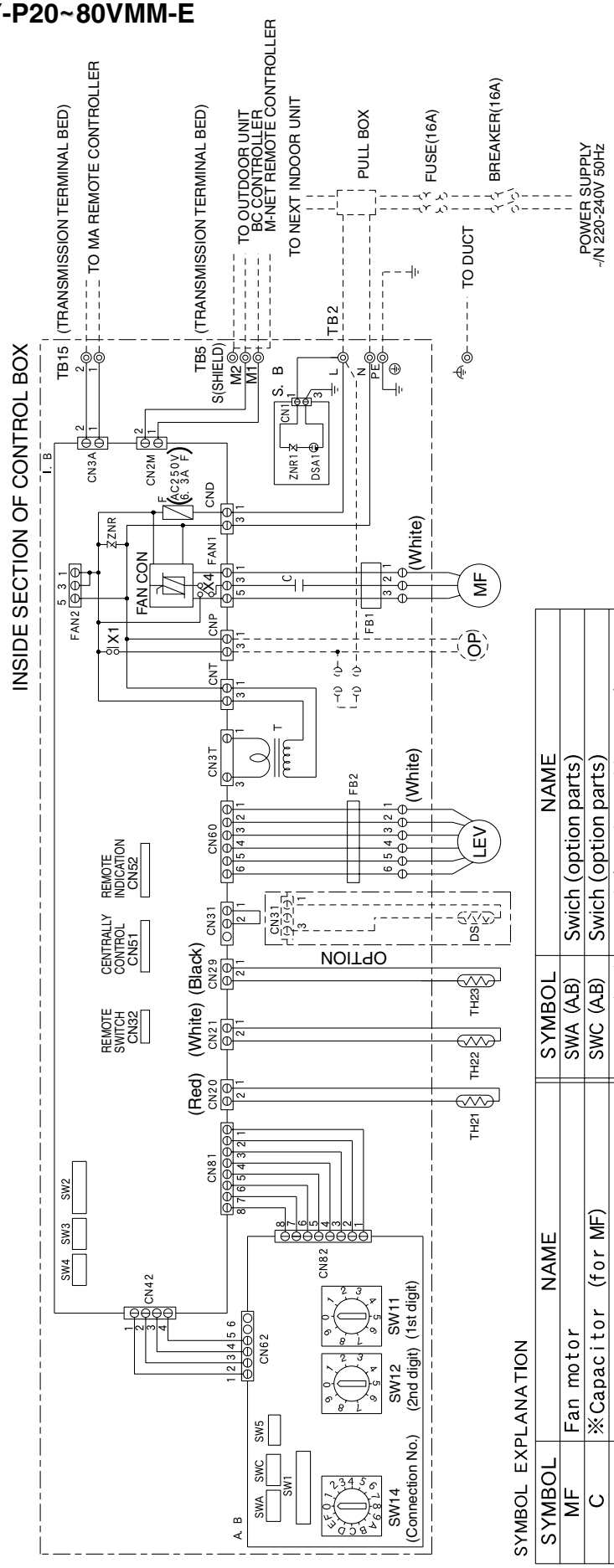
**PEFY-P140VMM-E**
**with circular duct flange**

Unit : mm



# 4. Electrical Wiring Diagrams

## PEFY-P20~80VMM-E



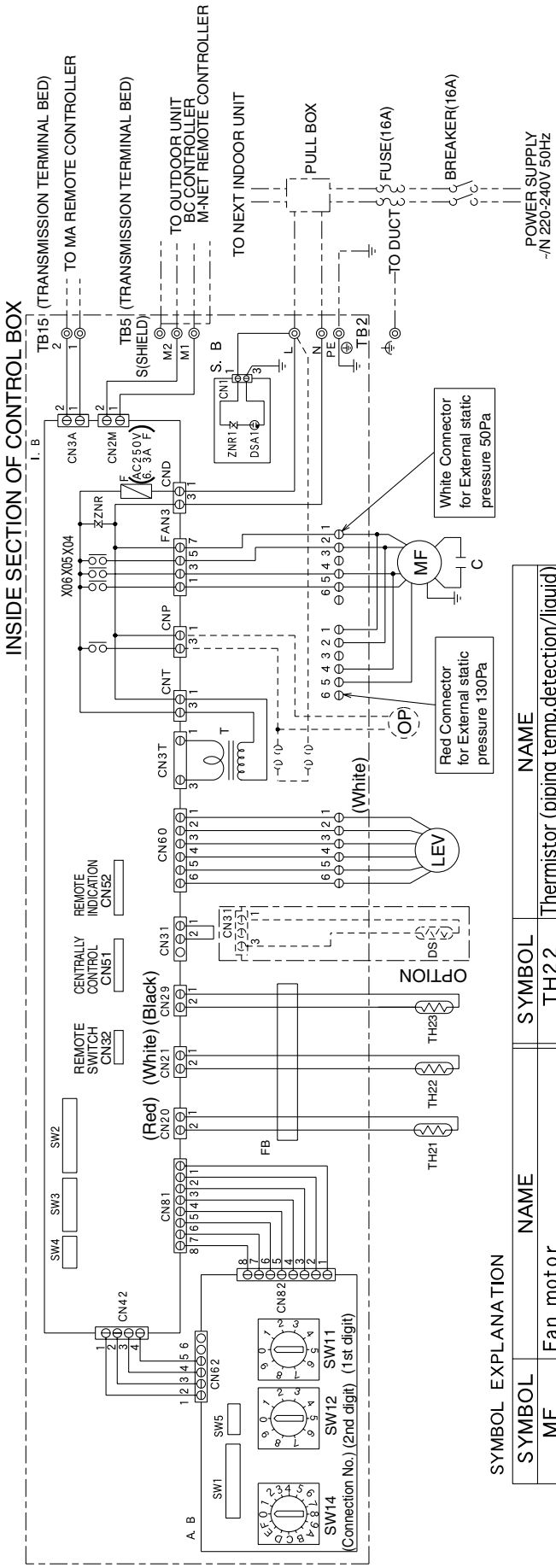

NOTE:1.TB2,TB5 shown in dotted line are field work.
2.Mark ◎ indicates terminal bed, ⊖connector, ⊟board insertion connector or fastening connector of control board.

※Capacitor
MODELS 20/25/32 6μF
MODELS 40/50 8μF
MODELS 63/71/80 6μF

SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | SWA (A.B) | Swich (option parts) |
| C | ※Capacitor (for MF) | SWC (A.B) | Swich (option parts) |
| I.B | Indoor controller board | SW11 (A.B) | Switch (1st digit address set) |
| A.B | Address board | SW12 (A.B) | Switch (2nd digit address set) |
| TB2 | Power source terminal bed | SW14 (A.B) | Switch (connection No.set) |
| TB5 | Transmission terminal bed | SW1 (A.B) | Switch(for mode selection) |
| TB15 | Transmission terminal bed | SW2 (I.B) | Switch(for capacity code) |
| F | Fuse AC250V 6.3AF | SW3 (I.B) | Switch(for mode selection) |
| T | Transformer | SW4 (I.B) | Switch(for model selection) |
| LEV | Electronic linear expan. valve | SW5 (A.B) | Switch(for voltage selection) |
| TH21 | Thermistor (inlet temp.detection) | FB1,2 | Ferrite core |
| TH22 | Thermistor (piping temp.detection/liquid) | S.B | Surge absorber board |
| TH23 | Thermistor (piping temp.detection/gas) | DP | Drainpump |
| | | DS | Drainsensor |

## PEFY-P100~140VMM-E




NOTE:1.TB2,TB5 shown in dotted line are field work.
2.Mark ◎ indicates terminal bed, ⊖connector, ⊟ board insertion connector or fastening connector of control board.

※Capacitor
MODELS 100/125/140 8μF

SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | TH22 | Thermistor (piping temp.detection/liquid) |
| C | Capacitor (for MF) | TH23 | Thermistor (piping temp.detection/gas) |
| I.B | Indoor controller board | SW11 (A.B) | Switch (1st digit address set) |
| A.B | Address board | SW12 (A.B) | Switch (2nd digit address set) |
| TB2 | Power source terminal bed | SW14 (A.B) | Switch (connection No.set) |
| TB15 | Transmission terminal bed | SW1 (A.B) | Switch(for mode selection) |
| TB5 | Transmission terminal bed | SW2 (I.B) | Switch(for capacity code) |
| F | Fuse AC250V 6. 3A F | SW3 (I.B) | Switch(for mode selection) |
| T | Transformer | SW4 (I.B) | Switch(for model selection) |
| LEV | Electronic linear expan. valve | SW5 (A.B) | Switch(for voltage selection) |
| S.B | Surge absorber board | X04~06 | Aux relay |
| FB | Ferrite core | DP | Drainpump |
| TH21 | Thermistor (inlet temp.detection) | DS | Drainsensor |

PEFY-P-VMM-E

# 5. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Circular duct flange | PAC-KE32EDF-F | P20/P25/P32 |
| | PAC-KE50EDF-F | P40/P50 |
| | PAC-KE80EDF-F | P63/P71/P80 |
| | PAC-KE125EDF-F | P100/P125 |
| | PAC-KE140EDF-F | P140 |
| Drain water lift-up kit | PAC-KE03DM-F | P20/P25/P32/P40/P50/P63/P71<br>P80/P100/P125/P140 |

# CONTENTS

1. Specifications ..... Ⅰ-46

2. Sound Levels ..... Ⅰ-47
   2-1 Noise levels(VMH-E-F) ..... Ⅰ-47
   2-2 NC curves(VMH-E-F) ..... Ⅰ-47
   2-3 Fan characteristics curves(VMH-E-F) ..... Ⅰ-51

3. External Dimensions ..... Ⅰ-53

4. Electrical Wiring Diagrams ..... Ⅰ-54

5. Options ..... Ⅰ-55

# 1. Specifications

| | | | | PEFY-P80VMH-E-F | PEFY-P140VMH-E-F |
|---|---|---|---|---|---|
| Power source | | | | ~ 220-240V 50Hz / ~ 208-230V 60Hz | |
| Cooling capacity | | ※1 | kW | 9.0 | 16.0 |
| Heating capacity | | ※1 | kW | 8.5 | 15.1 |
| Power consumption (50/60Hz) | Cooling | | kW | 0.16/0.21 | 0.29/0.33 |
| | Heating | | kW | 0.16/0.21 | 0.29/0.33 |
| Current | Cooling | | A | 0.67/0.91 | 1.24/1.48 |
| | Heating | | A | 0.67/0.91 | 1.24/1.48 |
| External finish | | | | Galvanizing | |
| Dimension | Height | | mm | 380 | |
| | Width | | mm | 1000 | 1200 |
| | Depth | | mm | 900 | |
| Net weight | | | kg | 50 | 70 |
| Heat exchanger | | | | Cross fin (Aluminum plate fin and copper tube) | |
| Fan | Type | | | Sirocco fan×1 | Sirocco fan×2 |
| | Airflow rate | | $m^3$/min | 9.0 | 18.0 |
| | External static pressure (Low/Mid/High) | 208V | Pa | 35/85/170 | 35/85/170 |
| | | 220V | Pa | 40/115/190 | 50/115/190 |
| | | 230V | Pa | 50/130/210 | 60/130/220 |
| | | 240V | Pa | 80/170/220 | 100/170/240 |
| Motor | Type | | | Single phase induction motor | |
| | Output | | kW | 0.09 | 0.14 |
| Air filter (option) | | | | Synthetic fiber unwoven cloth filter(long life) | |
| Refrigerant pipe dimension | Gas (Flare) | | mm | ø 15.88 | ø 15.88 (R410A)<br>ø 19.05 (R22,R407C) |
| | Liquid (Flare) | | mm | ø 9.52 | |
| Drain pipe dimension | | | | 32 (1-1/4 inch) | |
| Noise level ※2 | | 208, 220V | dB(A) | 27/38/43 | 28/38/43 |
| | | 230, 240V | dB(A) | 33/43/45 | 34/43/45 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 33˚CDB/28˚CWB,Outdoor 33˚CDB
Heating : Indoor 0˚CDB/-2.9˚CWB,Outdoor 0˚CDB/-2.9˚CWB
※2 It is measured in anechoic room.

a). The cooling and heating capacities are the maximum capacities that were obtained by operating in the above air conditions and with a refrigerant pipe of about 7.5m.
b). The actual capacity characteristics vary with the combination of indoor and outdoor units. See the technical information.
c). The operating noise is the data that was obtained by measuring it 1.5m from the bottom of the unit in an anechoic room. (Noise meter A-scale value)
d). The figure of Electrical characteristic indicates at 220V and at middle external static pressure.
e). When the 100% fresh air indoor units are connected, the maximum connectable indoor units to 1 outdoor unit are as follows.

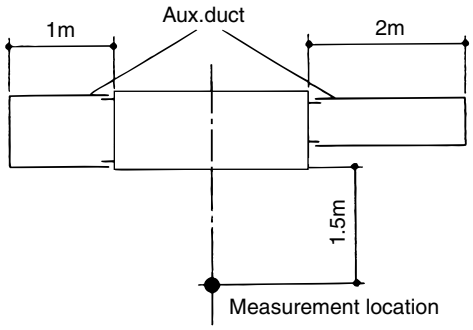
| Heat pump models | Cooling only |
|---|---|
| 110%(100% in case of heating below-5˚C) | 110% |

f ). Operational temp range is cooling : from 21˚CDB/15.5˚C WB to 43˚CDB/35˚CWB.
Heating : from -10˚CDB to 20˚CDB
※Thermo off (Fan) operation automatically starts either when temperature is lower than 21˚CDB in cooling mode or when the temperature exceeds 20˚CDB in heating mode.
g ). As the room temp is sensed by the thermo in the remote controller or the one in the room, be sure to use ether remote controller or room thermo.
h ). Dry mode is Not available. Fan mode operation during the thermo off in Cooling/Heating mode.
i ). The fan would temporarily stops either with R2/WR2 system or in defrost.
j ). In any case, the air flow rate should be kept lower than 110% of the above chart.Please see " Fan curves " for the details.
k ). When this unit is used as sole A/C system, be careful about the dew in air outlet grilles in cooling mode.
l ). Un-conditioned outdoor air such as humid air or cold air blows to the indoor during thermo off operation.
Please be careful when positioning indoor unit air outlet grilles, ie take the necessary precautions for cold air, and also insulate rooms for dew condensation prevention as required.
m). Air filter must be installed in the air intake side.The filter should be attached where easy maintenance is possible in case of usage of field supply filters.
n ). Long life filter cannot be used with Hi-efficiency filter together.

# 2. Sound Levels

## 2-1. Noise levels(VMH-E-F)

Ceiling concealed (VMH-E series)




Noise level at anechoic room — Unit : dB(A)

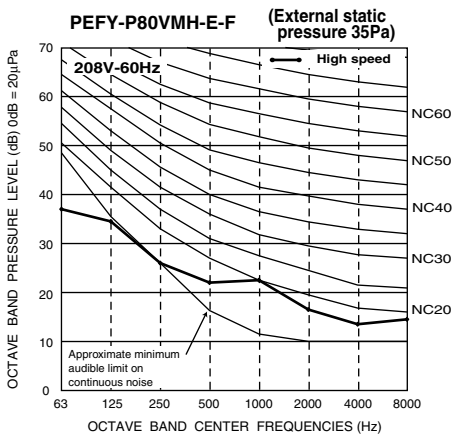
| Model | | External static pressure | | |
|---|---|---|---|---|
| | | Low | Mid | High |
| PEFY-P80 VMH-E-F | 208,220V | 27 | 38 | 43 |
| | 230,240V | 33 | 43 | 45 |
| PEFY-P140 VMH-E-F | 208,220V | 28 | 38 | 43 |
| | 230,240V | 34 | 43 | 45 |

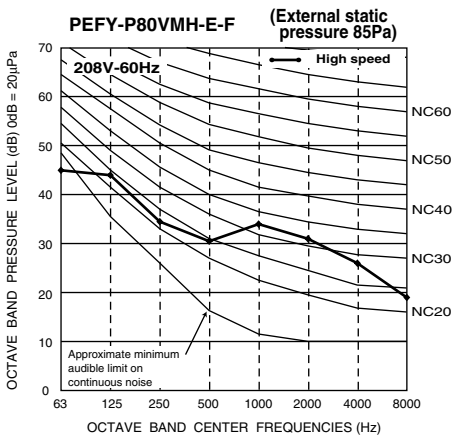
External static pressure (Low/Mid/High) — Unit : Pa

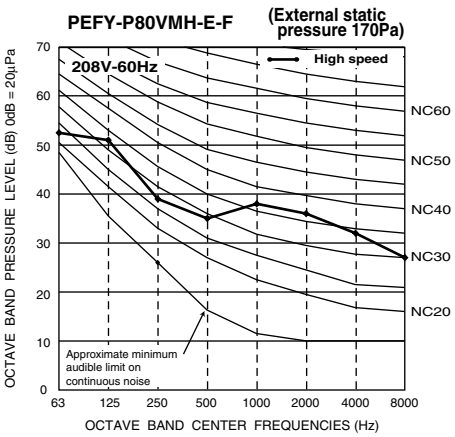
| Model | External static pressure | | Power source | | | |
|---|---|---|---|---|---|---|
| | | | 208V | 220V | 230V | 240V |
| PEFY-P80VMH-E-F | 50Hz | Low | - | 40 | 50 | 80 |
| | | Mid | | 115 | 130 | 170 |
| | | High | | 190 | 210 | 220 |
| | 60Hz | Low | 35 | 40 | 50 | - |
| | | Mid | 85 | 115 | 130 | |
| | | High | 170 | 190 | 210 | |
| PEFY-P140VMH-E-F | 50Hz | Low | - | 50 | 60 | 100 |
| | | Mid | | 115 | 130 | 170 |
| | | High | | 119 | 220 | 240 |
| | 60Hz | Low | 35 | 50 | 60 | - |
| | | Mid | 85 | 115 | 130 | |
| | | High | 170 | 190 | 220 | |

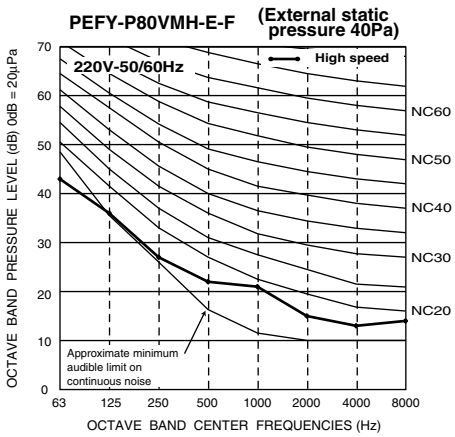
PEFY-P-VMH-E-F

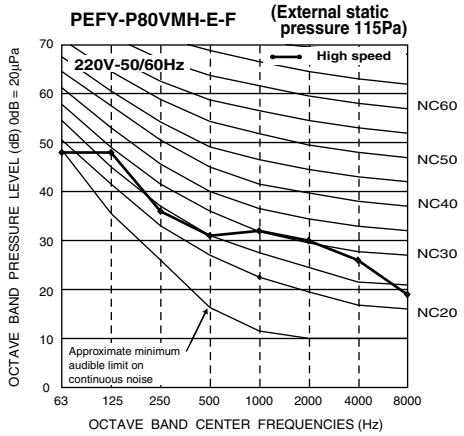
## 2-2. NC curves(VMH-E-F)

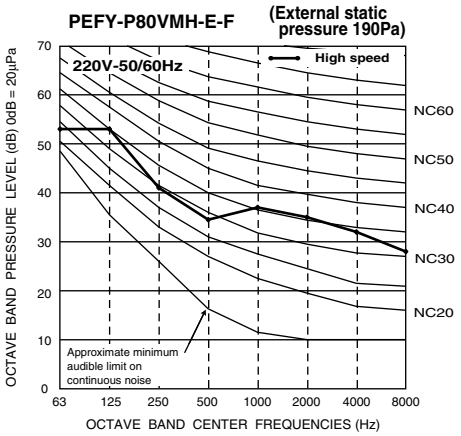


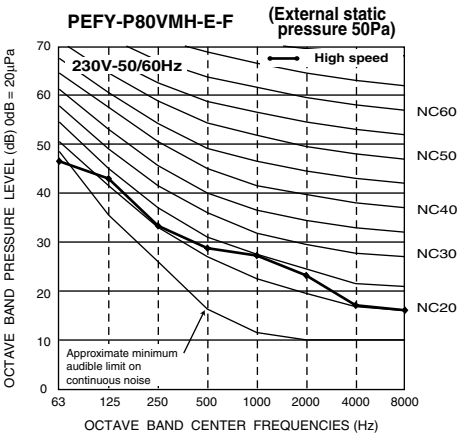



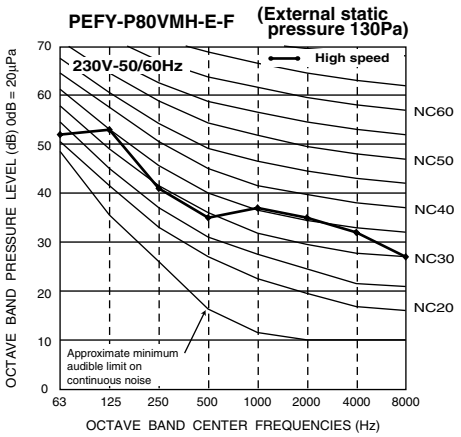



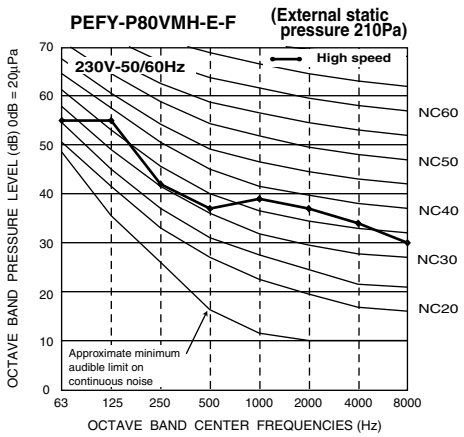



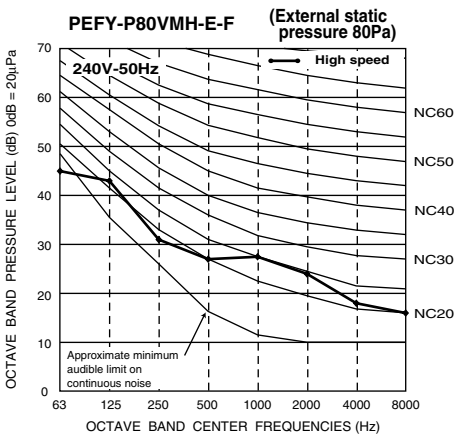

PEFY-P80VMH-E-F
(External static pressure 115Pa)
220V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

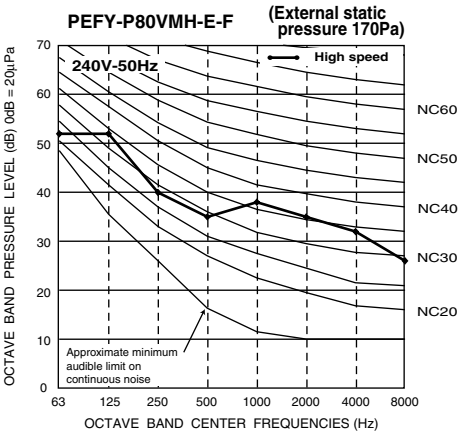

PEFY-P80VMH-E-F
(External static pressure 190Pa)
220V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

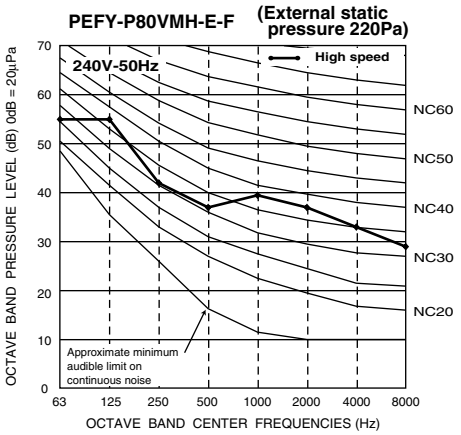

PEFY-P80VMH-E-F
(External static pressure 50Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

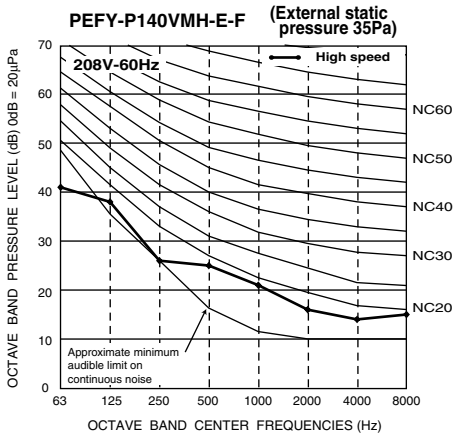

PEFY-P80VMH-E-F
(External static pressure 130Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

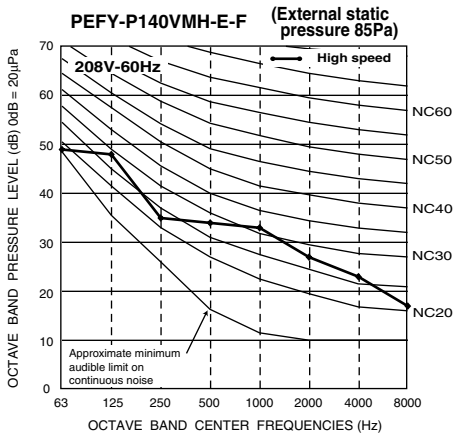

PEFY-P80VMH-E-F
(External static pressure 210Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

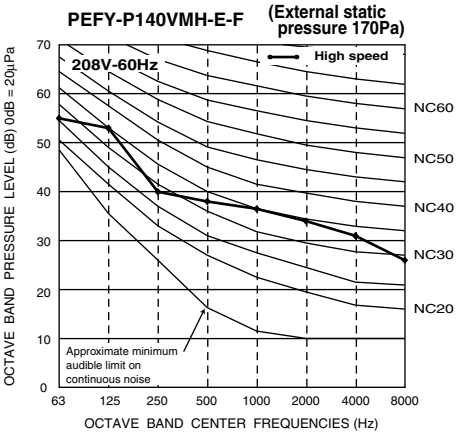

PEFY-P80VMH-E-F
(External static pressure 80Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

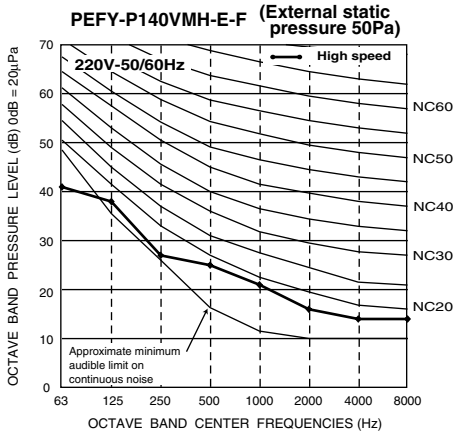

PEFY-P80VMH-E-F
(External static pressure 170Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

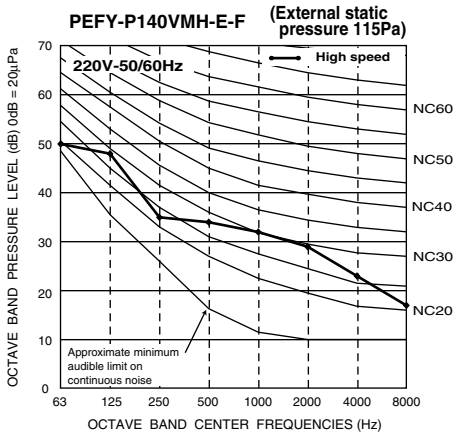

PEFY-P80VMH-E-F
(External static pressure 220Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

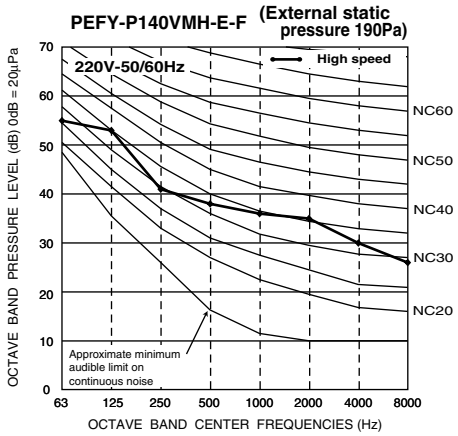

PEFY-P140VMH-E-F
(External static pressure 35Pa)
208V-60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

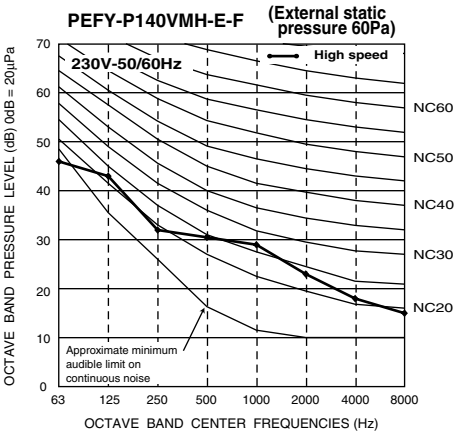

PEFY-P140VMH-E-F
(External static pressure 85Pa)
208V-60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

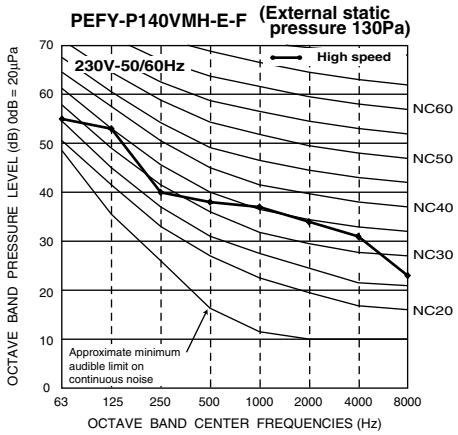

PEFY-P140VMH-E-F
(External static pressure 170Pa)
208V-60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

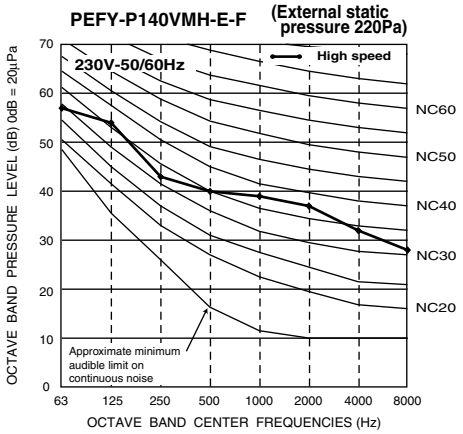

PEFY-P140VMH-E-F
(External static pressure 50Pa)
220V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

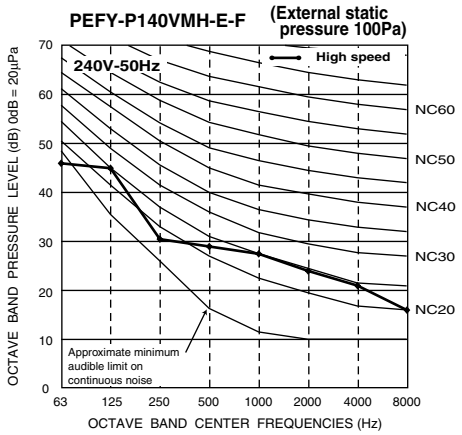

PEFY-P140VMH-E-F
(External static pressure 115Pa)
220V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

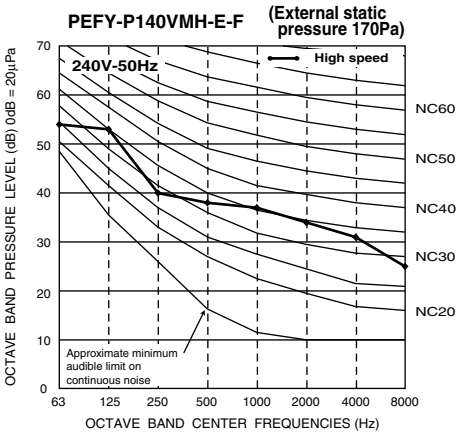

PEFY-P140VMH-E-F
(External static pressure 190Pa)
220V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

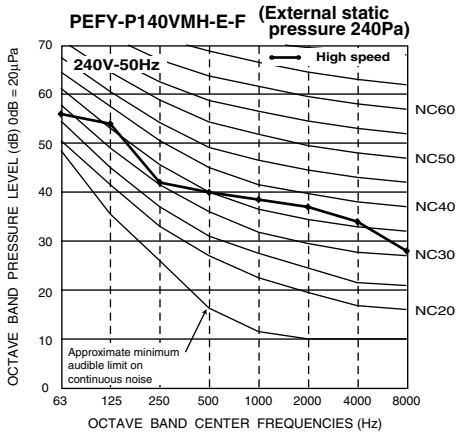

PEFY-P140VMH-E-F
(External static pressure 60Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P140VMH-E-F
(External static pressure 130Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PEFY-P140VMH-E-F
(External static pressure 220Pa)
230V-50/60Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)
0
10
20
30
40
50
60
70
63
125
250
500
1000
2000
4000
8000

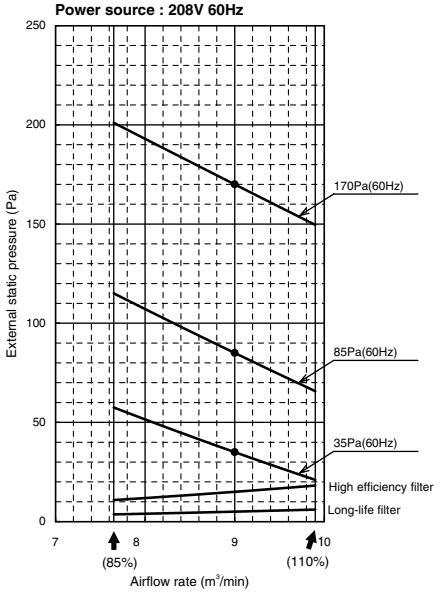

PEFY-P140VMH-E-F
(External static pressure 100Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)
0
10
20
30
40
50
60
70
63
125
250
500
1000
2000
4000
8000


PEFY-P140VMH-E-F
(External static pressure 170Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)
0
10
20
30
40
50
60
70
63
125
250
500
1000
2000
4000
8000

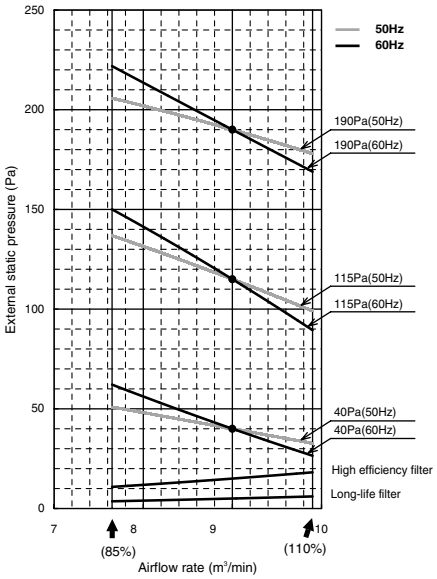

PEFY-P140VMH-E-F
(External static pressure 240Pa)
240V-50Hz
High speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB = 20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)
0
10
20
30
40
50
60
70
63
125
250
500
1000
2000
4000
8000

## 2-3. Fan characteristics curves(VMH-E-F)

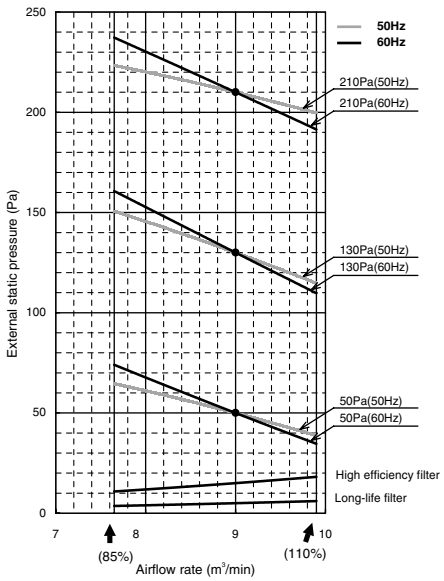
**PEFY-P80VMH-E-F**
**Suction : Back inlet**
**External static pressure : 35,85,170Pa**
**Power source : 208V 60Hz**



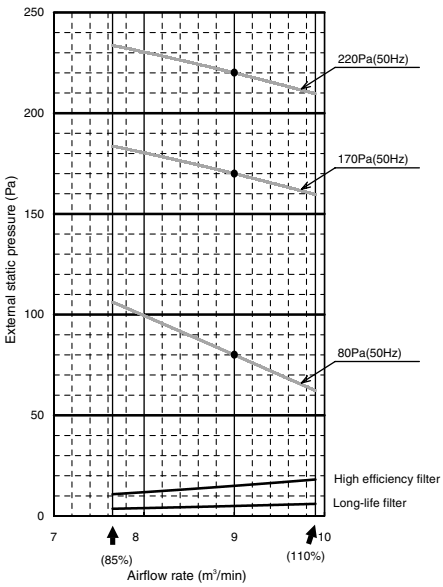

**PEFY-P80VMH-E-F**
**Suction : Back inlet**
**External static pressure : 40,115,190Pa**
**Power source : 220V 50/60Hz**



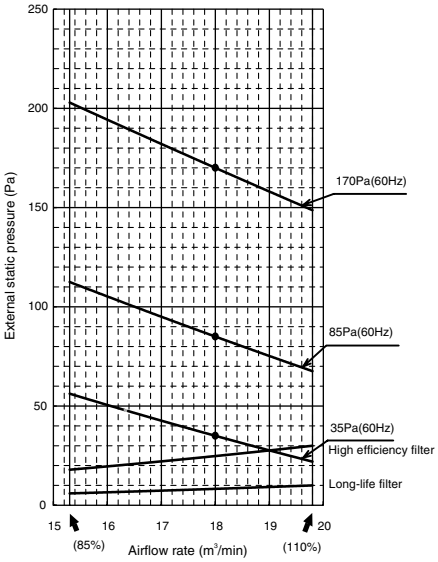

**PEFY-P80VMH-E-F**
**Suction : Back inlet**
**External static pressure : 50,130,210Pa**
**Power source : 230V 50/60Hz**



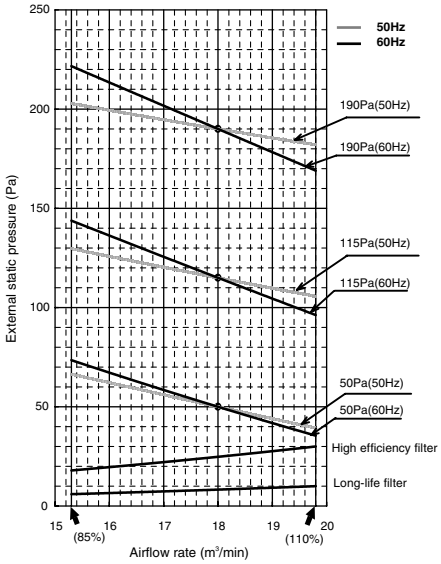

**PEFY-P80VMH-E-F**
**Suction : Back inlet**
**External static pressure : 80,170,220Pa**
**Power source : 240V 50Hz**



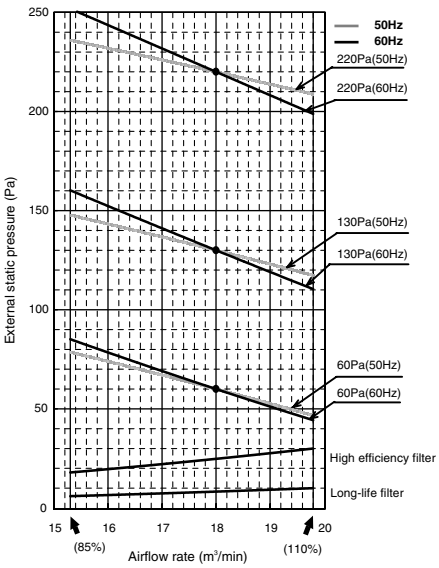
**PEFY-P140VMH-E-F**
**Suction : Back inlet**
**External static pressure : 35,85,170Pa**
**Power source : 208V 60Hz**



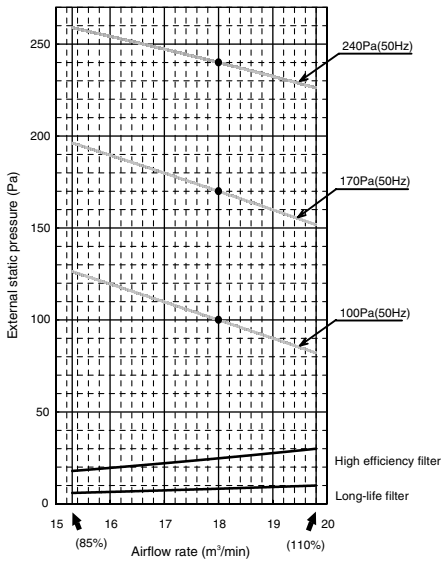

**PEFY-P140VMH-E-F**
**Suction : Back inlet**
**External static pressure : 50,115,190Pa**
**Power source : 220V 50/60Hz**



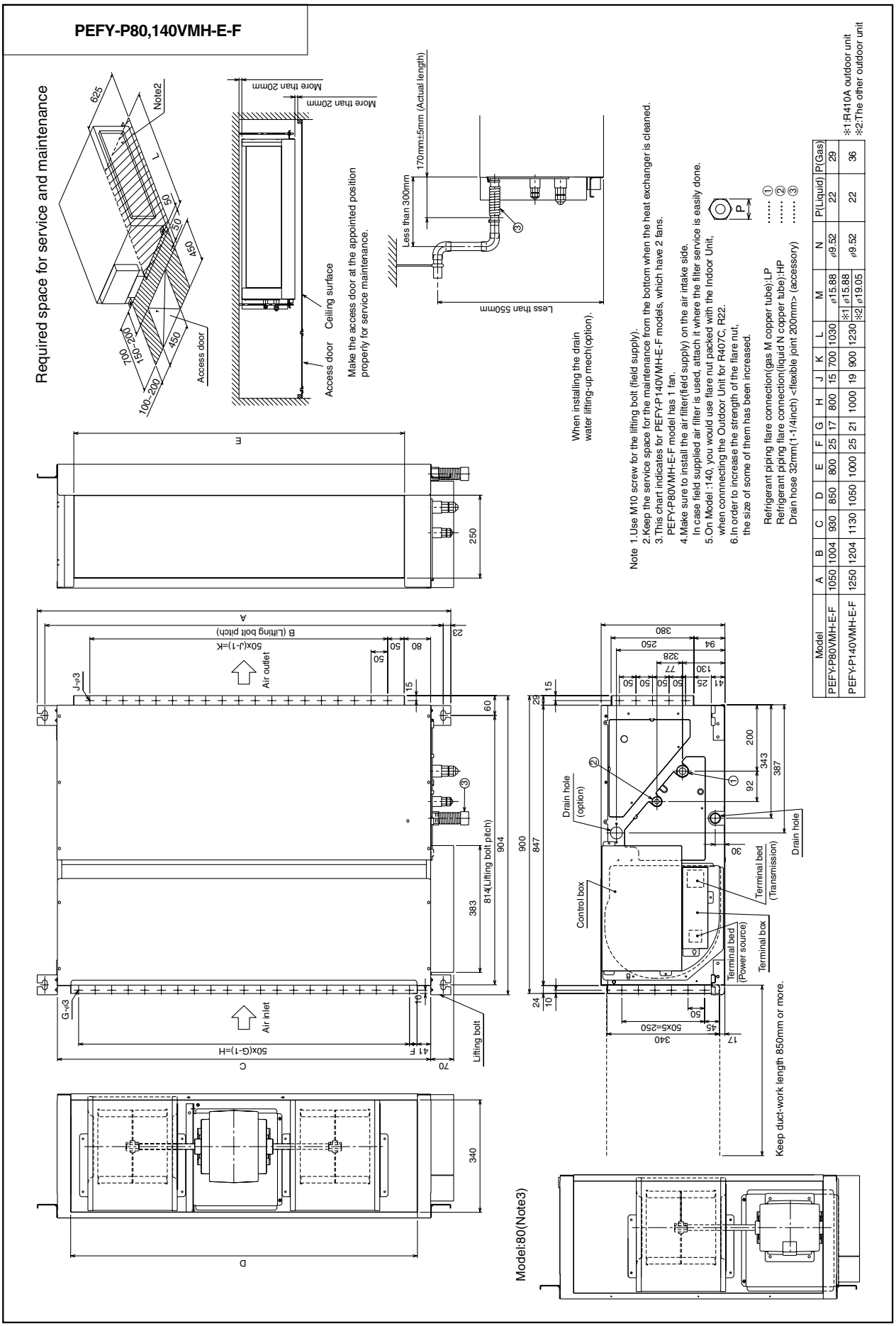

**PEFY-P140VMH-E-F**
**Suction : Back inlet**
**External static pressure : 60,130,220Pa**
**Power source : 230V 50/60Hz**




**PEFY-P140VMH-E-F**
**Suction : Back inlet**
**External static pressure : 100,170,240Pa**
**Power source : 240V 50Hz**



# 3. External Dimensions

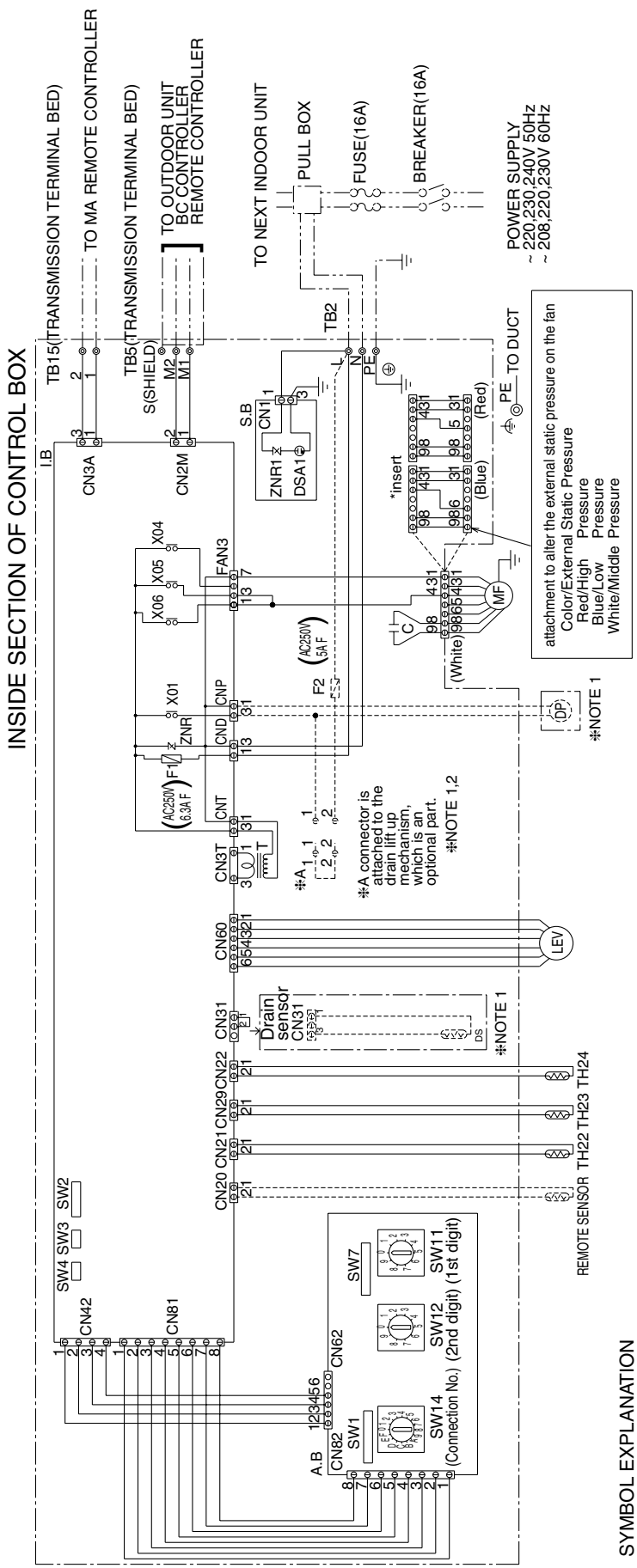



| Model | A | B | C | D | E | F | G | H | J | K | L | M | N | P(Liquid) | P(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PEFY-P80VMH-E-F | 1050 | 1004 | 930 | 850 | 800 | 25 | 17 | 800 | 15 | 700 | 1030 | φ15.88 | φ9.52 | 22 | 29 |
| PEFY-P140VMH-E-F | 1250 | 1204 | 1130 | 1050 | 1000 | 25 | 21 | 1000 | 19 | 900 | 1230 | ※1 φ15.88<br>※2 φ19.05 | φ9.52 | 22 | 36 |

PEFY-P-VMH-E-F

# 4. Electrical Wiring Diagrams

## PEFY-P80,140VMH-E-F




NOTE : 1. The part of the broken line indicates the circuit for optional parts.
2. ✻A in the chart is the connector for a drain pump test run operation. (The Drain Pump operates continuously if the connector is inserted and the power is supplied.) After the test run, make sure to remove the ✻A connector.
3. The wirings to TB2, TB5 (shown in dotted line) are field work.
4. Mark ◎ indicates terminal bed, ⊖ connector, ⊕ board insertion connector or fastening connector of control board.

### SYMBOL EXPLANATION

| SYMBOL | NAME |
|---|---|
| MF | Fan motor |
| C | ✻B Capacitor (for MF) |
| I.B | Indoor controller board |
| <DS> | Drain sensor |
| A.B | Address board |
| TB2 | Power source terminal bed |
| TB5 | Transmission terminal bed |
| TB15 | Transmission terminal bed |
| F1 | Fuse AC250V 6.3A F |
| <F2> | Fuse AC250V 5A F |
| T | Transformer |
| <DP> | Drain Pump |
| LEV | Electronic linear expan. valve |
| S.B | Surge absorber board |

| SYMBOL | NAME |
|---|---|
| CN20 | Connector (remote sensor) |
| TH22 | Thermistor (piping temp.detection/liquid) |
| TH23 | Thermistor (piping temp.detection/gas) |
| TH24 | Thermistor (outdoor air temp.detection) |
| SW11(A.B) | Switch (1st digit address set) |
| SW12(A.B) | Switch (2nd digit address set) |
| SW14(A.B) | Switch (connection No.set) |
| SW1(A.B) | Switch(for mode selection) |
| SW2(I.B) | Switch(for capacity code) |
| SW3(I.B) | Switch(for mode selection) |
| SW4(I.B) | Switch(for model selection) |
| SW7(A.B) | Switch(for model selection) |
| X04 ~ X06 | Aux.relay |

Inside < > is the optional parts.

# 5. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Long life filter | PAC-KE88LAF | P80 |
| | PAC-KE89LAF | P140 |
| Filter box | PAC-KE80TBA-F | P80 |
| | PAC-KE140TBA-F | P140 |
| Drain water lift-up kit | PAC-KE04DM-F | P80/P140 |

Ceiling mounted built-in PDFY-P-VM-E

# CONTENTS


1. Specifications ..... I -58

2. Sound Levels ..... I -59

2-1 Noise levels ..... I -59
2-2 NC curves ..... I -59
2-3 Fan characteristics curves ..... I -63

3. External Dimensions ..... I -64

4. Electrical Wiring Diagrams ..... I -68

5. Option ..... I -70

# 1. Specifications

| | | | PDFY-P20VM-E | PDFY-P25VM-E | PDFY-P32VM-E | PDFY-P40VM-E | PDFY-P50VM-E |
|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220V 60Hz | | | | |
| Cooling capacity | ※1 | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 |
| | ※2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 | 5,000 |
| Heating capacity | | kW | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 |
| Power consumption (50/60Hz) | Cooling | kW | 0.11/0.12 | | | 0.13/0.15 | |
| | Heating | kW | 0.11/0.12 | | | 0.13/0.15 | |
| Current | Cooling | A | 0.53/0.58 | | | 0.60/0.71 | |
| | Heating | A | 0.53/0.58 | | | 0.60/0.71 | |
| External finish | | | Galvanizing | | | | |
| Dimension | Height | mm | 295 | | | | |
| | Width | mm | 710 | | | 960 | |
| | Depth | mm | 735 | | | | |
| Net weight | | kg | 25.5 | | 27 | 32 | 34 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | | |
| Fan | Type | | Sirocco fan× 1 | | | Sirocco fan× 2 | |
| | Airflow rate (Lo-Mid2-Mid1-Hi) | m³/min | 6.0-6.5-7.5-8.5 | | | 10.0-11.0-12.5-14.0 | |
| | External static pressure ※3 | Pa | 30/50/100 | | | | |
| Motor | Type | | Single phase induction motor | | | | |
| | Output ※4 | kW | 0.075(at 240V) | | | | |
| Air filter ※5 | | | Synthethic fiber unwoven cloth filter(long life) | | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | | ø 12.7 (R410A)<br>ø 15.88 (R22,R407C) |
| | Liqud (Flare) | mm | ø 6.35 | | | | ø 6.35 (R410A)<br>ø 9.52 (R22,R407C) |
| Drain pipe dimension | | | Outer diameter 32(VP-25) | | | | |
| Noise level (Lo-Mid2-Mid1-Hi) ※7 | | dB(A) | 28-30-33-36 | | | 34-36-37-39 | |

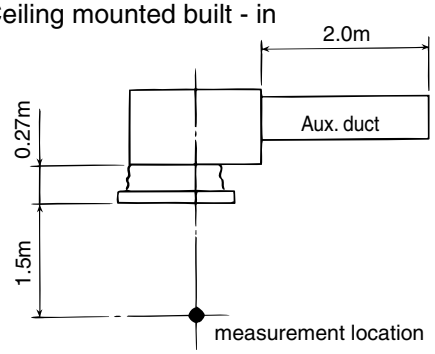
| | | | PDFY-P63VM-E | PDFY-P71VM-E | PDFY-P80VM-E | PDFY-P100VM-E | PDFY-P125VM-E |
|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220V 60Hz | | | | |
| Cooling capacity | ※1 | kW | 7.1 | 8.0 | 9.0 | 11.2 | 14.0 |
| | ※2 | kcal/h | 6,300 | 7,100 | 8,000 | 10,000 | 12,500 |
| Heating capacity | ※1 | kW | 8.0 | 9.0 | 10.0 | 12.5 | 16.0 |
| Power consumption | Cooling | kW | 0.14/0.17 | 0.15/0.18 | 0.17/0.21 | 0.27-0.31/0.29 | 0.33-0.38/0.39 |
| | Heating | kW | 0.14/0.17 | 0.15/0.18 | 0.17/0.21 | 0.27-0.31/0.29 | 0.33-0.38/0.39 |
| Current | Cooling | A | 0.68/0.82 | 0.72/0.88 | 0.82/1.01 | 1.28-1.34/1.36 | 1.55-1.63/1.84 |
| | Heating | A | 0.68/0.82 | 0.72/0.88 | 0.82/1.01 | 1.28-1.34/1.36 | 1.55-1.63/1.84 |
| External finish | | | Galvanizing | | | | |
| Dimension | Height | mm | 295 | | | 335 | |
| | Width | mm | 1160 | | | 1510 | |
| | Depth | mm | 735 | | | 775 | |
| Net weight | | kg | 39 | | | 52 | |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | | |
| Fan | Type | | Sirocco fan× 2 | | | | |
| | Airflow rate (Lo-Mid2-Mid1-Hi) | m³/min | 12.5-14.0-16.0-18.0 | 13.5-15.5-17.5-19.5 | 14.5-16.5-18.5-21.0 | 19.5-28.0 (Lo-Hi) | 24.0-34.0 (Lo-Hi) |
| | External static pressure ※3 | Pa | 30/50/100 | | | 50/100/130 | |
| Motor | Type | | Single phase induction motor | | | | |
| | Output ※4 | kW | 0.078(at 240V) | | | 0.140(at 240V) | 0.190(at 240V) |
| Air filter | | | Synthethic fiber unwoven cloth filter(long life) | | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 15.88 | | | ø 15.88 (R410A)<br>ø 19.05 (R22,R407C) | |
| | Liquid (Flare) | mm | ø 9.52 | | | | |
| Drain pipe dimension | | | Outer diameter 32(VP-25) | | | | |
| Noise level (Lo-Mid2-Mid1-Hi) ※6 | | dB(A) | 30-34-36-39 | 32-35-37-40 | 34-37-40-42 | 34-42(37-44)※5 | 40-45(42-46)※5 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 The external static pressure is set to 50Pa at factory shipment.
※4 The value for Models 20-80 are that at the external static pressure of 100Pa, while the value for Models 100-125 are that at the external static pressure of 130Pa.
※5 The figure in ( ) indicates noise level at 240V/50Hz.
※6 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

Ceiling mounted built - in

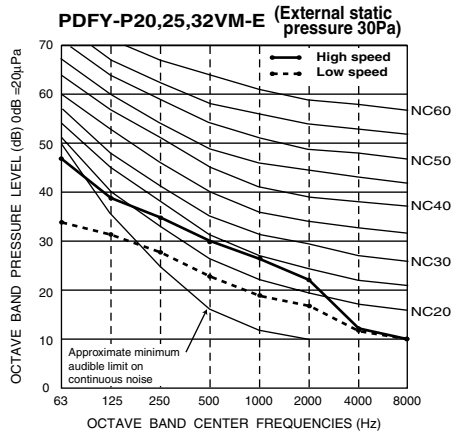


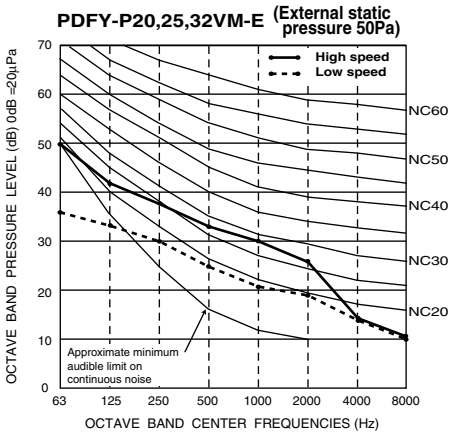

※ PDFY-P20~80VM-E
Low : 30Pa Mid : 50Pa High : 100Pa
PDFY-P100, 125VM-E
Low : 50Pa Mid : 100Pa High : 130Pa

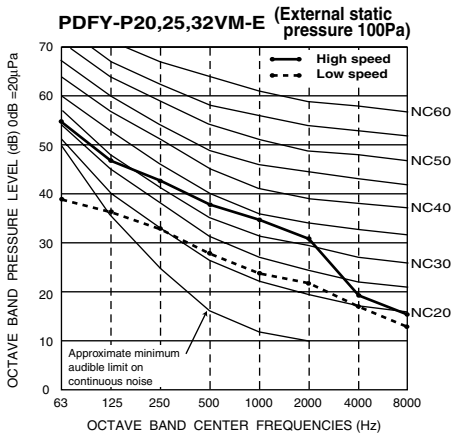
Noise level at anechoic room
(Low-Middle2-Middle1-High) Unit : dB(A)

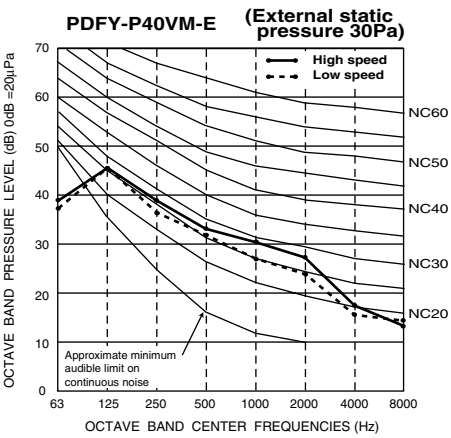
| Model | External static pressure※ | | |
|---|---|---|---|
| | Low | Mid | High |
| PDFY-P20VM-E<br>PDFY-P25VM-E<br>PDFY-P32VM-E | 26-28-31-33 | 28-30-33-36 | 31-35-39-41 |
| PDFY-P40VM-E<br>PDFY-P50VM-E | 35-35.5-36-37 | 34-36-37-39 | 37-39-40-41 |
| PDFY-P63VM-E | 28-31-34-37 | 30-34-36-39 | 33-37-40-42 |
| PDFY-P71VM-E | 30-33-35-38 | 32-35-37-40 | 35-38-41-43 |
| PDFY-P80VM-E | 31-34-37-39 | 34-37-40-42 | 35-39-42-44 |
| PDFY-P100VM-E | 34-42(37-44) | 36-44(38-45) | 38-45(39-46) |
| PDFY-P125VM-E | 40-45(42-46) | 42-46(43-47) | 42-46(44-47) |

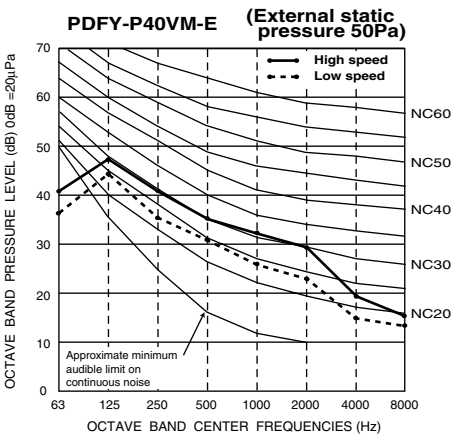
## 2-2. NC curves

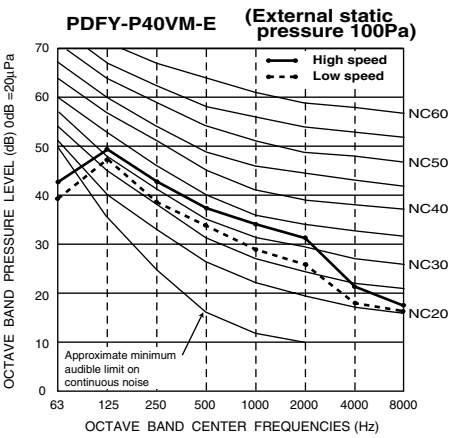


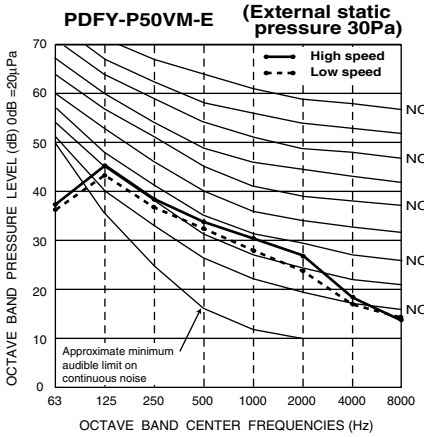



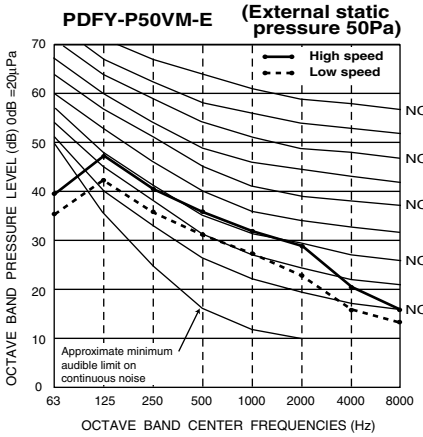



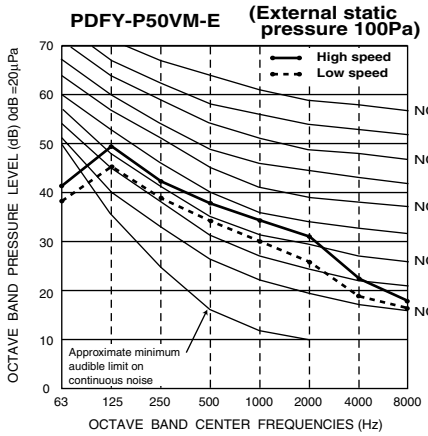



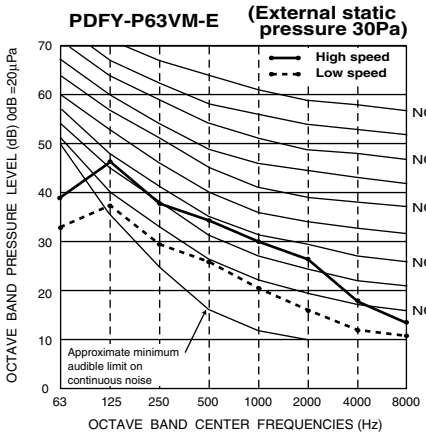



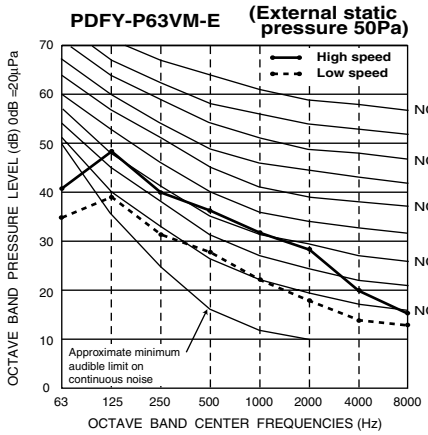



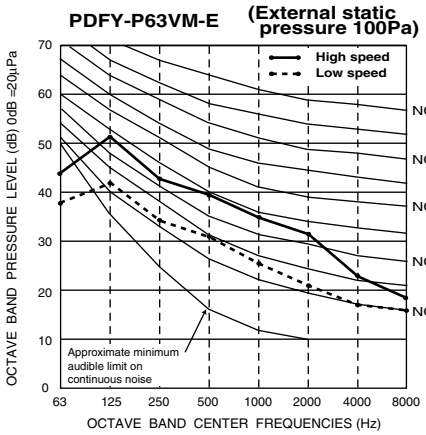

PDFY-P50VM-E
(External static pressure 30Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

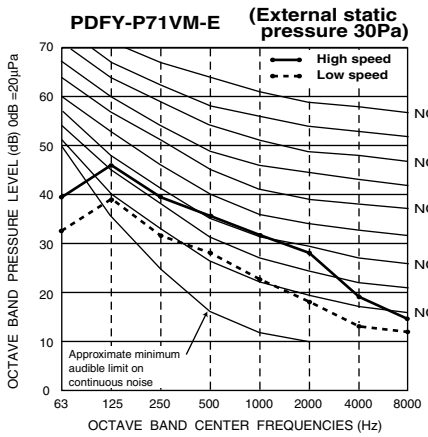

PDFY-P50VM-E
(External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

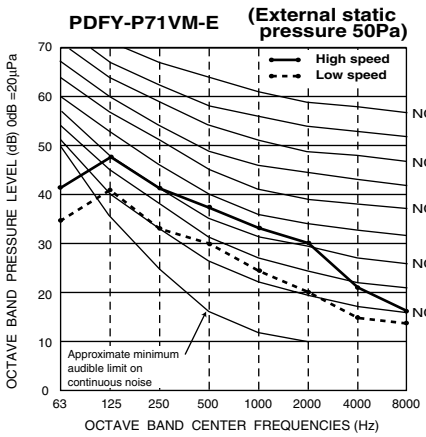

PDFY-P50VM-E
(External static pressure 100Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

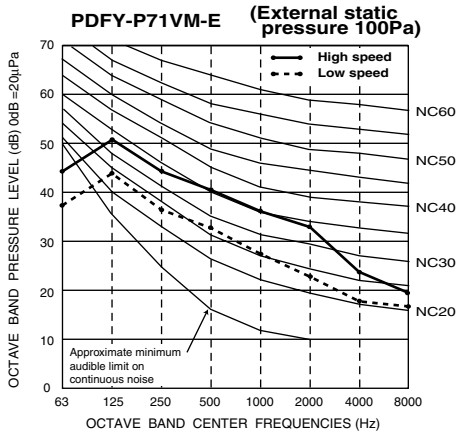

PDFY-P63VM-E
(External static pressure 30Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

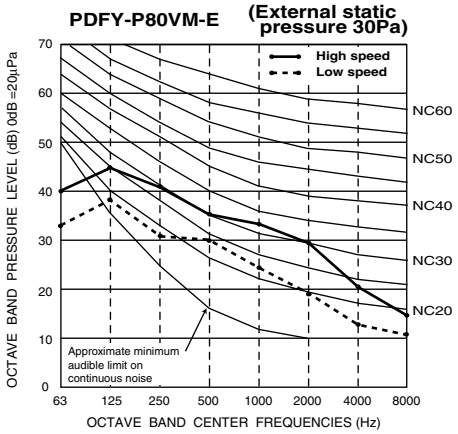

PDFY-P63VM-E
(External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

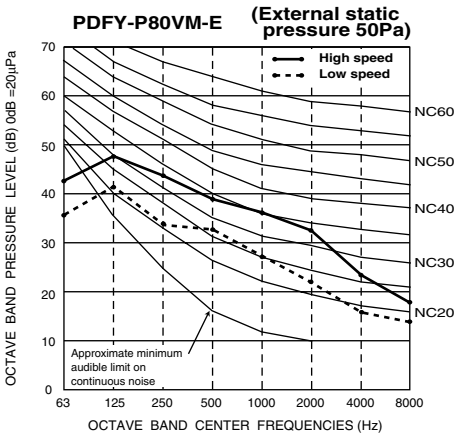

PDFY-P63VM-E
(External static pressure 100Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

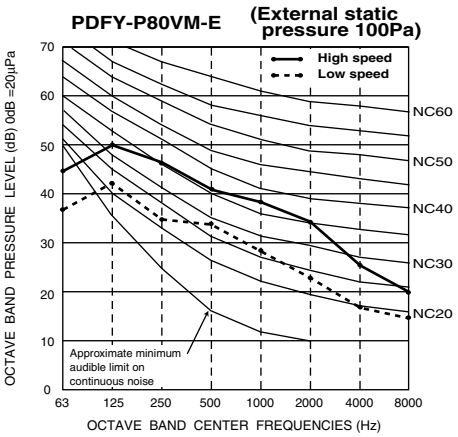

PDFY-P71VM-E
(External static pressure 30Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

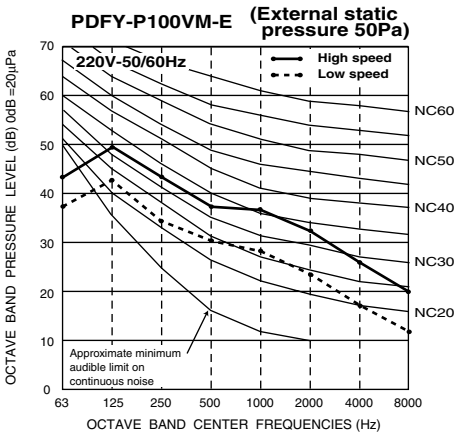

PDFY-P71VM-E
(External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

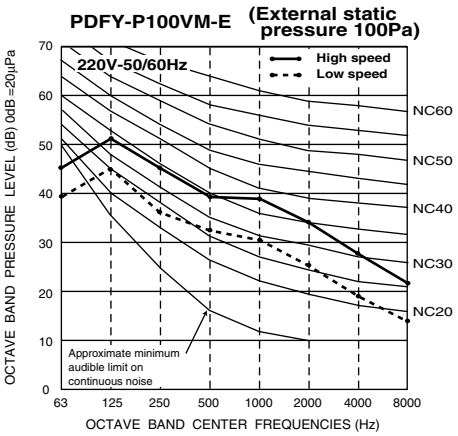

PDFY-P71VM-E
(External static pressure 100Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

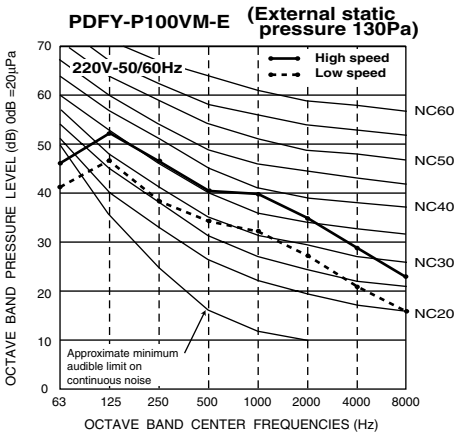

PDFY-P80VM-E
(External static pressure 30Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

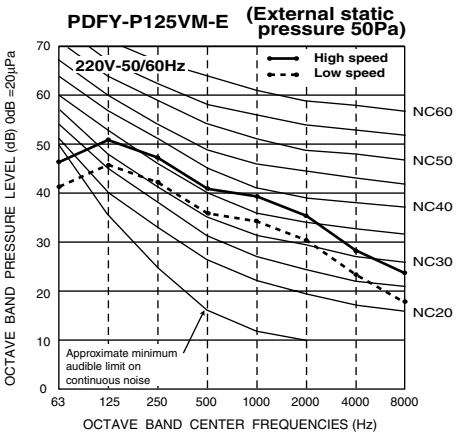

PDFY-P80VM-E
(External static pressure 50Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

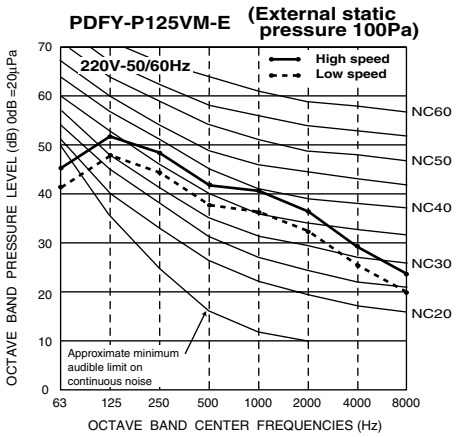

PDFY-P80VM-E
(External static pressure 100Pa)
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

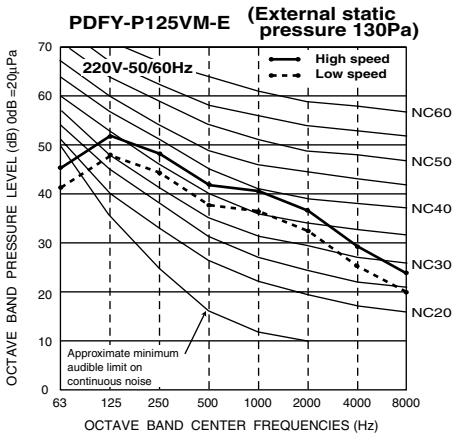

PDFY-P100VM-E
(External static pressure 50Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

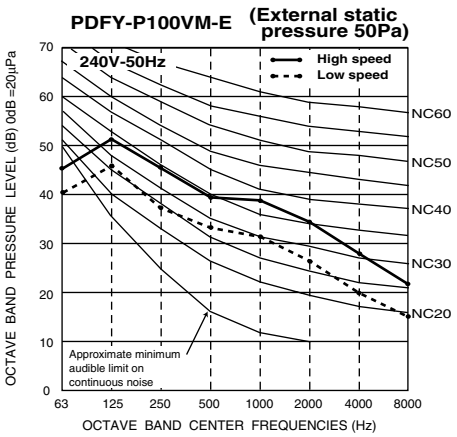

PDFY-P100VM-E
(External static pressure 100Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

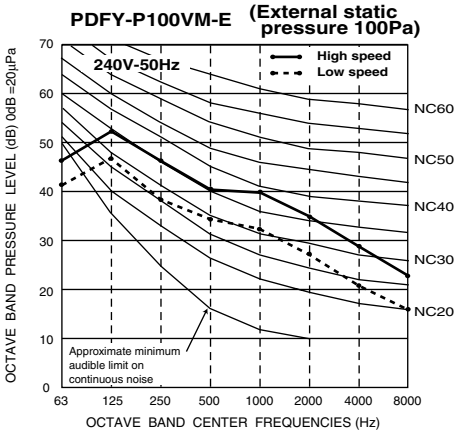

PDFY-P100VM-E
(External static pressure 130Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

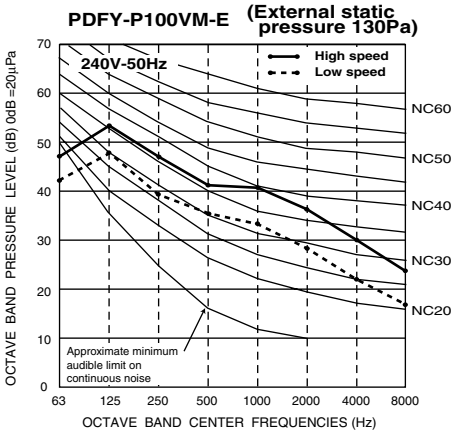

PDFY-P125VM-E
(External static pressure 50Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

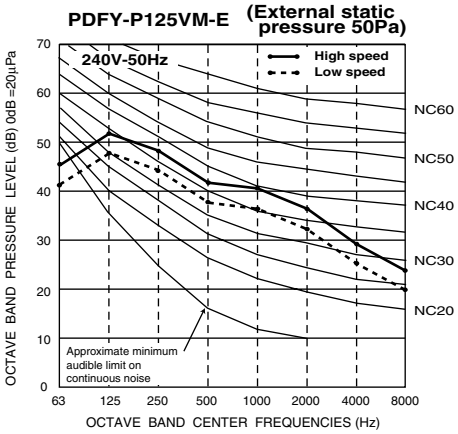

PDFY-P125VM-E (External static pressure 100Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

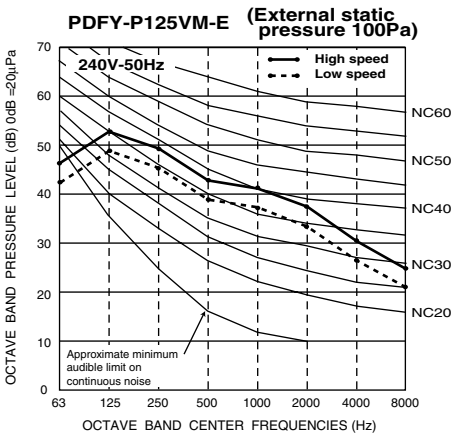

PDFY-P125VM-E (External static pressure 130Pa)
220V-50/60Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

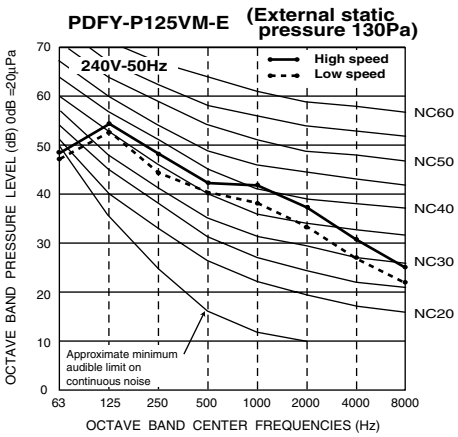

PDFY-P100VM-E (External static pressure 50Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PDFY-P100VM-E (External static pressure 100Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PDFY-P100VM-E (External static pressure 130Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

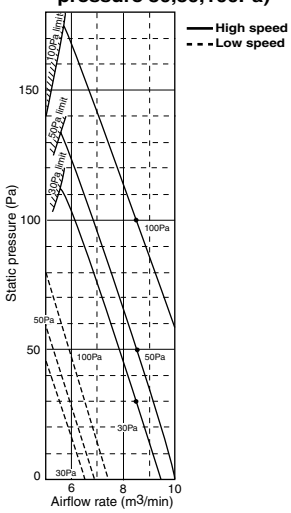

PDFY-P125VM-E (External static pressure 50Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)


PDFY-P125VM-E (External static pressure 100Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

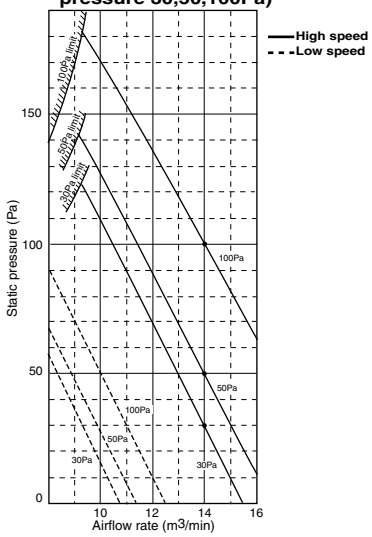

PDFY-P125VM-E (External static pressure 130Pa)
240V-50Hz
High speed
Low speed
NC60
NC50
NC40
NC30
NC20
Approximate minimum audible limit on continuous noise
OCTAVE BAND PRESSURE LEVEL (dB) 0dB =20μPa
OCTAVE BAND CENTER FREQUENCIES (Hz)

## 2-3. Fan characteristics curves

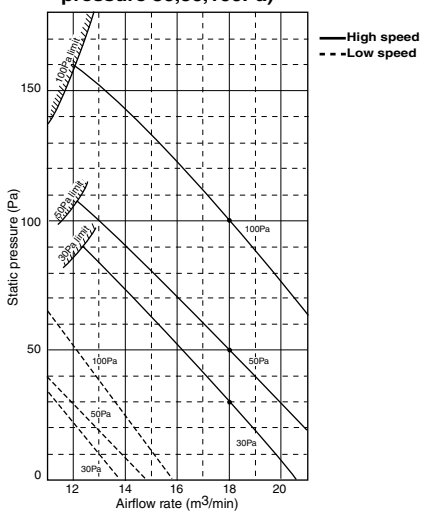
**PDFY-P20,25,32VM-E**
**(External static pressure 30,50,100Pa)**



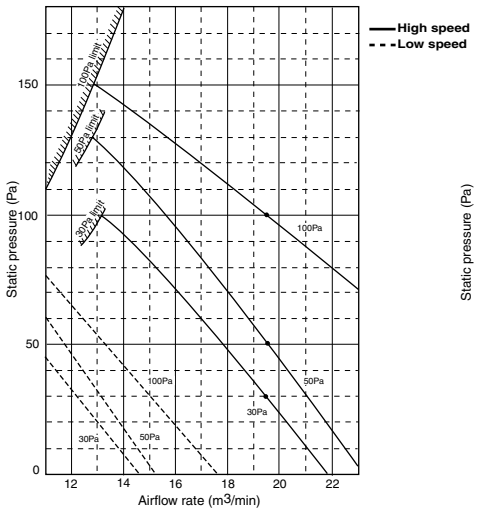

**PDFY-P40,50VM-E**
**(External static pressure 30,50,100Pa)**



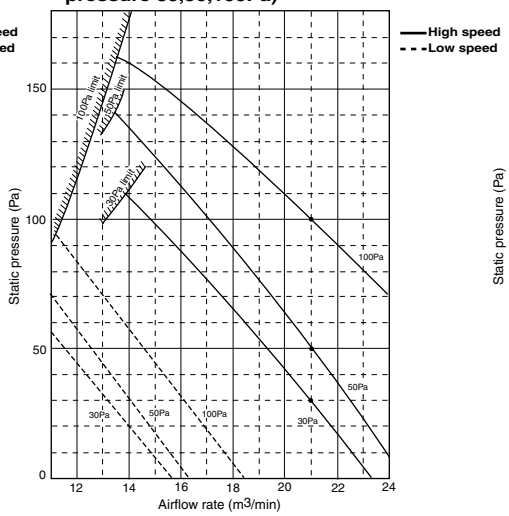

**PDFY-P63VM-E**
**(External static pressure 30,50,100Pa)**



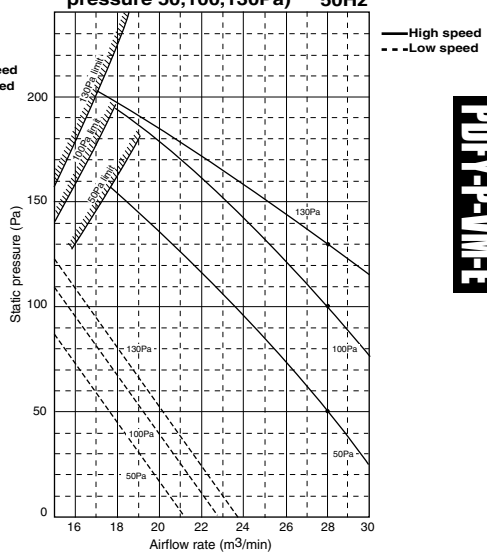

**PDFY-P71VM-E**
**(External static pressure 30,50,100Pa)**



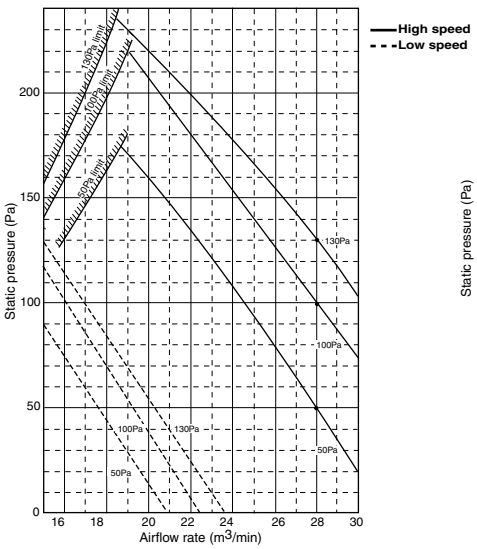

**PDFY-P80VM-E**
**(External static pressure 30,50,100Pa)**



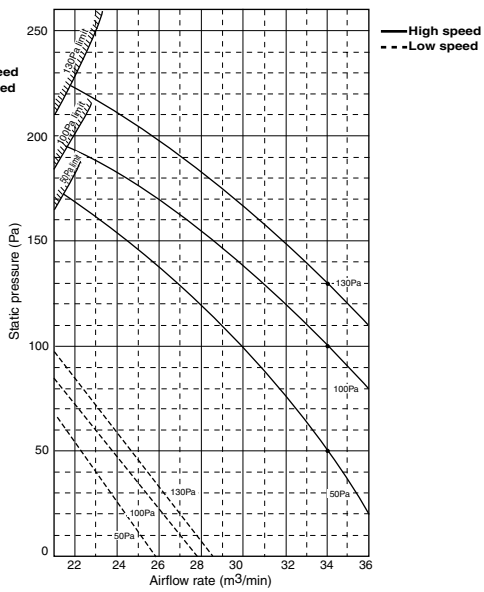

**PDFY-P100VM-E**
**(External static pressure 50,100,130Pa) 50Hz**



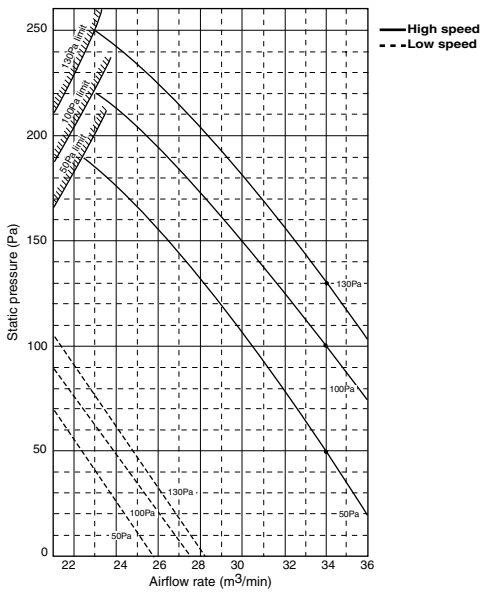

**PDFY-P100VM-E**
**(External static pressure 50,100,130Pa) 60Hz**




**PDFY-P125VM-E**
**(External static pressure 50,100,130Pa) 50Hz**



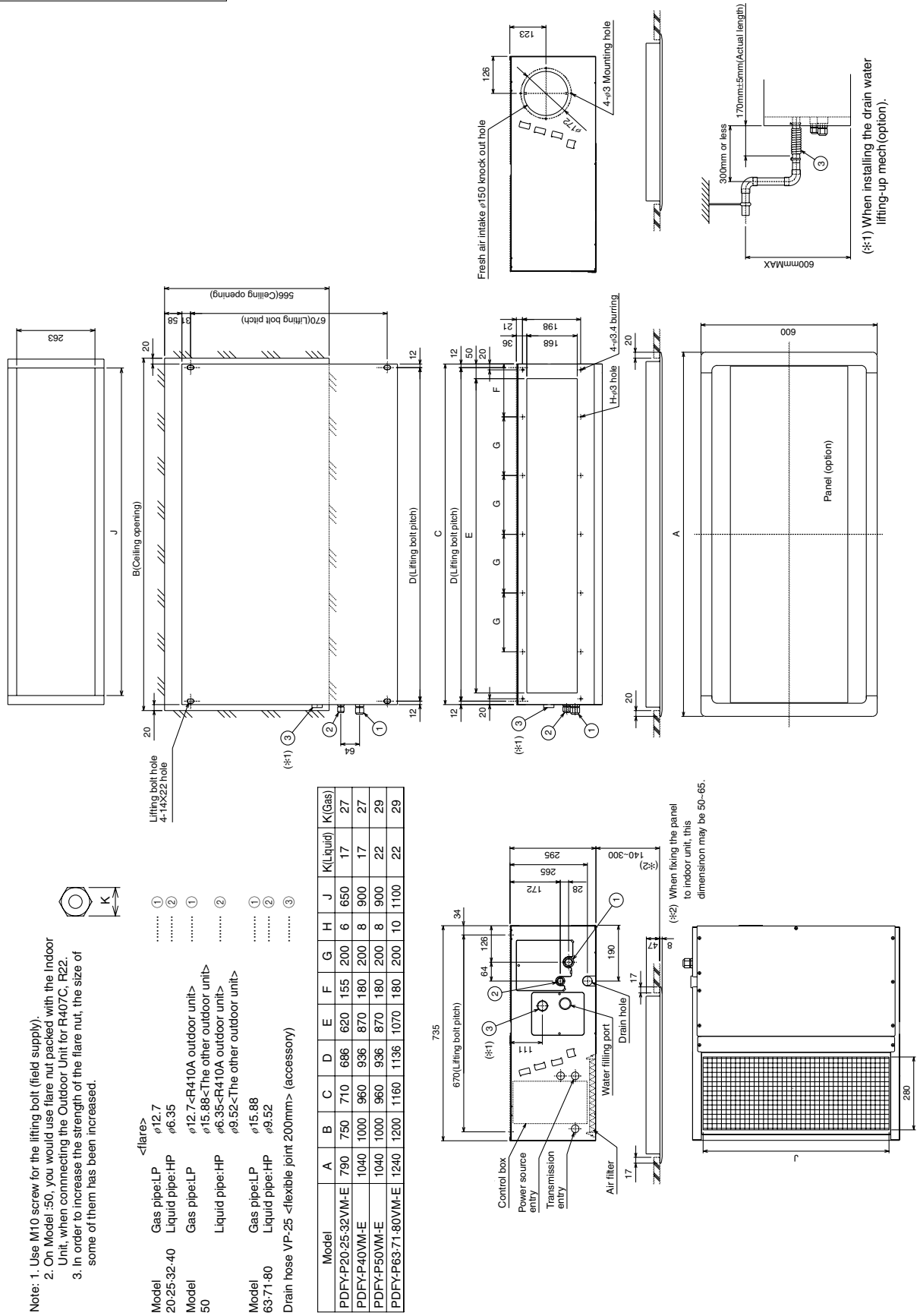

**PDFY-P125VM-E**
**(External static pressure 50,100,130Pa) 60Hz**



# 3. External Dimensions

**PDFY-P20,25,32,40,50, 63,71,80VM-E**

Unit : mm




Note: 1. Use M10 screw for the lifting bolt (field supply).
2. On Model :50, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
3. In order to increase the strength of the flare nut, the size of some of them has been increased.

K

<flare>

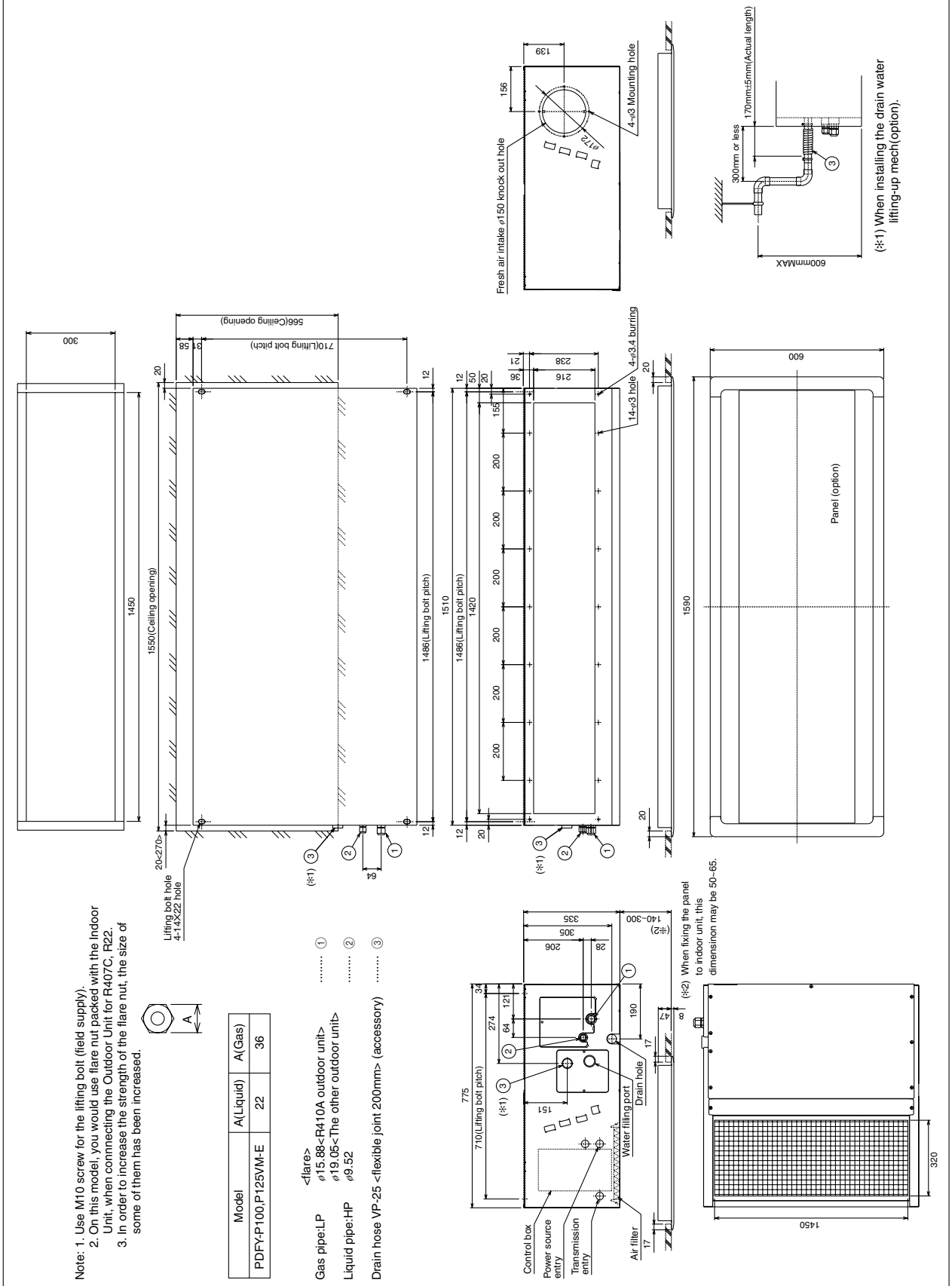
| | | | |
|---|---|---|---|
| Model 20·25·32·40 | Gas pipe:LP | ø12.7 | ..... ① |
| | Liquid pipe:HP | ø6.35 | ..... ② |
| Model 50 | Gas pipe:LP | ø12.7<R410A outdoor unit> | ..... ① |
| | | ø15.88<The other outdoor unit> | |
| | Liquid pipe:HP | ø6.35<R410A outdoor unit> | ..... ② |
| | | ø9.52<The other outdoor unit> | |
| Model 63·71·80 | Gas pipe:LP | ø15.88 | ..... ① |
| | Liquid pipe:HP | ø9.52 | ..... ② |

Drain hose VP-25 <flexible joint 200mm> (accessory) ..... ③

| Model | A | B | C | D | E | F | G | H | J | K(Liquid) | K(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PDFY-P20·25·32VM-E | 790 | 750 | 710 | 686 | 620 | 155 | 200 | 6 | 650 | 17 | 27 |
| PDFY-P40VM-E | 1040 | 1000 | 960 | 936 | 870 | 180 | 200 | 8 | 900 | 17 | 27 |
| PDFY-P50VM-E | 1040 | 1000 | 960 | 936 | 870 | 180 | 200 | 8 | 900 | 22 | 29 |
| PDFY-P63·71·80VM-E | 1240 | 1200 | 1160 | 1136 | 1070 | 180 | 200 | 10 | 1100 | 22 | 29 |

## PDFY-P100, 125VM-E

Unit : mm



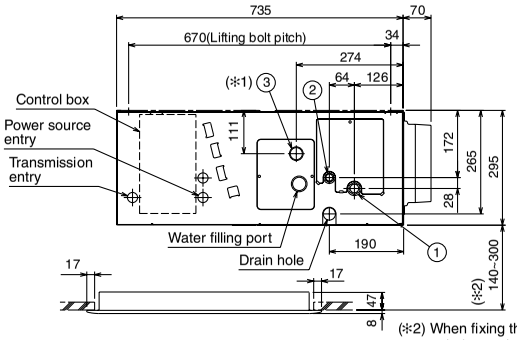

PDFY-P-VM-E

## PDFY-P20,25,32,40,50, 63,71,80VM-E with circular duct flange

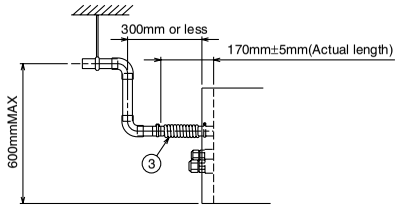
Note: 1. Use M10 screw for the lifting bolt (field supply).
2. On Model :50, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
3. In order to increase the strength of the flare nut, the size of some of them has been increased.

| | | <flare> | |
|---|---|---|---|
| Model 20·25·32·40 | Gas pipe:LP | ø12.7 | ····· ① |
| | Liquid pipe:HP | ø6.35 | ····· ② |
| Model 50 | Gas pipe:LP | ø12.7<R410A outdoor unit><br>ø15.88<The other outdoor unit> | ····· ① |
| | Liquid pipe:HP | ø6.35<R410A outdoor unit><br>ø9.52<The other outdoor unit> | ····· ② |
| Model 63·71·80 | Gas pipe:LP | ø15.88 | ····· ① |
| | Liquid pipe:HP | ø9.52 | ····· ② |
| Drain hose VP-25 <flexible joint 200mm> (accessory) | | | ····· ③ |

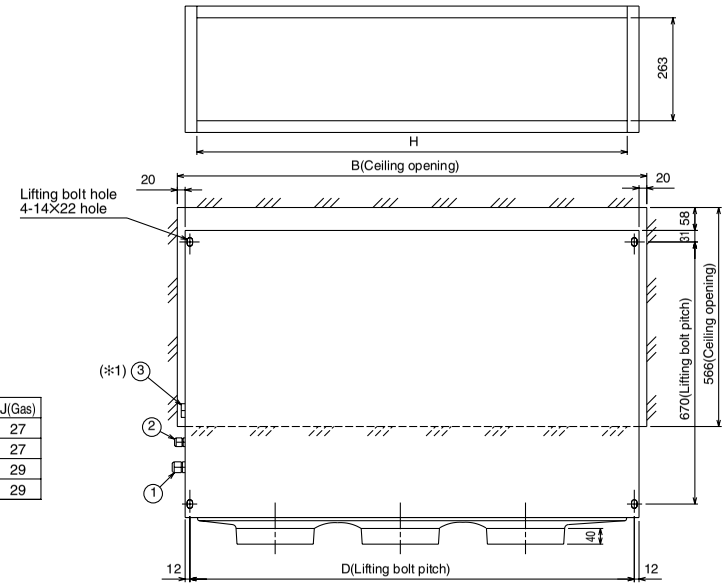
| Model | A | B | C | D | E | F | G | H | J(Liquid) | J(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|
| PDFY-P20·25·32VM-E | 790 | 750 | 710 | 686 | 165 | 320 | — | 650 | 17 | 27 |
| PDFY-P40VM-E | 1040 | 1000 | 960 | 936 | 225 | 450 | — | 900 | 17 | 27 |
| PDFY-P50VM-E | 1040 | 1000 | 960 | 936 | 225 | 450 | — | 900 | 22 | 29 |
| PDFY-P63·71·80VM-E | 1240 | 1200 | 1160 | 1136 | 230 | 320 | 320 | 1100 | 22 | 29 |

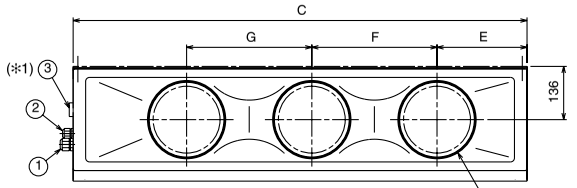


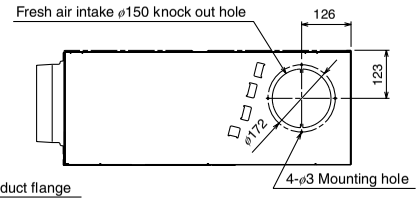

(※2) When fixing the panel to indoor unit, this dimensinon may be 50~65.

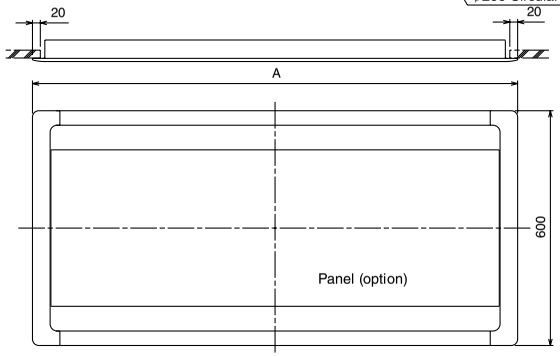


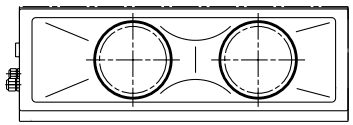

(※1)When installing the drain water lifting-up mech(option).



Model:20~50

Unit : mm

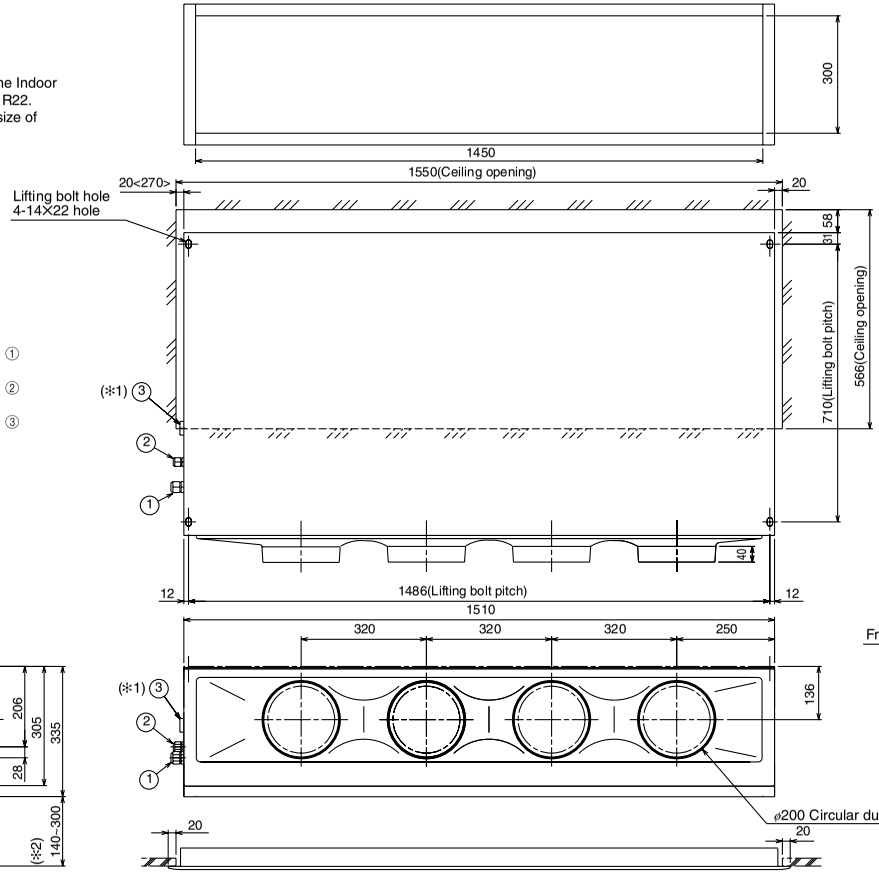
## PDFY-P100, 125VM-E with circular duct flange

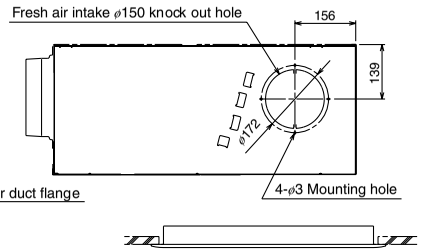
Note: 1. Use M10 screw for the lifting bolt (field supply).
2. On this model, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
3. In order to increase the strength of the flare nut, the size of some of them has been increased.

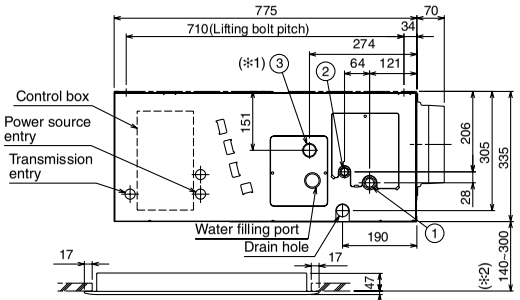
| Model | A(Liquid) | A(Gas) |
|---|---|---|
| PDFY-P100,P125VM-E | 22 | 36 |

<flare>
Gas pipe:LP ø15.88<R410A outdoor unit> ····· ①
ø19.05<The other outdoor unit>
Liquid pipe:HP ø9.52 ····· ②

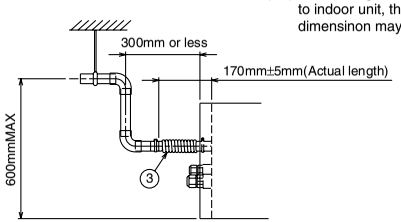
Drain hose VP-25 <flexible joint 200mm> (accessory) ····· ③



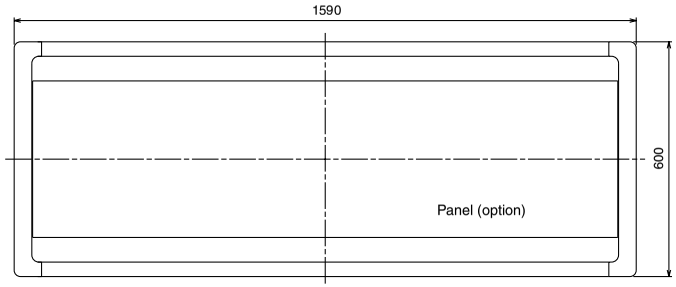




(※2) When fixing the panel to indoor unit, this dimensinon may be 50~65.



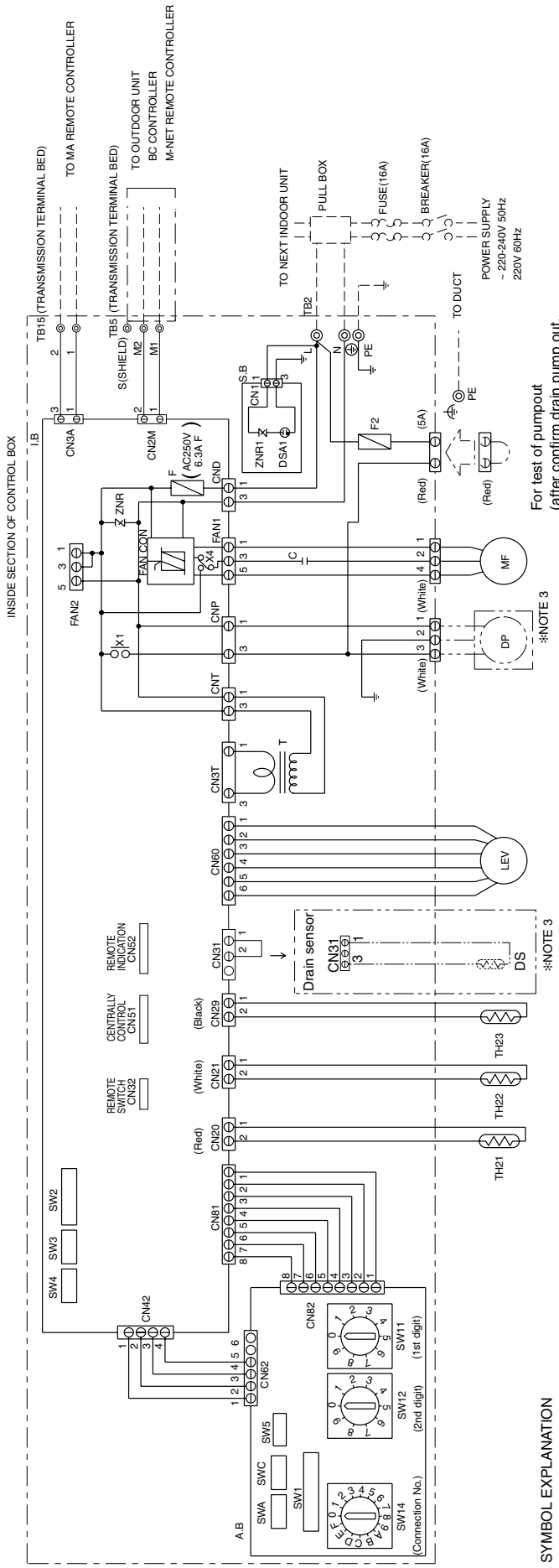

(※1)When installing the drain water lifting-up mech(option).




Unit : mm

# 4. Electrical Wiring Diagrams

## PDFY-P20~P80VM-E



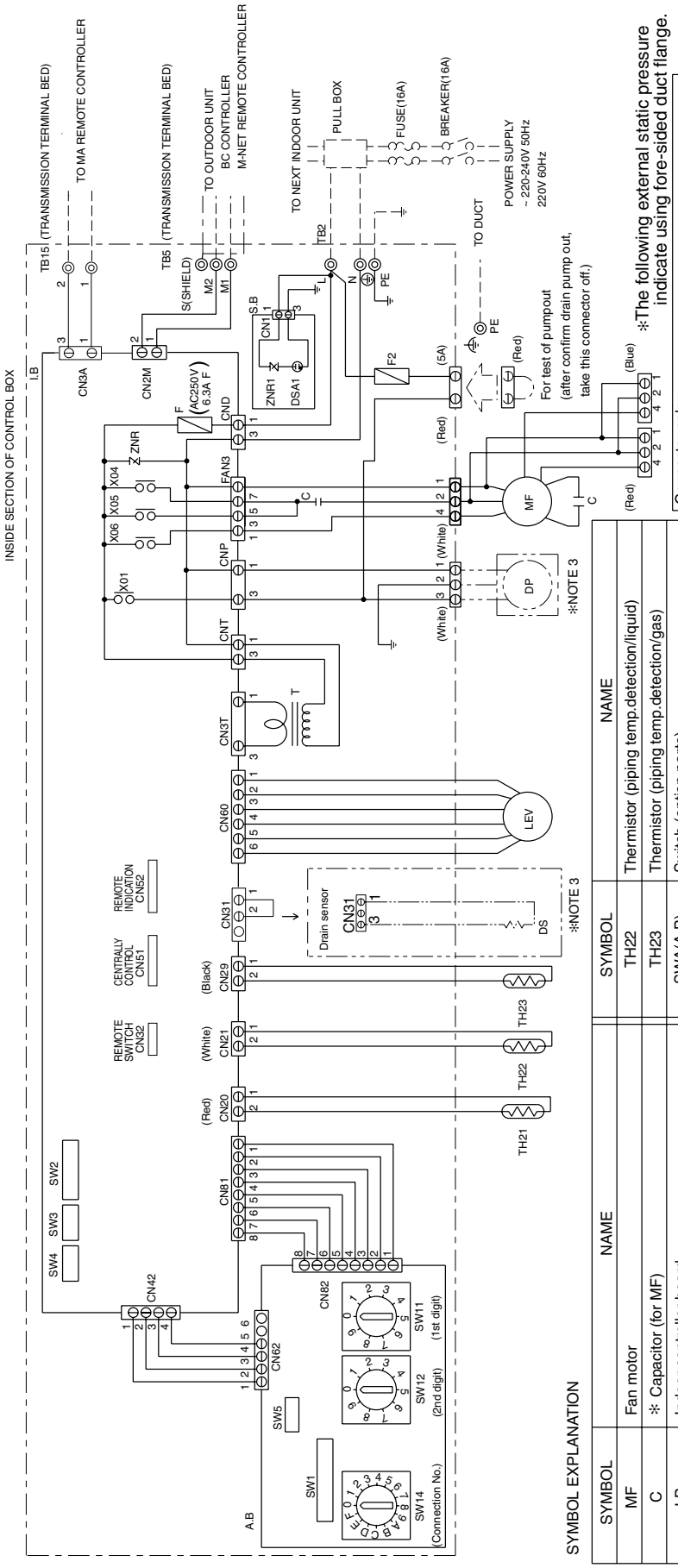

NOTE:1.TB2,TB5 shown in dotted line are field work.
2.Mark ⓪ indicates terminal bed, ⊖connector, [e]board insertion connector or fastening connector of control board.
3. — — — — :optional parts

SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | TH22 | Thermistor (piping temp.detection/liquid) |
| C | ※ Capacitor (for MF) | TH23 | Thermistor (piping temp.detection/gas) |
| I.B | Indoor controller board | SWA(A.B) | Switch (option parts) |
| A.B | Address board | SWC(A.B) | Switch (option parts) |
| TB2 | Power source terminal bed | SW11(A.B) | Switch (1st digit address set) |
| TB5 | Transmission terminal bed | SW12(A.B) | Switch (2nd digit address set) |
| TB15 | Transmission terminal bed | SW14(A.B) | Switch (connection No.set) |
| F | Fuse AC250V 6.3A F | SW1(A.B) | Switch(for mode selection) |
| <F2> | Fuse AC250V 5A F | SW2(I.B) | Switch(for capacity code) |
| T | Transformer | SW3(I.B) | Switch(for mode selection) |
| <DP> | Drain pump | SW4(I.B) | Switch(for model selection) |
| <DS> | Drain sensor | SW5(A.B) | Switch(for voltage selection) |
| LEV | Electronic linear expan. valve | X1,X4 | Aux.relay |
| TH21 | Thermistor (inlet temp.detection) | S.B | Surge absorber board |

Inside < > is the optional parts.

## PDFY-P100·P125VM-E




※The following external static pressure indicate using fore-sided duct flange.

| Connector color |
|---|
| White··· In case of used 50Pa. |
| Red ··· In case of used 100Pa or 70Pa included <h.e.f>. |
| Blue ··· In case of used 130Pa or 100Pa included <h.e.f>. |
| (<h.e.f>:high efficiency filter) |

NOTE:1.TB2,TB5 shown in dotted line are field work.
2.Mark ⓪ indicates terminal bed, ⊖connector, ⊟board insertion connector or fastening connector of control board.
3. — — — — :optional parts

※Capacitor
MODELS 100 5.0μF
MODELS 125 8.0μF

SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | TH22 | Thermistor (piping temp.detection/liquid) |
| C | ※ Capacitor (for MF) | TH23 | Thermistor (piping temp.detection/gas) |
| I.B | Indoor controller board | SWA(A.B) | Switch (option parts) |
| A.B | Address board | SWC(A.B) | Switch (option parts) |
| TB2 | Power source terminal bed | SW11(A.B) | Switch (1st digit address set) |
| TB5 | Transmission terminal bed | SW12(A.B) | Switch (2nd digit address set) |
| TB15 | Transmission terminal bed | SW14(A.B) | Switch (connection No.set) |
| F | Fuse AC250V 6.3A F | SW1(A.B) | Switch(for mode selection) |
| <F2> | Fuse AC250V 5A F | SW2(I.B) | Switch(for capacity code) |
| T | Transformer | SW3(I.B) | Switch(for mode selection) |
| <DP> | Drain pump | SW4(I.B) | Switch(for model selection) |
| <DS> | Drain sensor | SW5(A.B) | Switch(for voltage selection) |
| LEV | Electronic linear expan. valve | X01,X04~X06 | Aux.relay |
| TH21 | Thermistor (inlet temp.detection) | S.B | Surge absorber board |

Inside < > is the optional parts.

PDFY-P-VM-E

# 5. Option

| Description | Model | Applicable capacity |
|---|---|---|
| Drain water lift-up kit | PAC-KD02DM-F | P20/P25/P32/P40/P50<br>P63/P71/P80/P100/P125 |
| Square duct flange | PAC-KD32KDF-F | P20/P25/P32 |
| | PAC-KD50KDF-F | P40/P50 |
| | PAC-KD80KDF-F | P63/P71/P80 |
| | PAC-KD125KDF-F | P100/P125 |
| Circular duct flange | PAC-KD32EDF-F | P20/P25/P32 |
| | PAC-KD50EDF-F | P40/P50 |
| | PAC-KD80EDF-F | P63/P71/P80 |
| | PAC-KD125EDF-F | P100/P125 |
| Filter box for rear suction | PAC-KD80RTB | P20/P25/P32 |
| | PAC-KD81RTB | P40/P50 |
| | PAC-KD83RTB | P63/P71/P80 |
| | PAC-KD84RTB | P100/P125 |
| Canvas duct for bottom suction | PAC-KD90DF | P20/P25/P32 |
| | PAC-KD91DF | P40/P50 |
| | PAC-KD93DF | P63/P71/P80 |
| | PAC-KD94DF | P100/P125 |
| Filter box for bottom suction | PAC-KD70TB | P20/P25/P32 |
| | PAC-KD71TB | P40/P50 |
| | PAC-KD73TB | P63/P71/P80 |
| | PAC-KD74TB | P100/P125 |
| High efficiency filter 65% | PAC-KD30AF | P20/P25/P32 |
| | PAC-KD31AF | P40/P50 |
| | PAC-KD33AF | P63/P71/P80 |
| | PAC-KD34AF | P100/P125 |
| High efficiency filter 90% | PAC-KD40AF | P20/P25/P32 |
| | PAC-KD41AF | P40/P50 |
| | PAC-KD43AF | P63/P71/P80 |
| | PAC-KD44AF | P100/P125 |
| Maintenance panel with air intake | CMP-J36DSW | P20/P25/P32 |
| | CMP-J56DSW | P40/P50 |
| | CMP-J90DSW | P63/P71/P80 |
| | CMP-J160DSW | P100/P125 |

Floor standing(Exposed) PFFY-P-VLEM-E
Floor standing(Concealed) PFFY-P-VLRM-E

# CONTENTS


1. Specifications ..... I -72

2. Sound Levels ..... I -73
   2-1 Noise levels ..... I -73
   2-2 NC curves ..... I -73

3. External Dimensions ..... I -74

4. Electrical Wiring Diagram ..... I -76

5. Temperature/Airflow distribution ..... I -77

# 1. Specifications

| | | | PFFY-P20VLEM-E | PFFY-P25VLEM-E | PFFY-P32VLEM-E | PFFY-P40VLEM-E | PFFY-P50VLEM-E | PFFY-P63VLEM-E |
|---|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 208-230V 60Hz | | | | | |
| Cooling capacity | ※1 | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 |
| | ※2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 | 5,000 | 6,300 |
| Heating capacity | ※1 | kW | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 |
| Power consumption | Cooling | kW | 0.04 / 0.06 | | 0.06 / 0.07 | 0.065 / 0.075 | 0.085 / 0.09 | 0.1 / 0.11 |
| | Heating | kW | 0.04 / 0.06 | | 0.06 / 0.07 | 0.065 / 0.075 | 0.085 / 0.09 | 0.1 / 0.11 |
| Current | Cooling | A | 0.19 / 0.25 | | 0.29 / 0.30 | 0.32 / 0.33 | 0.40 / 0.41 | 0.46 / 0.47 |
| | Heating | A | 0.19 / 0.25 | | 0.29 / 0.30 | 0.32 / 0.33 | 0.40 / 0.41 | 0.46 / 0.47 |
| External finish(Munsel No.) | | | Acrylic paint (5Y 8/1) | | | | | |
| Dimension | Height | mm | 630 | | | | | |
| | Width | mm | 1,050 | | 1,170 | | 1,410 | |
| | Depth | mm | 220 | | | | | |
| Net weight | | kg | 23 | | 25 | 26 | 30 | 32 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | | | |
| Fan | Type | | Sirocco fan× 1 | | Sirocco fan× 2 | | | |
| | Airflow rate (Low-High) ※3 | m³/min | 5.5-6.5 | | 7.0-9.0 | 9.0-11.0 | 12.0-14.0 | 12.0-15.5 |
| | External static pressure | Pa | 0 | | | | | |
| Motor | Type | | Single phase induction motor | | | | | |
| | Output | kW | 0.02 | | 0.03 | 0.035 | | 0.045 |
| Air filter | | | PP Honeycomb fabric (washable) | | | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | | ø 12.7 (R410A)<br>ø 15.88 (R22,R407C) | ø 15.88 |
| | Liquid (Flare) | mm | ø 6.35 | | | | ø 6.35 (R410A)<br>ø 9.52 (R22,R407C) | ø 9.52 |
| Drain pipe dimension | | | Accessary hose ø 27 (top end : ø 20) | | | | | |
| Noise level (Low-High) ※3 ※4 ※5 | | dB(A) | 34-40 | | 35-40 | 38-43 | | 40-46 |

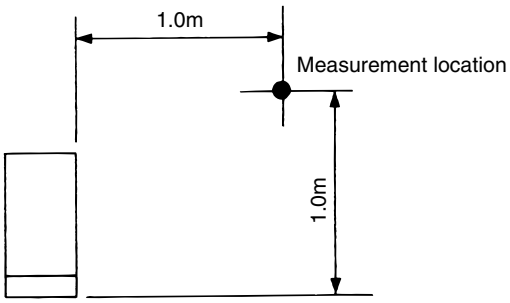
| | | | PFFY-P20VLRM-E | PFFY-P25VLRM-E | PFFY-P32VLRM-E | PFFY-P40VLRM-E | PFFY-P50VLRM-E | PFFY-P63VLRM-E |
|---|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 208-230V 60Hz | | | | | |
| Cooling capacity | ※1 | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 |
| | ※2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 | 5,000 | 6,300 |
| Heating capacity | ※1 | kW | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 |
| Power consumption | Cooling | kW | 0.04 / 0.06 | | 0.06 / 0.07 | 0.065 / 0.075 | 0.085 / 0.09 | 0.1 / 0.11 |
| | Heating | kW | 0.04 / 0.06 | | 0.06 / 0.07 | 0.065 / 0.075 | 0.085 / 0.09 | 0.1 / 0.11 |
| Current | Cooling | A | 0.19 / 0.25 | | 0.29 / 0.30 | 0.32 / 0.33 | 0.40 / 0.41 | 0.46 / 0.47 |
| | Heating | A | 0.19 / 0.25 | | 0.29 / 0.30 | 0.32 / 0.33 | 0.40 / 0.41 | 0.46 / 0.47 |
| External finish(Munsel No.) | | | Galvanizing | | | | | |
| Dimension | Height | mm | 639 | | | | | |
| | Width | mm | 886 | | 1,006 | | 1,246 | |
| | Depth | mm | 220 | | | | | |
| Net weight | | kg | 18.5 | | 20 | 21 | 25 | 27 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | | | |
| Fan | Type | | Sirocco fan× 1 | | Sirocco fan× 2 | | | |
| | Airflow rate (Low-High) ※3 | m³/min | 5.5-6.5 | | 7.0-9.0 | 9.0-11.0 | 12.0-14.0 | 12.0-15.5 |
| | External static pressure | Pa | 0 | | | | | |
| Motor | Type | | Single phase induction motor | | | | | |
| | Output | kW | 0.02 | | 0.03 | 0.035 | | 0.045 |
| Air filter | | | PP Honeycomb fabric (washable) | | | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | | ø 12.7 (R410A)<br>ø 15.88 (R22,R407C) | ø 15.88 |
| | Liquid (Flare) | mm | ø 6.35 | | | | ø 6.35 (R410A)<br>ø 9.52 (R22,R407C) | ø 9.52 |
| Drain pipe dimension | | | Accessary hose ø 27 (top end : ø 20) | | | | | |
| Noise level (Low-High) ※3 ※4 ※5 | | dB(A) | 34-40 | | 35-40 | 38-43 | | 40-46 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 Air flow rate/noise level are in ( Low-High)
※4 Measured point : 1m×1m, Power supply : AC240V/50Hz
·1dB(A) lower at AC230V/50Hz
·2dB(A) lower at AC220V/50Hz
·3dB(A) lower at 1.5m×1.5m point
※5 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

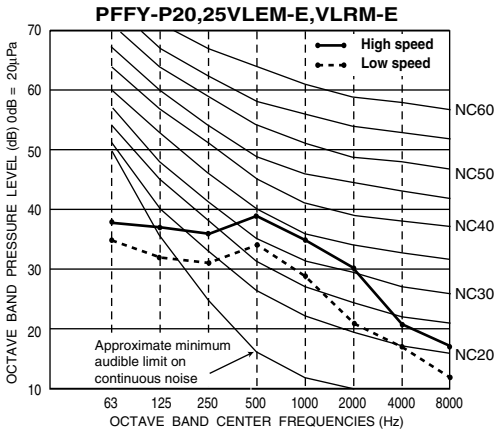
Floor standing

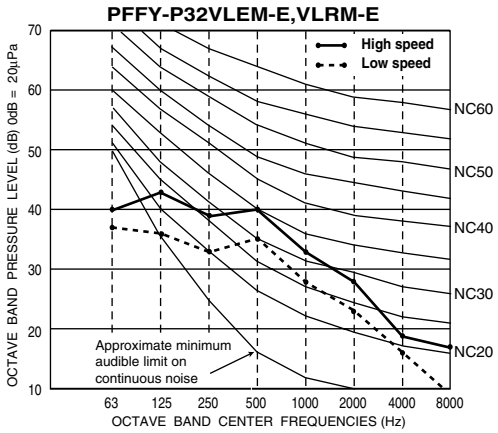


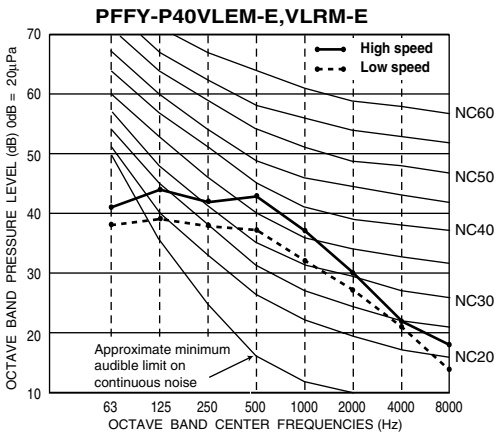

Noise level at anechoic room (Low-High) Unit : dB(A)

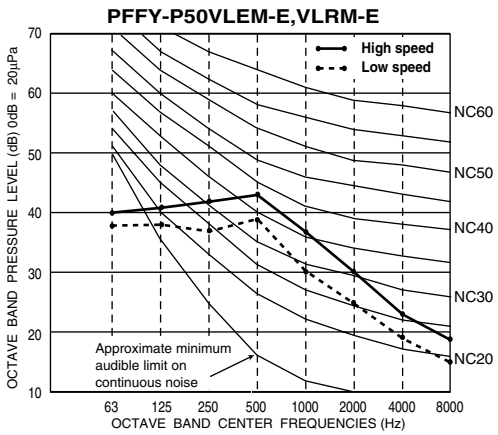
| Model | Noise level (A weighted) |
|---|---|
| PFFY-P20VLEM-E<br>PFFY-P20VLRM-E<br>PFFY-P25VLEM-E<br>PFFY-P25VLRM-E | 34-40 |
| PFFY-P32VLEM-E<br>PFFY-P32VLRM-E | 35-40 |
| PFFY-P40VLEM-E<br>PFFY-P40VLRM-E<br>PFFY-P50VLEM-E<br>PFFY-P50VLRM-E | 38-43 |
| PFFY-P63VLEM-E<br>PFFY-P63VLRM-E | 40-46 |

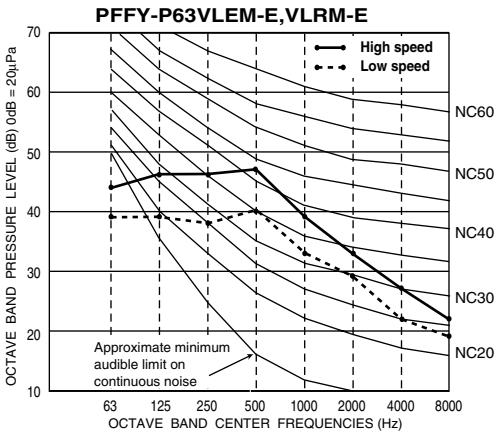
## 2-2. NC curves



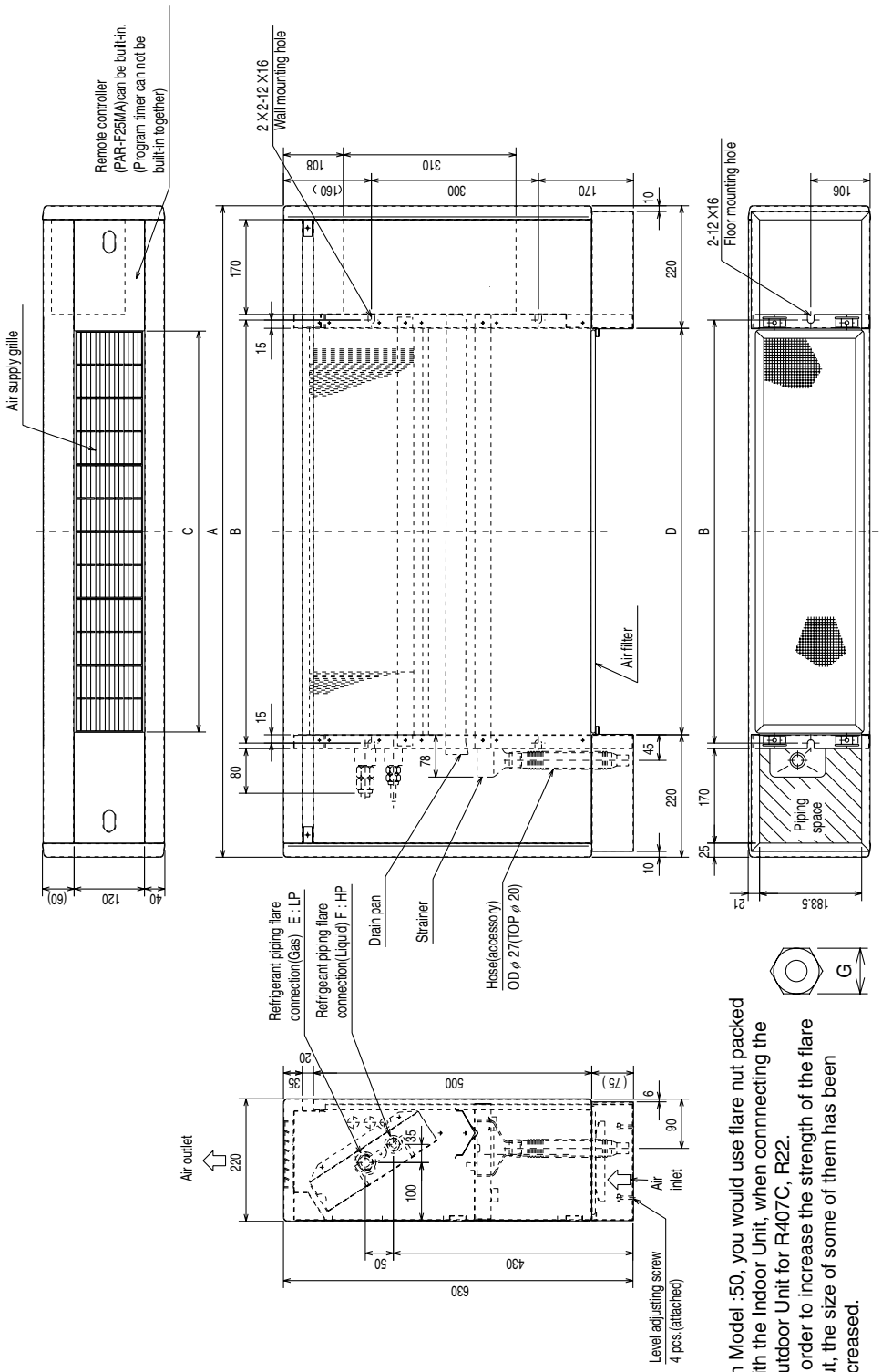



# 3. External Dimensions

**PFFY-P20,25,32,40,50, 63VLEM-E**

Unit : mm



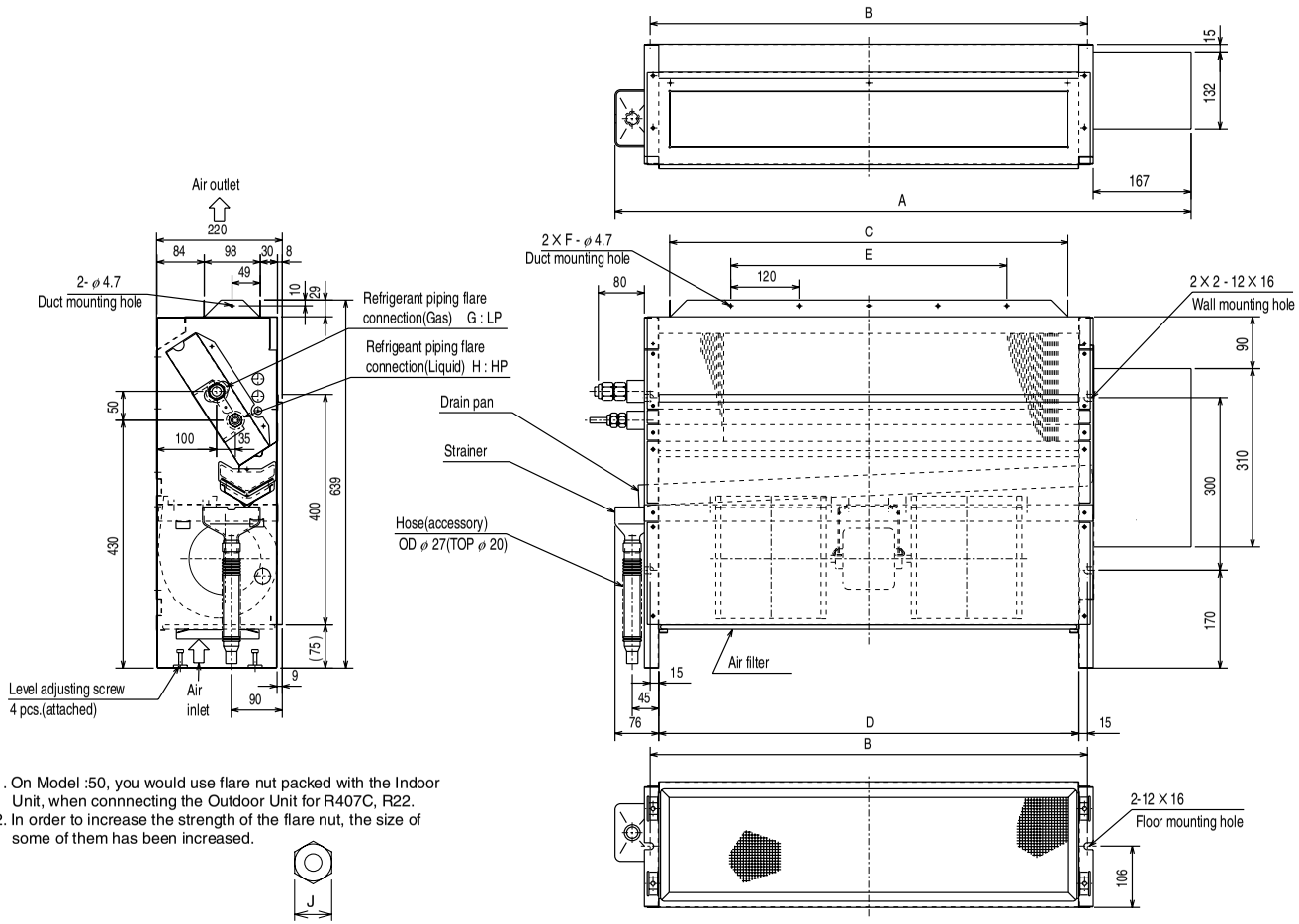

Note: 1. On Model :50, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
2. In order to increase the strength of the flare nut, the size of some of them has been increased.

Dimensions

| Model | A | B | C | D | E(Gas) | | F(Liquid) | | G(Liquid) | | G(Gas) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PFFY-P20VLEM-E | 1050 | 640 | 600 | 610 | ϕ12.7 | | ϕ6.35 | | 17 | | 27 | |
| PFFY-P25VLEM-E | 1050 | 640 | 600 | 610 | ϕ12.7 | | ϕ6.35 | | 17 | | 27 | |
| PFFY-P32VLEM-E | 1170 | 760 | 720 | 730 | ϕ12.7 | | ϕ6.35 | | 17 | | 27 | |
| PFFY-P40VLEM-E | 1170 | 760 | 720 | 730 | ϕ12.7 | | ϕ6.35 | | 17 | | 27 | |
| PFFY-P50VLEM-E | 1410 | 1000 | 960 | 970 | ϕ12.7 ※1 | ϕ15.88 ※2 | ϕ6.35 ※1 | ϕ9.52 ※2 | 22 ※1 | 22 ※2 | 29 ※1 | 29 ※2 |
| PFFY-P63VLEM-E | 1410 | 1000 | 960 | 970 | ϕ15.88 | | ϕ9.52 | | 22 | | 29 | |

※1:R410A outdoor unit
※2:The other outdoor unit

Unit : mm




Note: 1. On Model :50, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
2. In order to increase the strength of the flare nut, the size of some of them has been increased.

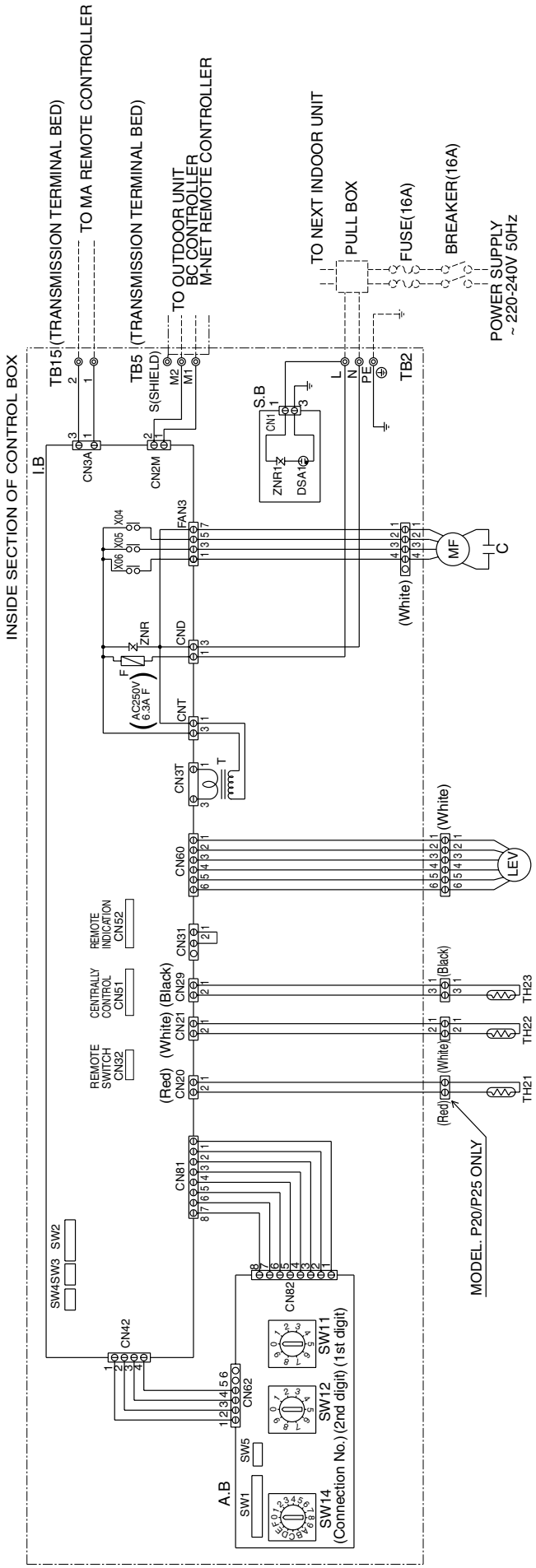



Dimensions

| Model | A | B | C | D | E | F | G(Gas) | H(Liquid) | J(Liquid) | J(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|
| PFFY-P20VLRM-E | 886 | 640 | 572 | 610 | 360 | 4 | ø12.7 | ø6.35 | 17 | 27 |
| PFFY-P25VLRM-E | 886 | 640 | 572 | 610 | 360 | 4 | ø12.7 | ø6.35 | 17 | 27 |
| PFFY-P32VLRM-E | 1006 | 760 | 692 | 730 | 480 | 5 | ø12.7 | ø6.35 | 17 | 27 |
| PFFY-P40VLRM-E | 1006 | 760 | 692 | 730 | 480 | 5 | ø12.7 | ø6.35 | 17 | 27 |
| PFFY-P50VLRM-E | 1246 | 1000 | 932 | 970 | 720 | 7 | ※1 ø12.7 | ※1 ø6.35 | ※1 22 | ※1 29 |
| | | | | | | | ※2 ø15.88 | ※2 ø9.52 | ※2 22 | ※2 29 |
| PFFY-P63VLRM-E | 1246 | 1000 | 932 | 970 | 720 | 7 | ø15.88 | ø9.52 | 22 | 29 |

※1:R410A outdoor unit
※2:The other outdoor unit

# 4. Electrical Wiring Diagram




SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|
| MF | Fan motor | TH22 | Thermistor (piping temp.detection/liquid) |
| C | ✻Capacitor (for MF) | TH23 | Thermistor (piping temp.detection/gas) |
| I.B | Indoor controller board | SW11(A.B) | Switch (1st digit address set) |
| A.B | Address board | SW12(A.B) | Switch (2nd digit address set) |
| TB2 | Power source terminal bed | SW14(A.B) | Switch (connection No.set) |
| TB5 | Transmission terminal bed | SW1(A.B) | Switch(for mode selection) |
| TB15 | Transmission terminal bed | SW2(I.B) | Switch(for capacity code) |
| F | Fuse AC250V 6.3A F | SW3(I.B) | Switch(for mode selection) |
| T | Transformer | SW4(I.B) | Switch(for model selection) |
| LEV | Electronic linear expan. valve | SW5(A.B) | Switch(for voltage selection) |
| S.B | Surge absorber board | X04~06 | Aux.relay |
| TH21 | Thermistor (inlet temp.detection) | | |

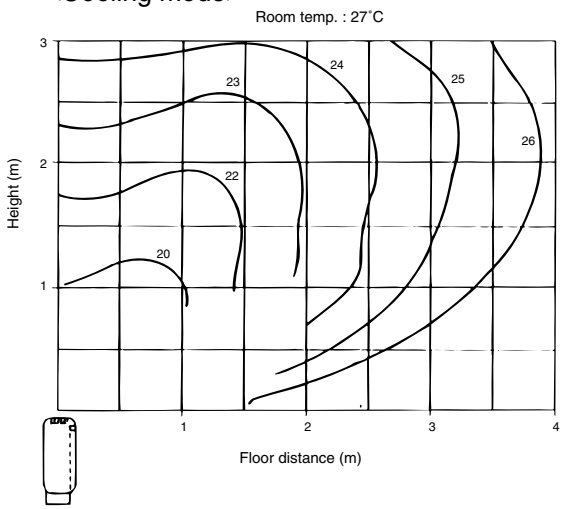
✻Capacitor
MODELS 20/25/32/40 1.5μF
MODEL 50 2.0μF
MODEL 63 2.5μF

PFFY-P-VLEM-E/VLRM-E

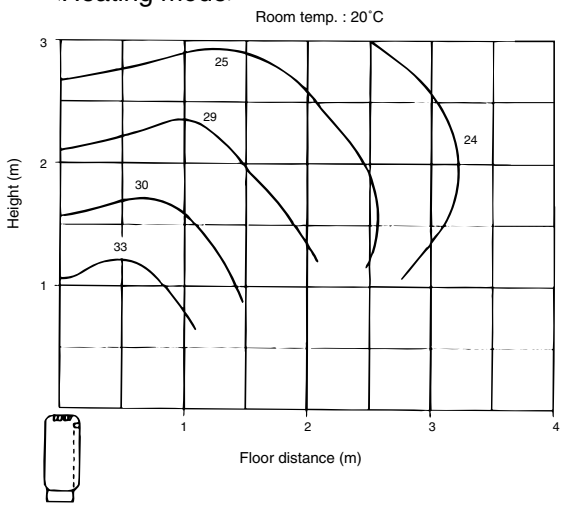
# 5. Temperature/Airflow distribution

## ● Temperature distribution

<Cooling mode>

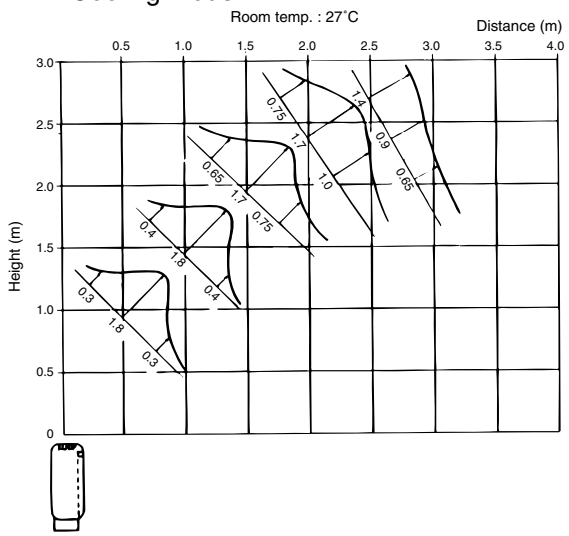



<Heating mode>

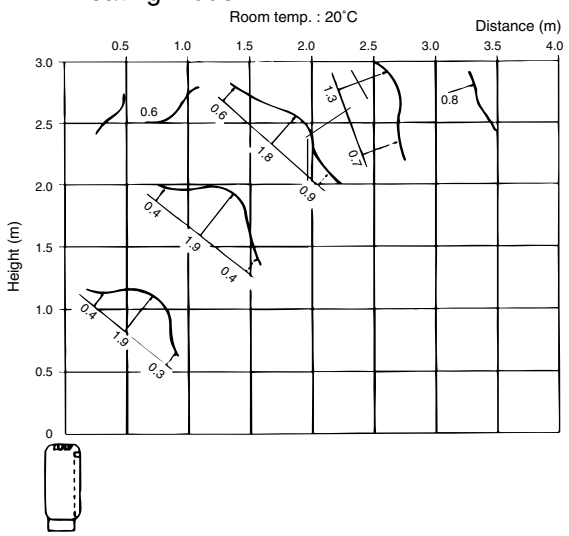



## ● Airlow distribution

<Cooling mode>




<Heating mode>




PFFY-P-VLEM-E/VLRM-E

Cassette ceiling (1-way flow) PMFY-P-VBM-E

# CONTENTS


1. Specifications ..... Ⅰ-80

2. Sound Levels ..... Ⅰ-81
   2-1 Noise levels ..... Ⅰ-81
   2-2 NC curves ..... Ⅰ-81

3. External Dimension ..... Ⅰ-82

4. Electrical Wiring Diagram ..... Ⅰ-83

5. Temperature/Airflow distribution ..... Ⅰ-84

6. Options ..... Ⅰ-84

# 1. Specifications

| | | | PMFY-P20VBM-E | PMFY-P25VBM-E | PMFY-P32VBM-E | PMFY-P40VBM-E |
|---|---|---|---|---|---|---|
| Power source | | | ~220-240V 50Hz / ~ 200V 60Hz | | | |
| Cooling capacity | ※1 | kW | 2.2 | 2.8 | 3.6 | 4.5 |
| | ※2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 |
| Heating capacity | ※1 | kW | 2.5 | 3.2 | 4.0 | 5.0 |
| Power consumption | Cooling | kW | 0.042 | 0.044 | | 0.054 |
| | Heating | kW | 0.042 | 0.044 | | 0.054 |
| Current | Cooling | A | 0.20 | 0.21 | | 0.26 |
| | Heating | A | 0.20 | 0.21 | | 0.26 |
| External finish | | | Panel : 0.98Y8.99/0.63 | | | |
| Dimension ※3 | Height | mm | 230 (30) | | | |
| | Width | mm | 812 (1000) | | | |
| | Depth | mm | 395 (470) | | | |
| Net weight ※3 | | kg | 14 (3.0) | | | |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | Line flow fan × 1 | | | |
| | Airflow rate ※3 (Low-Mid2-Mid1-High) | $m^3$/min | 6.5-7.2-8.0-8.7 | 7.3-8.0-8.6-9.3 | | 7.7-8.7-9.7-10.7 |
| | External static pressure | Pa | 0 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.028 | | | |
| Air filter | | | PP Honeycomb fabric | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | |
| | Liquid (Flare) | mm | ø 6.35 | | | |
| Drain pipe dimension | | | O.D. ø25 (VP-20) | | | |
| Noise level (Low-Mid2-Mid1-High) ※4 | | dB(A) | 27-30-33-35 | 32-34-36-37 | | 33-35-37-39 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB

※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)

※3 External dimension / net weight are shown in (panel), and airflow rate/noise level are in (low-middle2-middle1-high).

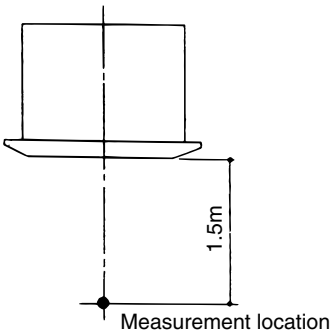
※4 It is measured in anechoic room.

PMFY-P-VBM-E

# 2. Sound Levels

## 2-1. Noise levels

Casette ceiling (VBM-E series)

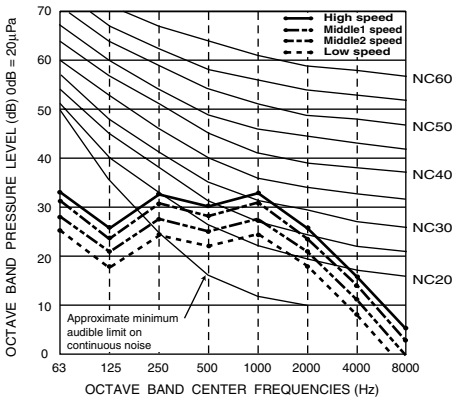



Noise level at anechoic room
(Low-Middle2-Middle1-High) Unit : dB(A)

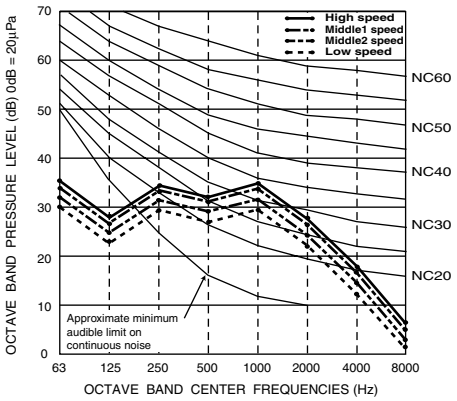
| Model | Noise level (A weighted) |
|---|---|
| PMFY-P20VBM-E | 27-30-33-35 |
| PMFY-P25VBM-E<br>PMFY-P32VBM-E | 32-34-36-37 |
| PMFY-P40VBM-E | 33-35-37-39 |

## 2-2. NC curves

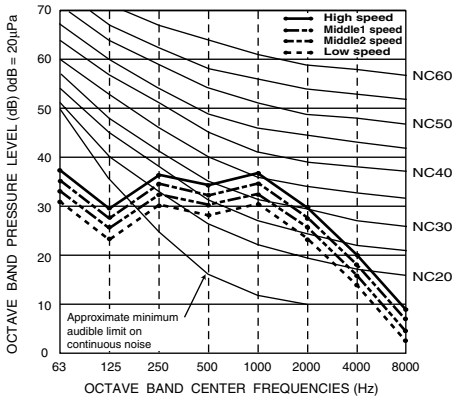
**PMFY-P20VBM-E**




**PMFY-P25,32VBM-E**



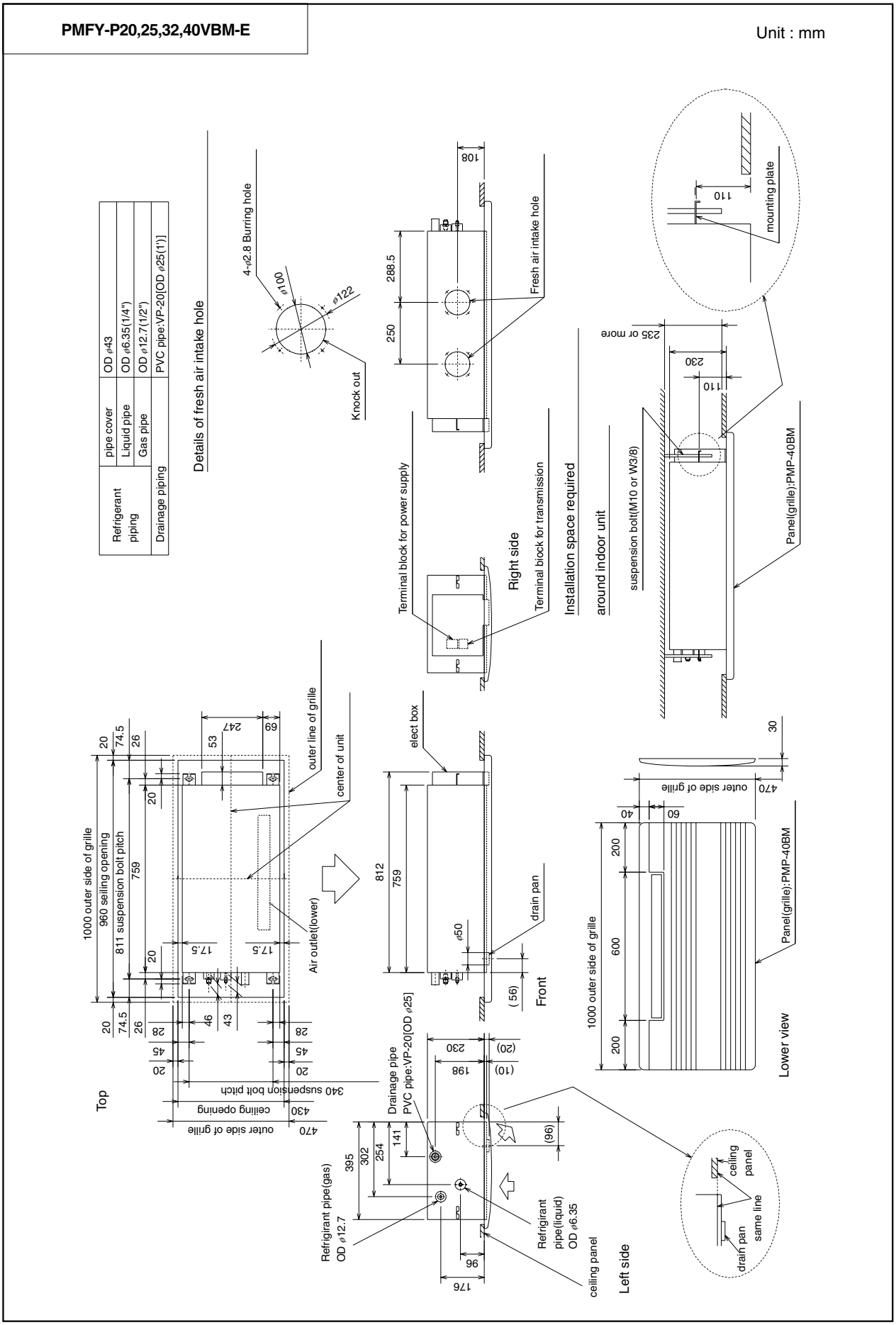

**PMFY-P40VBM-E**



# 3. External Dimension

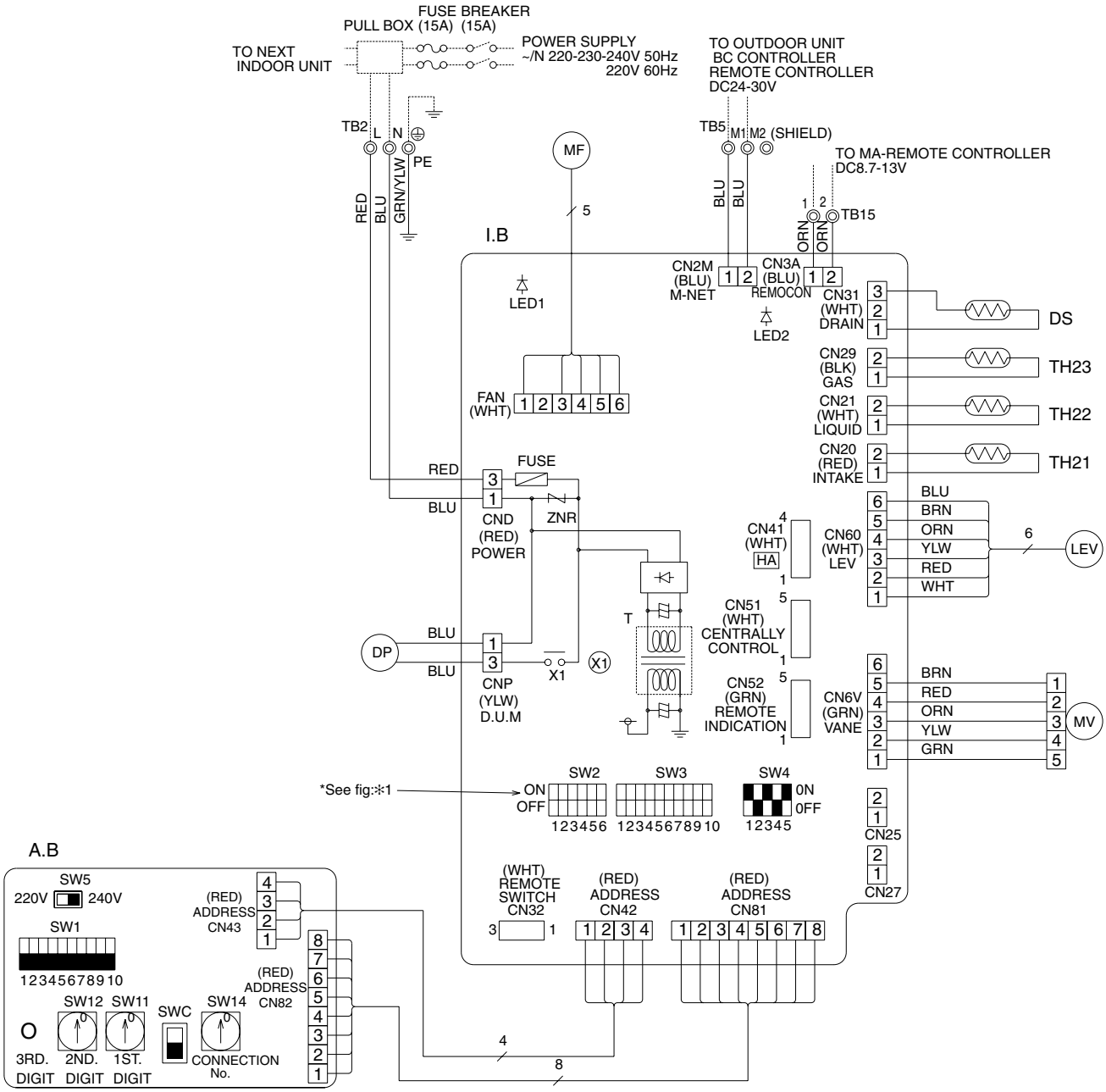
**PMFY-P20,25,32,40VBM-E**

Unit : mm




PMFY-P-VBM-E

# 4. Electrical Wiring Diagram




<SYMBOL EXPLANATION>

| SYMBOL | | NAME | | SYMBOL | NAME |
|---|---|---|---|---|---|
| I.B | | INDOOR CONTROLLER BOARD | | MF | FAN MOTOR |
| | CN25 | CONNECTOR | HUMIDIFIER | MV | VANE MOTOR |
| | CN27 | | DAMPER | DP | DRAIN WATER LIFTING-UP MACH. |
| | CN32 | | REMOTE SWITCH | DS | DRAIN SENSOR |
| | CN41 | | HA TERMINAL-A | TB2 | TERMINAL BLOCK: POWER SUPPLY |
| | CN51 | | CENTRALLY CONTROL | TB5 | TERMINAL BLOCK: TRANSMISSION |
| | CN52 | | REMOTE INDICATION | TB15 | TERMINAL BLOCK: MA-REMOTE CONTROLLER |
| | SW2 | SWITCH | CAPACITY CODE | TH21 | THERMISTOR: ROOM TEMPERATURE DETECTION (0˚C/15kΩ, 25˚C/5.4kΩ) |
| | SW3 | | MODE SELECTION | | |
| | SW4 | | MODEL SELECTION | TH22 | THERMISTOR: PIPE TEMPERATURE DETECTION/LIQUID (0˚C/15kΩ, 25˚C/5.4kΩ) |
| | ZNR | VARISTOR | | | |
| | FUSE | FUSE(6.3A/250V) | | TH23 | THERMISTOR: PIPE TEMPERATURE DETECTION/GAS (0˚C/15kΩ, 25˚C/5.4kΩ) |
| | X1 | AUX.RELAY | DRAIN PUMP | | |
| | T | TRANSFORMER | | LEV | LINEAR EXPANSION VALVE |
| | LED1 | POWER SUPPLY(I.B) | | | |
| | LED2 | POWER SUPPLY(I.B) | | | |
| A.B | | CIRCUIT BOARD | | | |
| | SW1 | SWITCH | MODE SELECTION | | |
| | SW5 | | VOLTAGE SELECTION | | |
| | SW11 | | ADDRESS SETTING 1ST DIGIT | | |
| | SW12 | | ADDRESS SETTING 2ND DIGIT | | |
| | SW14 | | CONNECTION NO. | | |

<*1>

| MODELS | SW2 | SW3 |
|---|---|---|
| P20 | ON OFF 123456 | ON OFF 12345678910 |
| P25 | ON OFF 123456 | ON OFF 12345678910 |
| P32 | ON OFF 123456 | ON OFF 12345678910 |
| P40 | ON OFF 123456 | ON OFF 12345678910 |

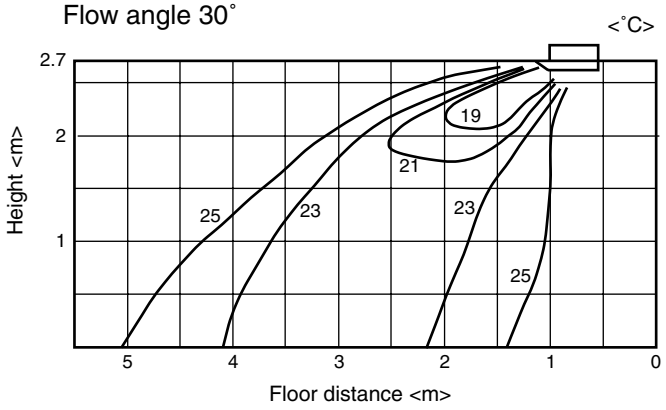
NOTES:

1. At servicing for outdoor unit, always follow the wiring diagram of outdoor unit.
2. Symbol [S] of TB5 is the shield wire connection.
3. Symbols used in wiring diagram above are, ◎:terminal block, ☐☐☐:connector.
4. The setting of the SW2 dip switches differs in the capacity for the detail, see the table <*1>.
5. Please set the switch SW5 according to the power supply voltage. Set SW5 to 240V side when the power supply is 230 and 240 volts. When the power supply is 220 volts, set SW5 to 220V side.

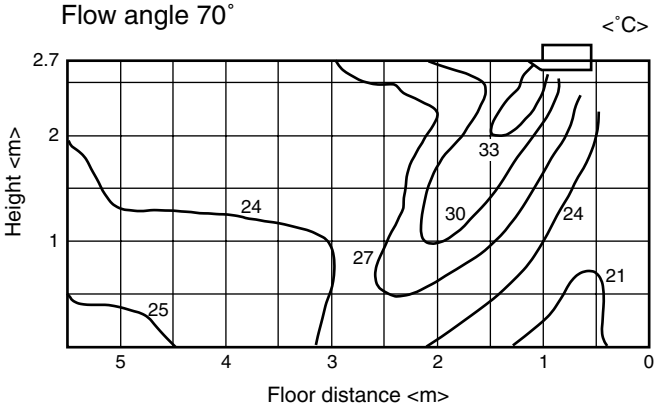
# 5. Temperature/Airflow distribution

● Temperature distribution

<Cooling mode>
Flow angle 30˚

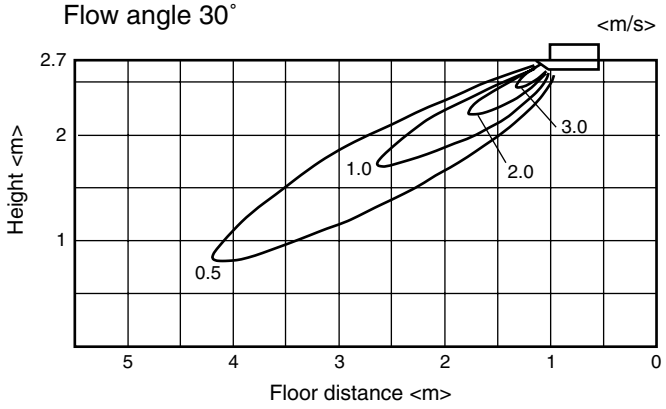



<Heating mode>
Flow angle 70˚

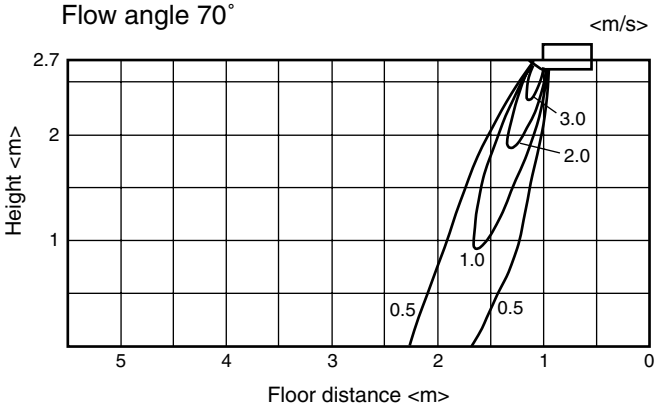



● Airflow distribution

<Fan mode>
Flow angle 30˚




<Fan mode>
Flow angle 70˚




PMFY-P-VBM-E

# 6. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Decoration panel | PMP-40BM | P20/P25/P32/P40 |

Cassette ceiling(2-way flow) PLFY-P-VLMD-E

# CONTENTS


1. Specifications ..... Ⅰ-86

2. Sound Levels ..... Ⅰ-87

2-1 Noise levels ..... Ⅰ-87
2-2 NC curves ..... Ⅰ-87
2-3 OA Intake-static pressure curve ..... Ⅰ-89
2-4 Branch duct Intake-static pressure curve ..... Ⅰ-90

3. External Dimensions ..... Ⅰ-91

4. Electrical Wiring Diagram ..... Ⅰ-94

5. Temperature/Airflow distribution ..... Ⅰ-96

6. Options ..... Ⅰ-96

# 1. Specifications

| | | | PLFY-P20VLMD-E | PLFY-P25VLMD-E | PLFY-P32VLMD-E | PLFY-P40VLMD-E |
|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220-230V 60Hz | | | |
| Cooling capacity | ✻1 | kW | 2.2 | 2.8 | 3.6 | 4.5 |
| | ✻2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 |
| Heating capacity | ✻1 | kW | 2.5 | 3.2 | 4.0 | 5.0 |
| Power consumption | Cooling | kW | 0.072 / 0.075 | 0.072 / 0.075 | 0.072 / 0.075 | 0.081 / 0.085 |
| | Heating | kW | 0.065 / 0.069 | 0.065 / 0.069 | 0.065 / 0.069 | 0.074 / 0.079 |
| Current | Cooling | A | 0.36 / 0.37 | 0.36 / 0.37 | 0.36 / 0.37 | 0.40 / 0.42 |
| | Heating | A | 0.30 / 0.32 | 0.30 / 0.32 | 0.30 / 0.32 | 0.34 / 0.37 |
| External finish(Munsel No.) | | | Unit: Galvanizing Decoration Panel: ABS (0.7Y 8.59/0.97) Service Panel: Galvanizing (0.7Y 8.59/0.97) | | | |
| Dimension ✻3 | Height | mm | 290 <20> | | | |
| | Width | mm | 776 <1080> | | | |
| | Depth | mm | 634 <710> | | | |
| Net weight | ✻3 | kg | 23 <6.5> | | 24 <6.5> | |
| Heat exchanger | | | Cross fin | | | |
| Fan | Type | | Turbo fan×1 | | | |
| | Airflow rate (Lo-Mid-Hi) | m³/min | 6.5-8.0-9.5 | | | 7.0-8.5-10.5 |
| | External static pressure | Pa | 0 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.015 | | | |
| Air filter | | | PP honeycomb fabric (long life filter) | | | |
| Refrigerant pipe dimension | Gas(Flare) | mm | ø 12.7 | | | |
| | Liquid(Flare) | mm | ø 6.35 | | | |
| Drain pipe dimension | | | Unit drain pipe I.D.32 (1-1/4inch) | | | |
| Noise level (Lo-Mid-Hi) ✻4 | 220V,240V | dB(A) | 27-30-33 | | | 29-33-36 |
| | 230V | dB(A) | 28-31-34 | | | 30-34-37 |

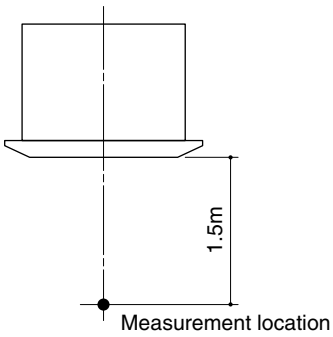
| | | | PLFY-P50VLMD-E | PLFY-P63VLMD-E | PLFY-P80VLMD-E | PLFY-P100VLMD-E | PLFY-P125VLMD-E |
|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220-230V 60Hz | | | | |
| Cooling capacity | ✻1 | kW | 5.6 | 7.1 | 9.0 | 11.2 | 14.0 |
| | ✻2 | kcal/h | 5,000 | 6,300 | 8,000 | 10,000 | 12,500 |
| Heating capacity | ✻1 | kW | 6.3 | 8.0 | 10.0 | 12.5 | 16.0 |
| Power consumption | Cooling | kW | 0.082 / 0.086 | 0.101 / 0.105 | 0.147 / 0.156 | 0.157 / 0.186 | 0.28 / 0.28 |
| | Heating | kW | 0.075 / 0.080 | 0.094 / 0.099 | 0.140 / 0.150 | 0.150 / 0.180 | 0.27 / 0.27 |
| Current | Cooling | A | 0.41 / 0.43 | 0.49 / 0.51 | 0.72 / 0.74 | 0.75 / 0.88 | 1.35 / 1.35 |
| | Heating | A | 0.35 / 0.38 | 0.43 / 0.46 | 0.66 / 0.69 | 0.69 / 0.83 | 1.33 / 1.33 |
| External finish(Munsel No.) | | | Unit: Galvanizing Decoration Panel: ABS (0.7Y 8.59/0.97) Service Panel: Galvanizing (0.7Y 8.59/0.97) | | | | |
| Dimension ✻3 | Height | mm | 290 <20> | | | | |
| | Width | mm | 946 <1250> | | 1446 <1750> | | 1708 <2010> |
| | Depth | mm | 634 <710> | | | | 606 <710> |
| Net weight | ✻3 | kg | 27 <7.5> | 28 <7.5> | 44 <12.5> | 47 <12.5> | 56 <13.0> |
| Heat exchanger | | | Cross fin | | | | |
| Fan | Type | | Turbo fan×1 | | Turbo fan×2 | | Sirocco fan×4 |
| | Airflow rate (Lo-Mid-Hi) | m³/min | 9.0-11.0-12.5 | 10.0-13.0-15.5 | 15.5-18.5-22.0 | 17.5-21.0-25.0 | 24.0-27.0-30.0-33.0 (Lo-Mid2-Mid1-Hi) |
| | External static pressure | Pa | 0 | | | | |
| Motor | Type | | Single phase induction motor | | | | |
| | Output | kW | 0.020 | | 0.020 (at 240V) | 0.030 (at 240V) | 0.078×2(at 240V) |
| Air filter | | | PP honeycomb fabric (long life filter) | | | | Synthetic fiber unwoven cloth filter (long life) |
| Refrigerant pipe dimension | Gas(Flare) | mm | ø 12.7 (R410A) ø 15.88 (R22,R407C) | ø 15.88 | | ø 15.88 (R410A) ø 19.05 (R22,R407C) | |
| | Liquid(Flare) | mm | ø 6.35 (R410A) ø 9.52 (R22,R407C) | ø 9.52 | | | |
| Drain pipe dimension | | | Unit drain pipe I.D.32 (1-1/4inch) | | | | |
| Noise level (Lo-Mid-Hi) ✻4 | 220V,240V | dB(A) | 31-34-37 | 32-37-39 | 33-36-39 | 36-39-42 | 40-42-44-46 (Lo-Mid2-Mid1-Hi) |
| | 230V | dB(A) | 32-35-38 | 33-38-40 | 34-37-40 | 37-41-43 | |

Note: ✻1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
✻2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
✻3 The figure in < > indicates panel's
✻4 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

Casette ceiling

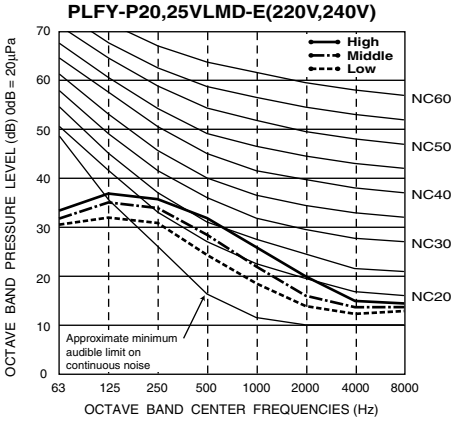



Noise level at anechoic room
( Low - Middle - High ) Unit : dB(A)

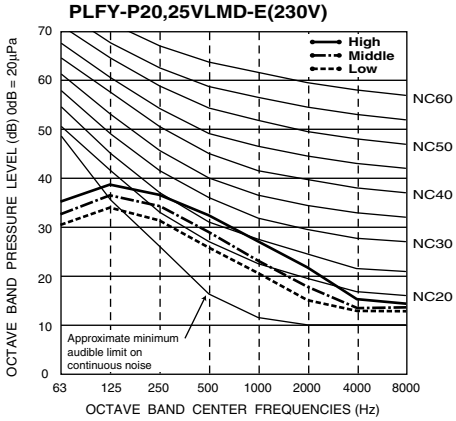
| Model | Noise level (A weighted) | |
|---|---|---|
| | 220V,240V | 230V |
| PLFY-P20VLMD-E | 27-30-33 | 28-31-34 |
| PLFY-P25VLMD-E | | |
| PLFY-P32VLMD-E | | |
| PLFY-P40VLMD-E | 29-33-36 | 30-34-37 |
| PLFY-P50VLMD-E | 31-34-37 | 32-35-38 |
| PLFY-P63VLMD-E | 32-37-39 | 33-38-40 |
| PLFY-P80VLMD-E | 33-36-39 | 34-37-40 |
| PLFY-P100VLMD-E | 36-39-42 | 37-41-43 |
| PLFY-P125VLMD-E | 40-42-44-46 | |

## 2-2. NC curves

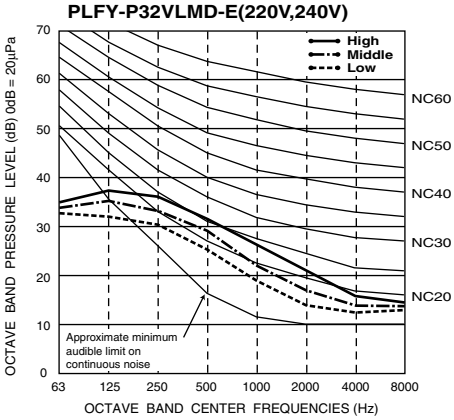
**PLFY-P20,25VLMD-E(220V,240V)**



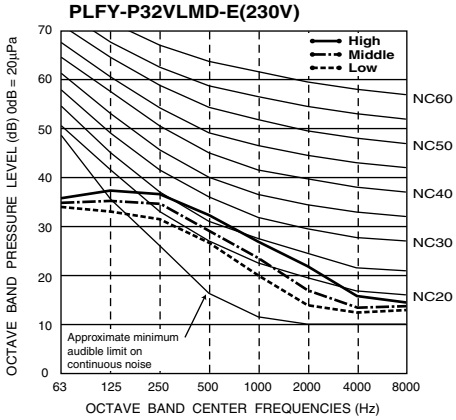

**PLFY-P20,25VLMD-E(230V)**



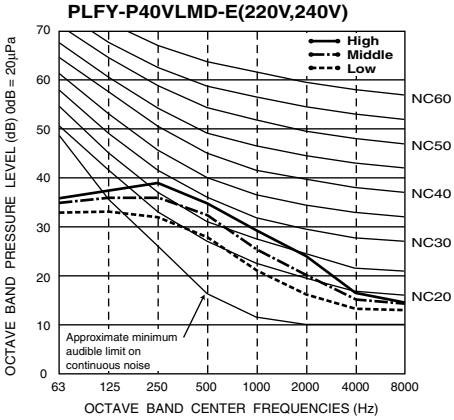

**PLFY-P32VLMD-E(220V,240V)**



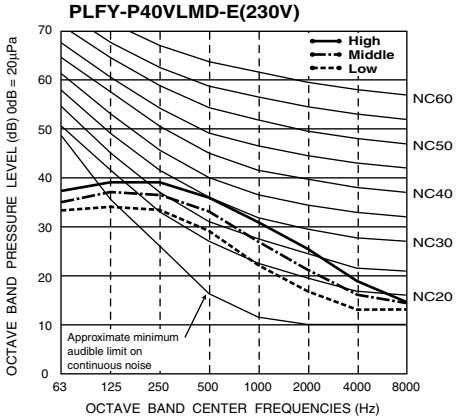

**PLFY-P32VLMD-E(230V)**



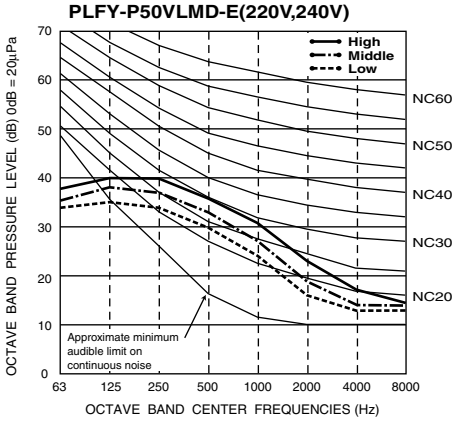

**PLFY-P40VLMD-E(220V,240V)**



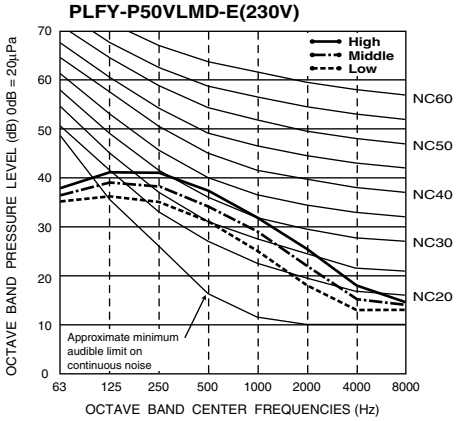

**PLFY-P40VLMD-E(230V)**



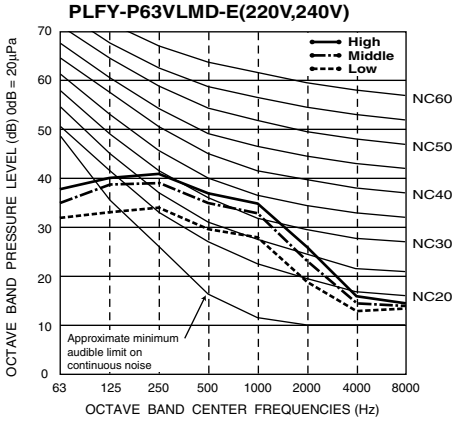
**PLFY-P50VLMD-E(220V,240V)**



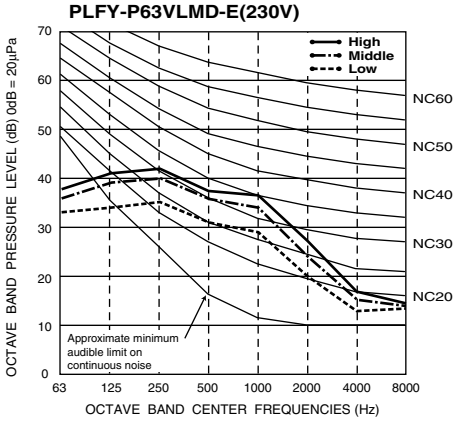

**PLFY-P50VLMD-E(230V)**



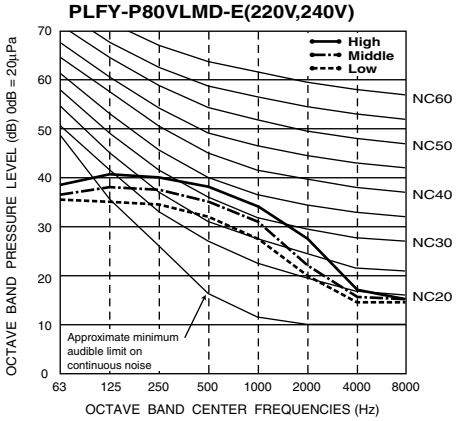

**PLFY-P63VLMD-E(220V,240V)**



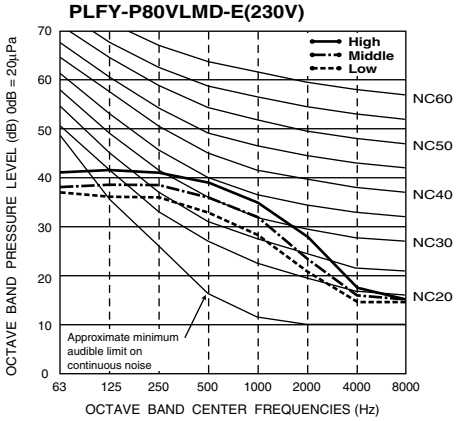

**PLFY-P63VLMD-E(230V)**



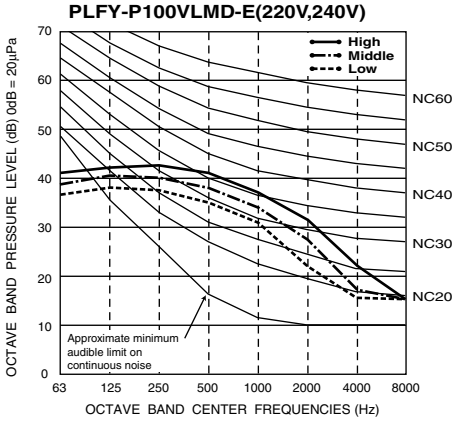

**PLFY-P80VLMD-E(220V,240V)**



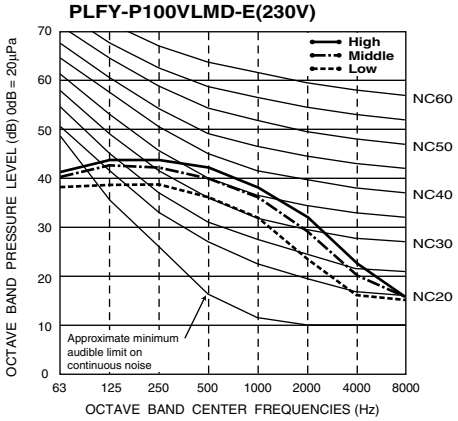

**PLFY-P80VLMD-E(230V)**

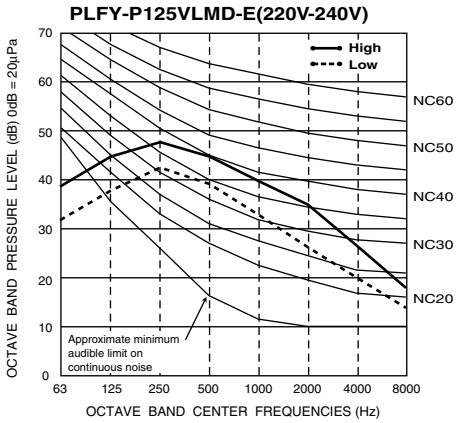



**PLFY-P100VLMD-E(220V,240V)**

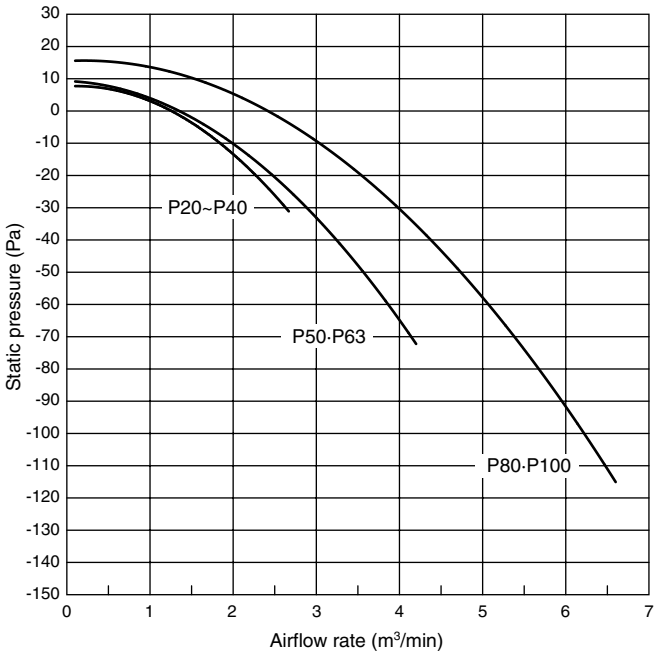


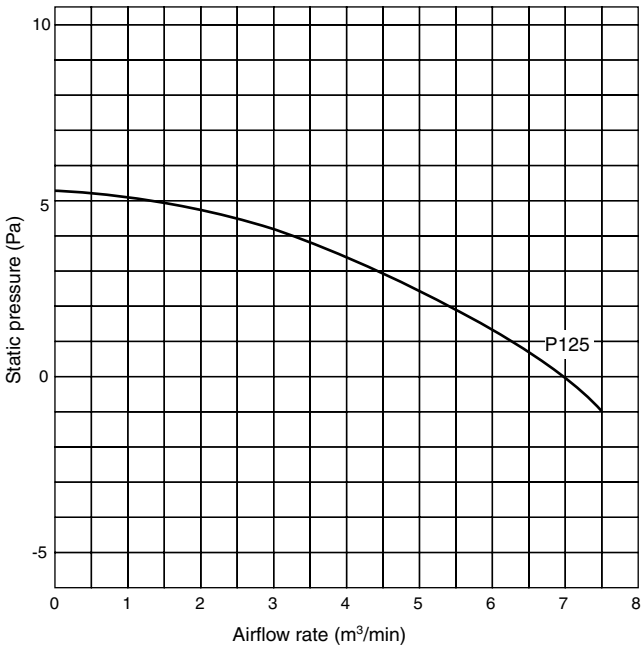

**PLFY-P100VLMD-E(230V)**






## 2-3. OA Intake-static pressure curve




Please confirm that inlet-air temperature ( which is mixed with outdoor air ) is in the following operating temperature range.

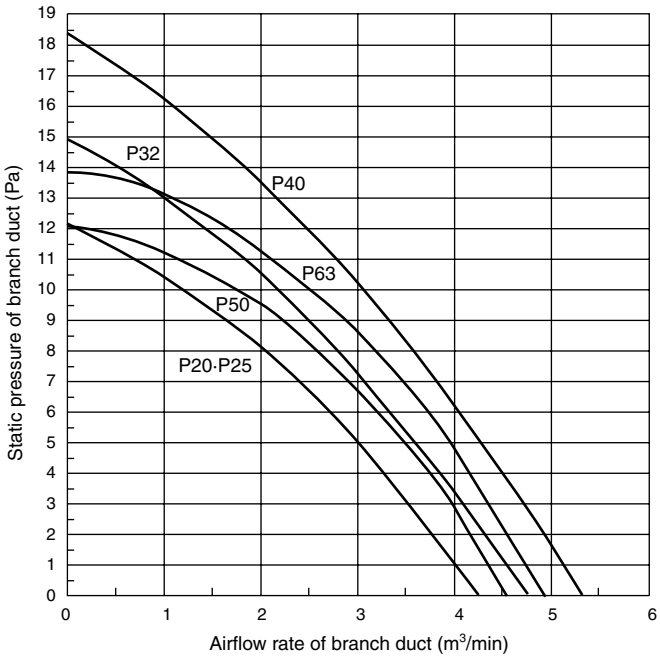
-P-VLMD-E : Operating temperature range

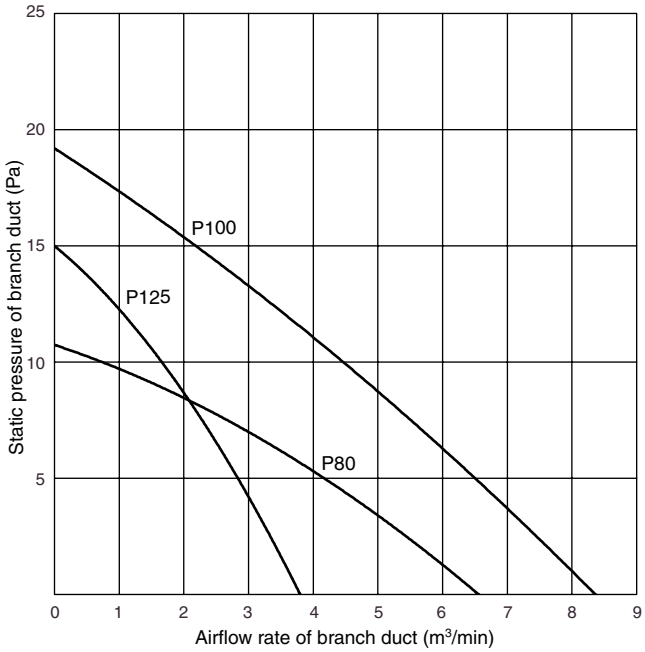
| Mode | Temperature range of inlet air |
|---|---|
| Cooling | 15˚C~24˚C(Wet bulb) |
| Dry | |
| Heating | 15˚C~27˚C(Dry bulb) |

*Relative humidity range is 30~80%.

PLFY-P-VLMD-E

## 2-4. Branch duct Intake-static pressure curve



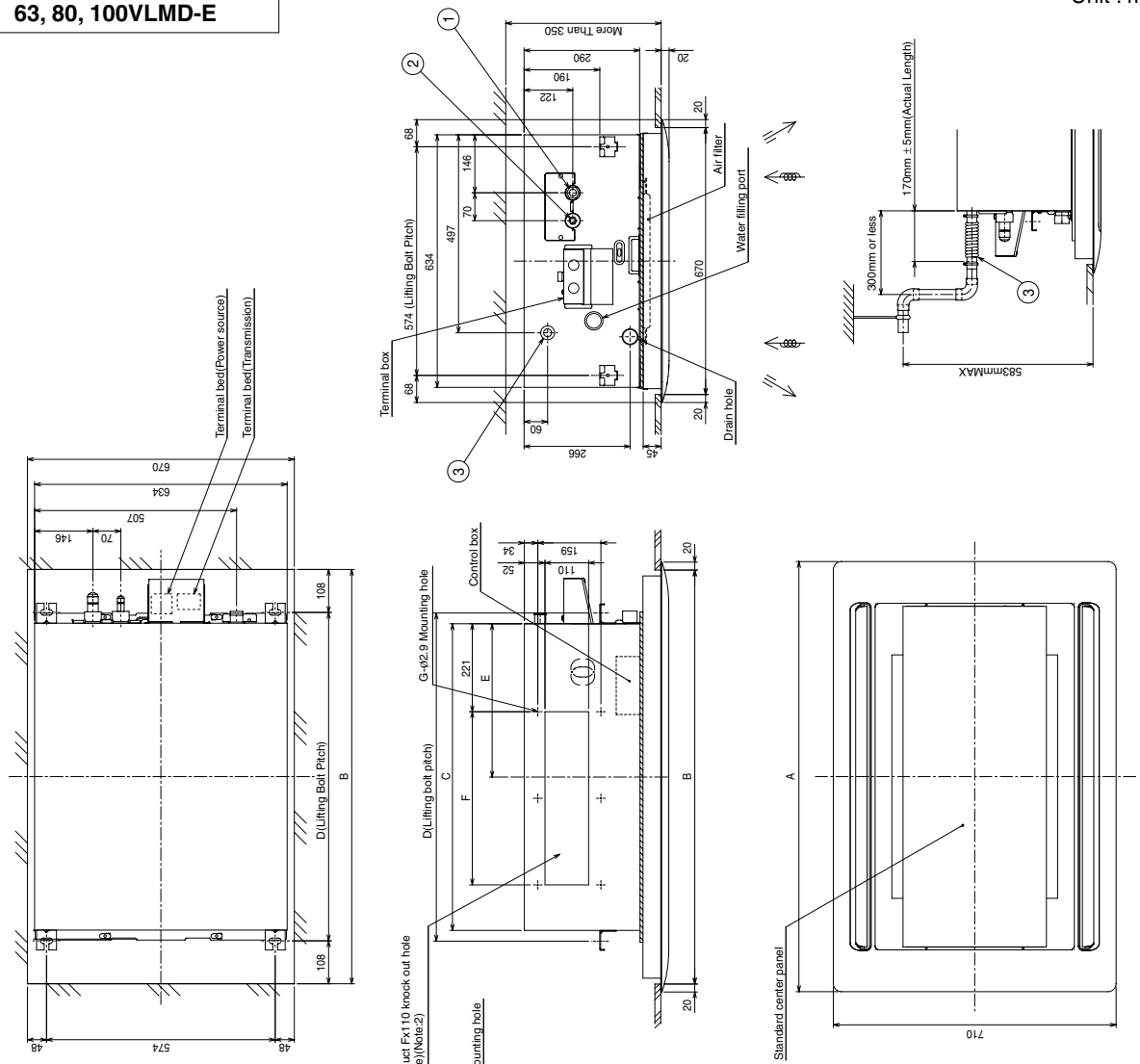




PLFY-P-VLMD-E

# 3. External Dimensions

**PLFY-P20, 25, 32, 40, 50, 63, 80, 100VLMD-E**

Unit : mm




Note: 1.Use M10 screw for the lifting bolt (field supply).
2.It is available to connect the branch duct on right and left side both.
3.On Model :50, 100, you would use flare nut packed with the Indoor Unit, when connecting the Outdoor Unit for R407C, R22.
4.In order to increase the strength of the flare nut, the size of some of them has been increased.

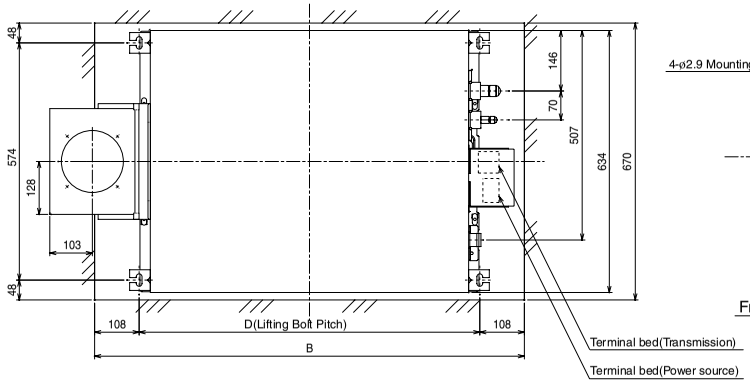
| | | <flare> | |
|---|---|---|---|
| Model 20·25·32·40 | Gas pipe:LP | ø12.7 | ① |
| | Liquid pipe:HP | ø6.35 | ② |
| Model 50 | Gas pipe:LP | ø12.7<R410A outdoor unit><br>ø15.88<The other outdoor unit> | ① |
| | Liquid pipe:HP | ø6.35<R410A outdoor unit><br>ø9.52<The other outdoor unit> | ② |
| Model 63·80 | Gas pipe:LP | ø15.88 | ① |
| | Liquid pipe:HP | ø9.52 | ② |
| Model 100 | Gas pipe:LP | ø15.88<R410A outdoor unit><br>ø19.05<The other outdoor unit> | ① |
| | Liquid pipe:HP | ø9.52 | ② |
| Drain hose | VP-25-flexible joint> (accessory) | | ③ |

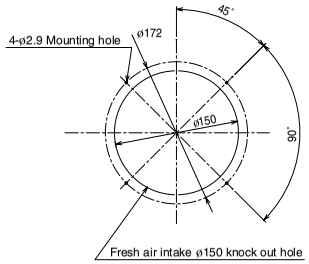
| Model | A | B | C | D | E | F | G | H(Liquid) | H(Gas) |
|---|---|---|---|---|---|---|---|---|---|
| PLFY-P20VLMD-E | CMP-40VLW-B | 1080 | 1040 | 776 | 824 | 388 | 217.5X2 =435 | 6 | 17 | 27 |
| PLFY-P25VLMD-E | | | | | | | | | | |
| PLFY-P32VLMD-E | | | | | | | | | | |
| PLFY-P40VLMD-E | | | | | | | | | | |
| PLFY-P50VLMD-E | CMP-63VLW-B | 1250 | 1210 | 946 | 994 | 473 | | | 22 | 29 |
| PLFY-P63VLMD-E | | | | | | | | | | |
| PLFY-P80VLMD-E | CMP-100VLW-B | 1750 | 1710 | 1446 | 1494 | 723 | 188.5X4 =754 | 10 | 22 | 36 |
| PLFY-P100VLMD-E | | | | | | | | | | |

# PLFY-P20, 25, 32, 40, 50, 63, 80, 100VLMD-E with OA duct flange

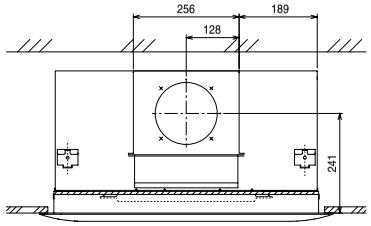
Note: 1.Use M10 screw for the lifing bolt (field supply).
2.It is available to connect the branch duct on right and left side both.
3.On Model :50, 100, you would use flare nut packed with the Indoor Unit, when connnecting the Outdoor Unit for R407C, R22.
4.In order to increase the strength of the flare nut, the size of some of them has been increased.

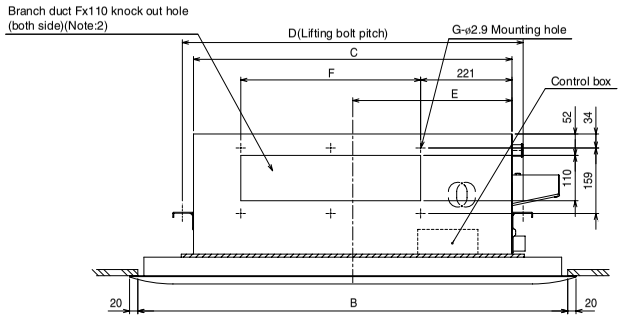
| | | <flare> | |
|---|---|---|---|
| Model 20·25·32·40 | Gas pipe:LP | ø12.7 | ····· ① |
| | Liquid pipe:HP | ø6.35 | ····· ② |
| Model 50 | Gas pipe:LP | ø12.7<R410A outdoor unit><br>ø15.88<The other outdoor unit> | ····· ① |
| | Liquid pipe:HP | ø6.35<R410A outdoor unit><br>ø9.52<The other outdoor unit> | ····· ② |
| Model 63·80 | Gas pipe:LP | ø15.88 | ····· ① |
| | Liquid pipe:HP | ø9.52 | ····· ② |
| Model 100 | Gas pipe:LP | ø15.88<R410A outdoor unit><br>ø19.05<The other outdoor unit> | ····· ① |
| | Liquid pipe:HP | ø9.52 | ····· ② |
| Drain hose | VP-25<flexible joint> (accessory) | | ····· ③ |

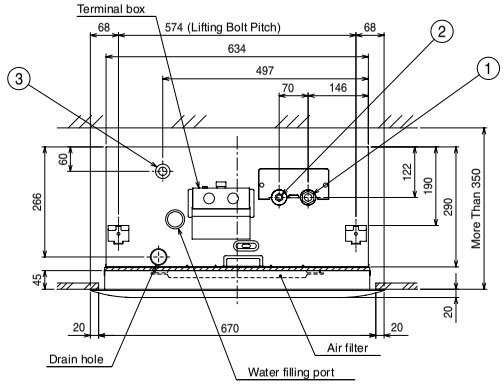


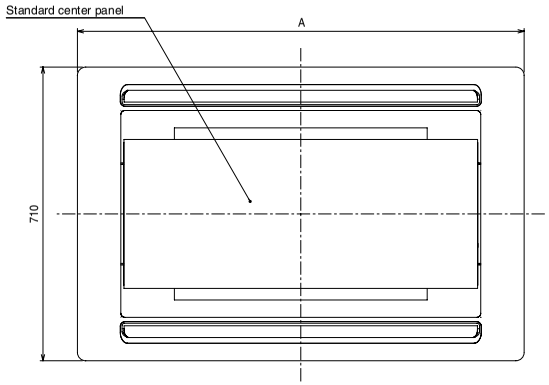



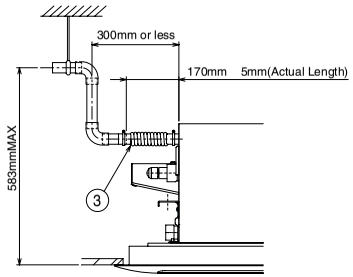

Fresh air intake knock out dimension




| Model | | A | B | C | D | E | F | G | H(Liquid) | H(Gas) |
|---|---|---|---|---|---|---|---|---|---|---|
| PLFY-P20VLMD-E | CMP-40VLW-B | 1080 | 1040 | 776 | 824 | 388 | 217.5×2 =435 | 6 | 17 | 27 |
| PLFY-P25VLMD-E | | | | | | | | | | |
| PLFY-P32VLMD-E | | | | | | | | | | |
| PLFY-P40VLMD-E | | | | | | | | | | |
| PLFY-P50VLMD-E | CMP-63VLW-B | 1250 | 1210 | 946 | 994 | 473 | | | 22 | 29 |
| PLFY-P63VLMD-E | | | | | | | | | | |
| PLFY-P80VLMD-E | CMP-100VLW-B | 1750 | 1710 | 1446 | 1494 | 723 | 188.5×4 =754 | 10 | | |
| PLFY-P100VLMD-E | | | | | | | | | 22 | 36 |

Unit : mm

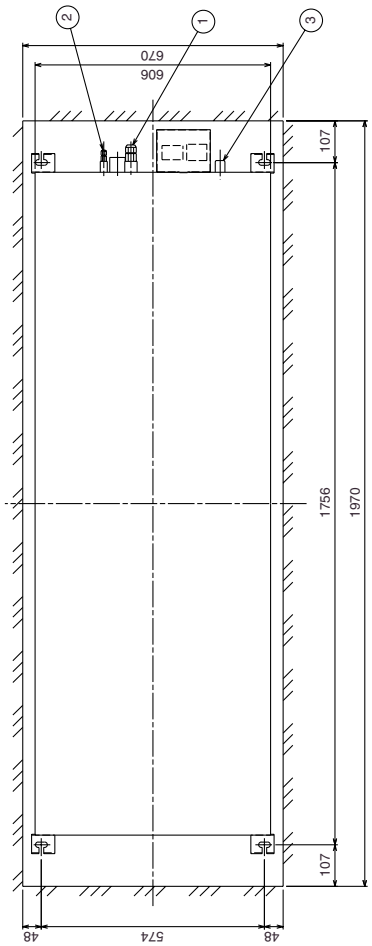
## PLFY-P125VLMD-E

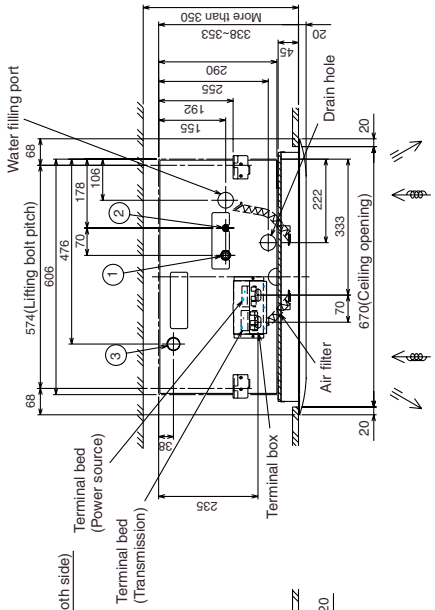
Unit : mm

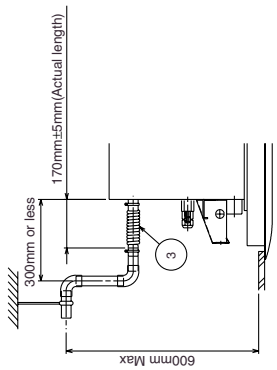
Note: 1. Use M10 screw for the lifting bolt (field supply).
2. On this model, you would use flare nut packed with the Indoor Unit, when connectingthe Outdoor Unit for R407C, R22.
3. In order to increase the strength of theflare nut, the size of some of them has been increased.

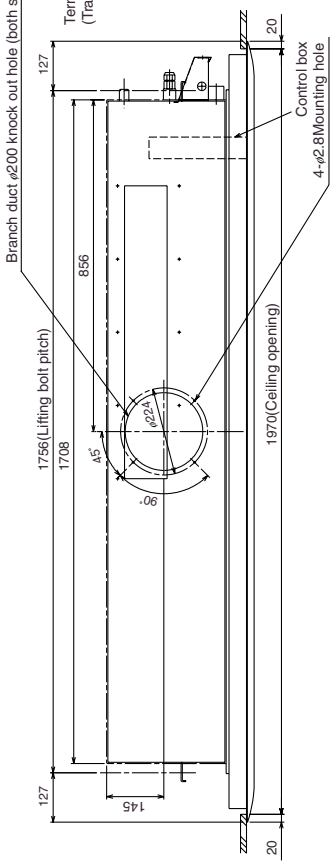
| Model | A(Liquid) | A(Gas) |
|---|---|---|
| PLFY-P125VLMD-E | 22 | 36 |

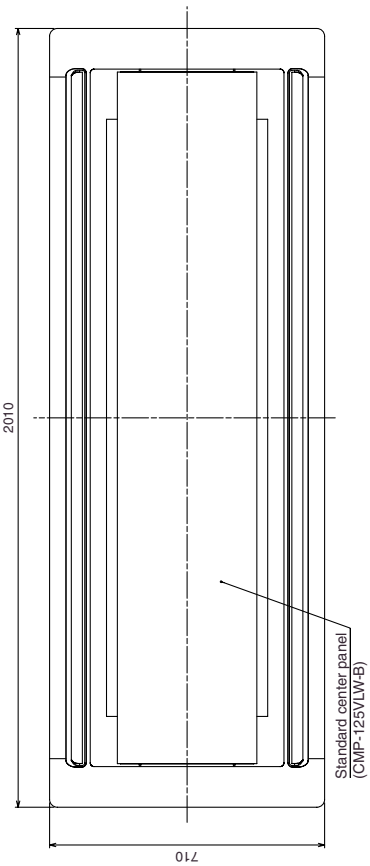
<flare>
Gas pipe:LP ø15.88<R410A outdoor unit> ..... ①
ø19.05<The other outdoor unit> ..... ②
Liquid pipe:HP ø9.52
Drain hose VP-25<flexible joint> (accessory) ..... ③

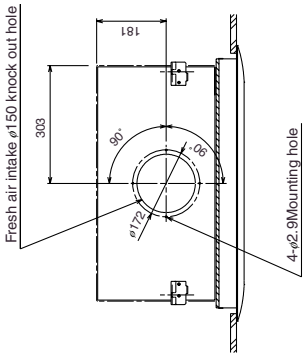


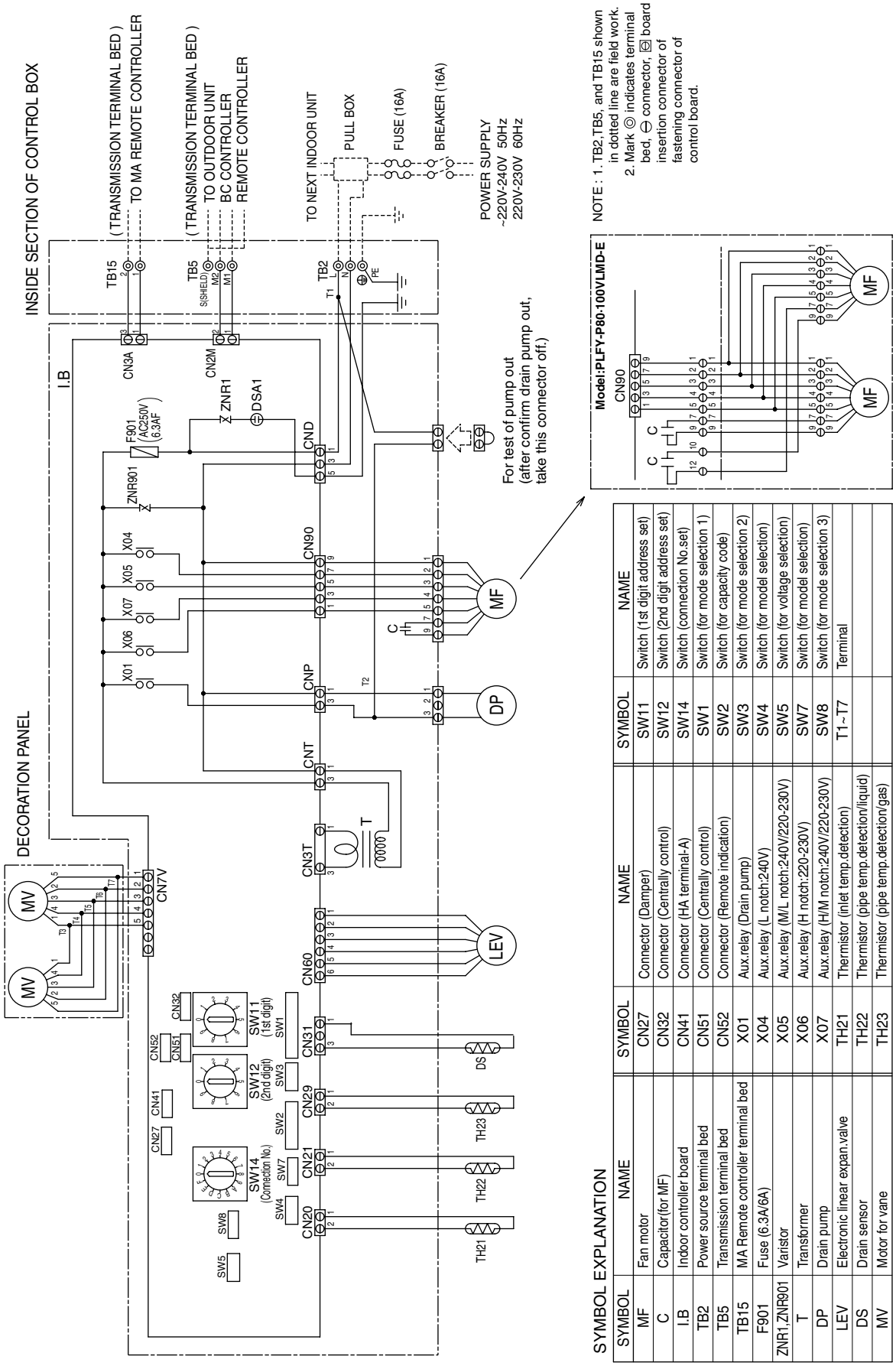




PLFY-P-VLMD-E

# 4. Electrical Wiring Diagram

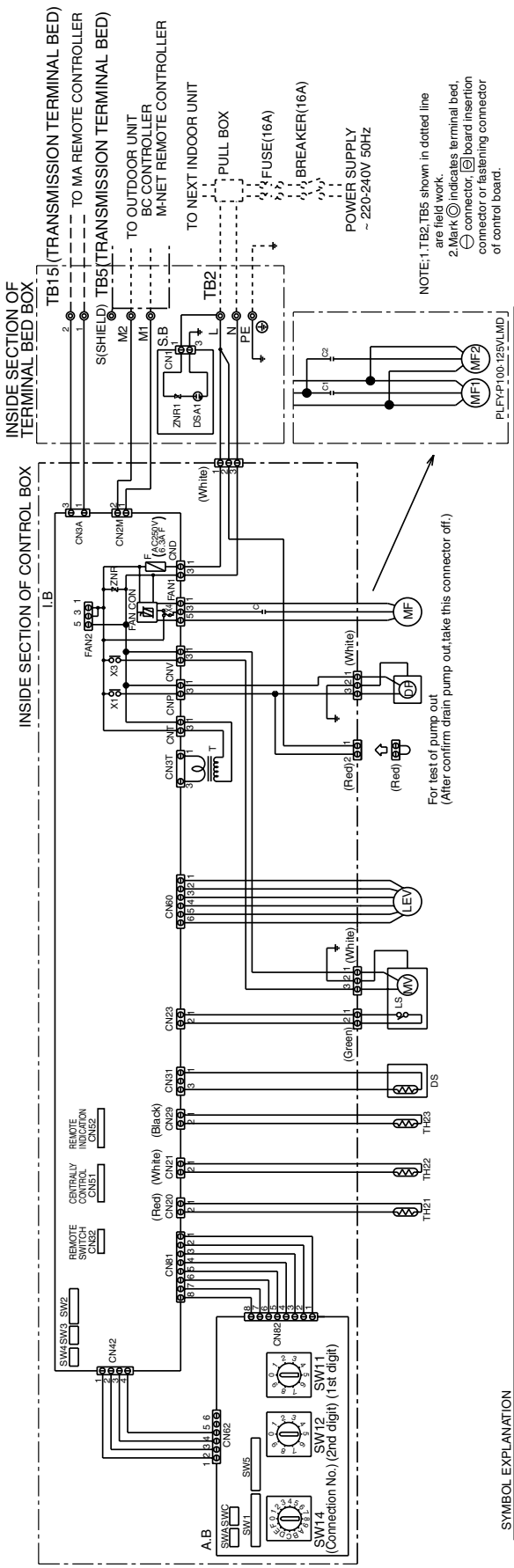
## ● PLFY-P20~100VLMD-E




SYMBOL EXPLANATION

| SYMBOL | NAME | SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|---|---|
| MF | Fan motor | CN27 | Connector (Damper) | SW11 | Switch (1st digit address set) |
| C | Capacitor(for MF) | CN32 | Connector (Centrally control) | SW12 | Switch (2nd digit address set) |
| I.B | Indoor controller board | CN41 | Connector (HA terminal-A) | SW14 | Switch (connection No.set) |
| TB2 | Power source terminal bed | CN51 | Connector (Centrally control) | SW1 | Switch (for mode selection 1) |
| TB5 | Transmission terminal bed | CN52 | Connector (Remote indication) | SW2 | Switch (for capacity code) |
| TB15 | MA Remote controller terminal bed | X01 | Aux.relay (Drain pump) | SW3 | Switch (for mode selection 2) |
| F901 | Fuse (6.3A/6A) | X04 | Aux.relay (L notch:240V) | SW4 | Switch (for model selection) |
| ZNR1,ZNR901 | Varistor | X05 | Aux.relay (M/L notch:240V/220-230V) | SW5 | Switch (for voltage selection) |
| T | Transformer | X06 | Aux.relay (H notch:220-230V) | SW7 | Switch (for model selection) |
| DP | Drain pump | X07 | Aux.relay (H/M notch:240V/220-230V) | SW8 | Switch (for mode selection 3) |
| LEV | Electronic linear expan.valve | TH21 | Thermistor (inlet temp.detection) | T1~T7 | Terminal |
| DS | Drain sensor | TH22 | Thermistor (pipe temp.detection/liquid) | | |
| MV | Motor for vane | TH23 | Thermistor (pipe temp.detection/gas) | | |

## ● PLFY-P125VLMD-E




NOTE;1.TB2,TB5 shown in dotted line are field work.
2.Mark ◎ indicates terminal bed, ⊖ connector, ⊡ board insertion connector or fastening connector of control board.

※ Capacitor 5.0μF × 2

SYMBOL EXPLANATION

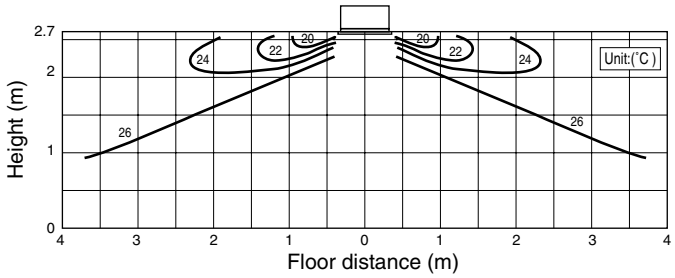
| SYMBOL | NAME | SYMBOL | NAME | SYMBOL | NAME |
|---|---|---|---|---|---|
| MF,MF1,MF2 | Fan motor | LEV | Electronic linear expan.valve | SW14(A.B) | Switch (connection No.set) |
| C,C1,C2 | ※ Capacitor(for MF,MF1,MF2) | S.B | Surge absorber board | SW1(A.B) | Switch (for mode selection) |
| I.B | Indoor controller board | LS | Limit switch (MV built in) | SW2(I.B) | Switch (for capacity code) |
| A.B | Address board | MV | Motor for vane (with limit switch) | SW3(I.B) | Switch (for mode selection) |
| TB2 | Power source terminal bed | DS | Drain sensor | SW4(I.B) | Switch (for model selection) |
| TB5 | Transmission terminal bed | TH21 | Thermistor (inlet temp.detection) | SW5(A.B) | Switch (for voltage selection) |
| TB15 | Transmission terminal bed | TH22 | Thermistor (pipe temp.detection / liquid) | SWA(A.B) | Switch (option parts) |
| F | Fuse AC250V 6.3A F | TH23 | Thermistor (pipe temp.detection / gas) | SWC(A.B) | Switch (option parts) |
| T | Transformer | SW11(A.B) | Switch (1st digit address set) | X1,X3,X4 | Aux.relay |
| DP | Dorain pump | SW12(A.B) | Switch (2nd digit address set) | | |

# 5. Temperature/Airflow distribution

## ●Temperature distribution

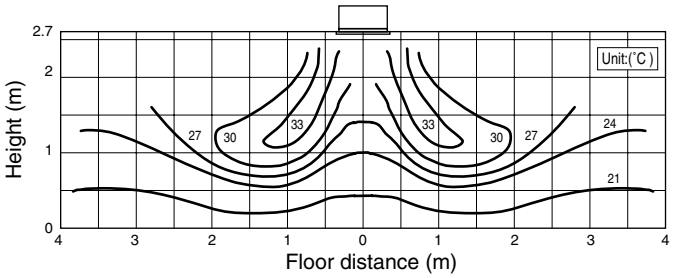
< Cooling mode >

Airflow angle : Horizontal  Room temp.: 27˚C  Airflow rate : High




< Heating mode >

Airflow angle : Downward  Room temp.: 20˚C  Airflow rate : High

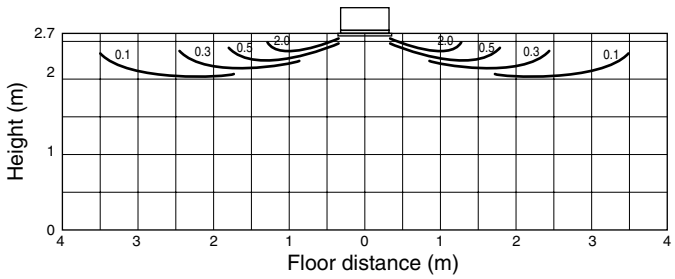



note : These figures show typical temperature distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load,obstacles,etc.

## ●Airflow distribution

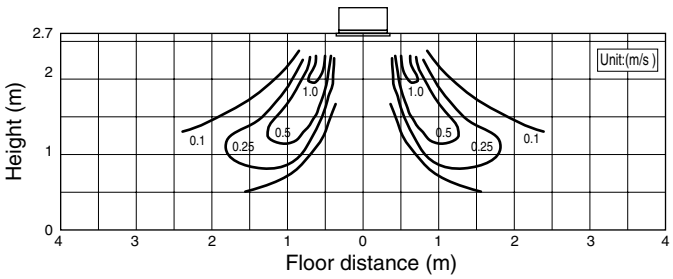
< Cooling mode >

Airflow angle : Horizontal  Room temp.: 27˚C  Airflow rate : High




< Heating mode >

Airflow angle : Downward  Room temp.: 20˚C  Airflow rate : High




note : These figures show typical temperature distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load,obstacles,etc.

# 6. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Decoration panel | CMP-40VLW-B | P20/P25/P32/P40 |
| | CMP-63VLW-B | P50/P63 |
| | CMP-100VLW-B | P80/P100 |
| | CMP-125VLW-B | P125 |
| OA duct flange | PAC-KH11OF | P20/P25/P32/P40/P50/P63/P80/P100 |

Cassette ceiling(4-way flow) PLFY-P-VAM-E

# CONTENTS


1. Specifications ..... Ⅰ-98

2. Sound Levels ..... Ⅰ-99
   2-1 Noise levels ..... Ⅰ-99
   2-2 NC curves ..... Ⅰ-99

3. External Dimensions ..... Ⅰ-100

4. Electrical Wiring Diagrams ..... Ⅰ-101

5. Temperature/Airflow distribution ..... Ⅰ-102

6. Options ..... Ⅰ-103

# 1. Specifications

| | | | PLFY-P32VAM-E | PLFY-P40VAM-E | PLFY-P50VAM-E | PLFY-P63VAM-E |
|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220V 60Hz | | | |
| Cooling capacity | ✻1 | kW | 3.6 | 4.5 | 5.6 | 7.1 |
| | ✻2 | kcal/h | 3,150 | 4,000 | 5,000 | 6,300 |
| Heating capacity | ✻1 | kW | 4.0 | 5.0 | 6.3 | 8.0 |
| Power consumption | Cooling | kW | 0.12 | 0.14 | | 0.16 |
| | Heating | kW | 0.12 | 0.14 | | 0.16 |
| Current | Cooling | A | 0.59 | 0.68 | | 0.78 |
| | Heating | A | 0.59 | 0.68 | | 0.78 |
| External finish(Munsel No.) | | | Panel : 0.70Y 8.59/0.97 | | | |
| Dimension ✻3 | Height | mm | 258(30) | | | |
| | Width | mm | 840(950) | | | |
| | Depth | mm | 840(950) | | | |
| Net weight | ✻3 | kg | 22(5) | | | 24(5) |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | Turbo fan | | | |
| | Airflow rate ✻3 (Low-Mid2-Mid1-High) | m³/min | 11-12-13-14 | 12-13-14-16 | | 14-15-16-18 |
| | External static pressure | Pa | 0 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.070 | | | |
| Air filter | | | PP Honeycomb | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | ø 12.7 / ø 15.88 (Compatible) | ø 15.88 |
| | Liquid (Flare) | mm | ø 6.35 | | ø 6.35 / ø 9.52 (Compatible) | ø 9.52 |
| Drain pipe dimension | | | O.D. ø32 (VP-25) | | | |
| Noise level (Lo-Mid2-Mid1-Hi) ✻3 ✻4 | | dB(A) | 27-28-29-31 | 27-28-30-32 | | 28-29-31-33 |

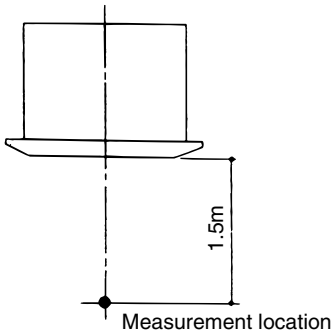
| | | | PLFY-P80VAM-E | PLFY-P100VAM-E | PLFY-P125VAM-E |
|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~ 220V 60Hz | | |
| Cooling capacity | ✻1 | kW | 9.0 | 11.2 | 14.0 |
| | ✻2 | kcal/h | 8,000 | 10,000 | 12,500 |
| Heating capacity | ✻1 | kW | 10.0 | 12.5 | 16.0 |
| Power consumption | Cooling | kW | 0.18 | 0.30 | 0.34 |
| | Heating | kW | 0.18 | 0.30 | 0.34 |
| Current | Cooling | A | 0.86 | 1.43 | 1.64 |
| | Heating | A | 0.86 | 1.43 | 1.64 |
| External finish(Munsel No.) | | | Panel : 0.70Y 8.59/0.97 | | |
| Dimension ✻3 | Height | mm | 258(30) | 298(30) | |
| | Width | mm | 840(950) | | |
| | Depth | mm | 840(950) | | |
| Net weight | ✻3 | kg | 24(5) | 32(5) | 32(5) |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | |
| Fan | Type | | Turbo fan | | |
| | Airflow rate ✻3 (Low-Mid2-Mid1-High) | m³/min | 16-18-20-22 | 19-22-25-27 | 21-24-27-29 |
| | External static pressure | Pa | 0 | | |
| Motor | Type | | Single phase induction motor | | |
| | Output | kW | 0.070 | 0.120 | |
| Air filter | | | PP Honeycomb | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 15.88 | ø 15.88 / ø 19.05 (Compatible) | |
| | Liquid (Flare) | mm | ø 9.52 | | |
| Drain pipe dimension | | | O.D. ø32 (VP-25) | | |
| Noise level (Lo-Mid2-Mid1-Hi) ✻3 ✻4 | | dB(A) | 30-32-35-37 | 33-36-39-41 | 35-38-41-43 |

Note: ✻1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
✻2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
✻3 External dimension/ net weight are shown in (unit/panel) , and airflow rate/noise level are in (low-middle2-middle1-high).
✻4 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

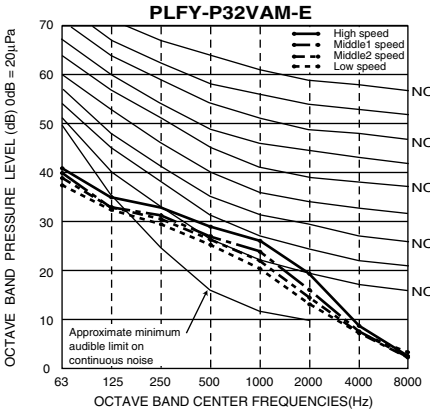
Casette ceiling (VAM-E series)

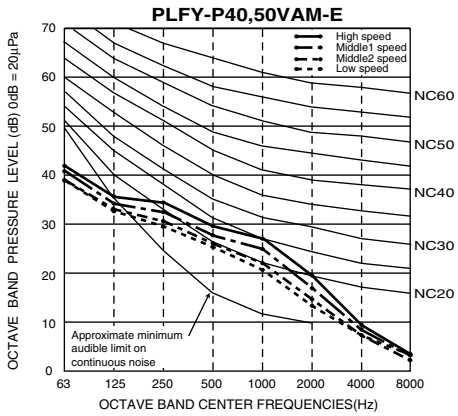


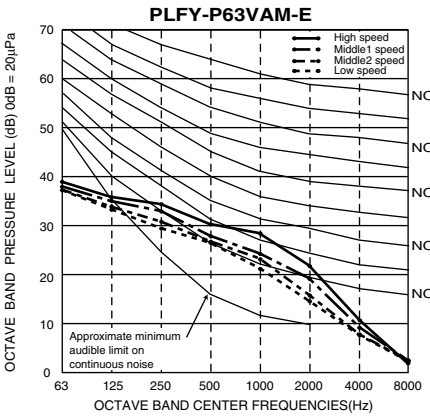

Noise level at anechoic room
(Low-Middle2-Middle1-High) Unit : dB(A)

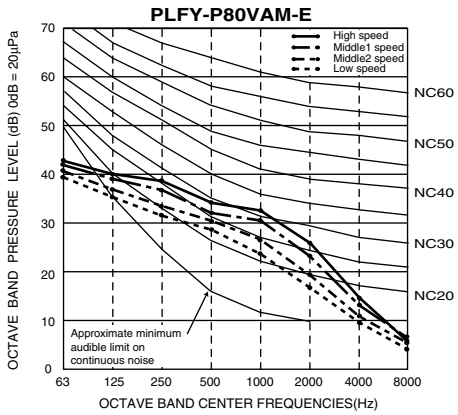
| Model | Noise level (A weighted) |
|---|---|
| PLFY-P32VAM-E | 27-28-29-31 |
| PLFY-P40VAM-E<br>PLFY-P50VAM-E | 27-28-30-32 |
| PLFY-P63VAM-E | 28-29-31-33 |
| PLFY-P80VAM-E | 30-32-35-37 |
| PLFY-P100VAM-E | 33-36-39-41 |
| PLFY-P125VAM-E | 35-38-41-43 |

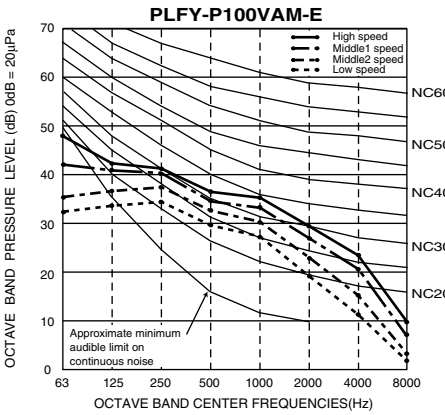
## 2-2. NC curves

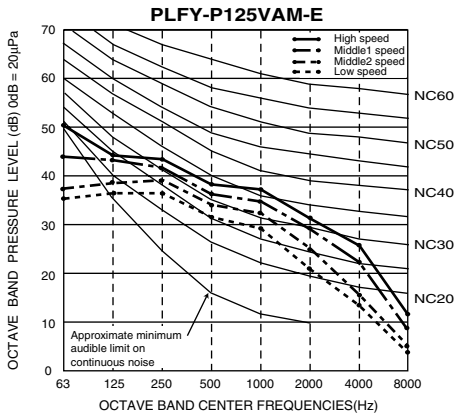


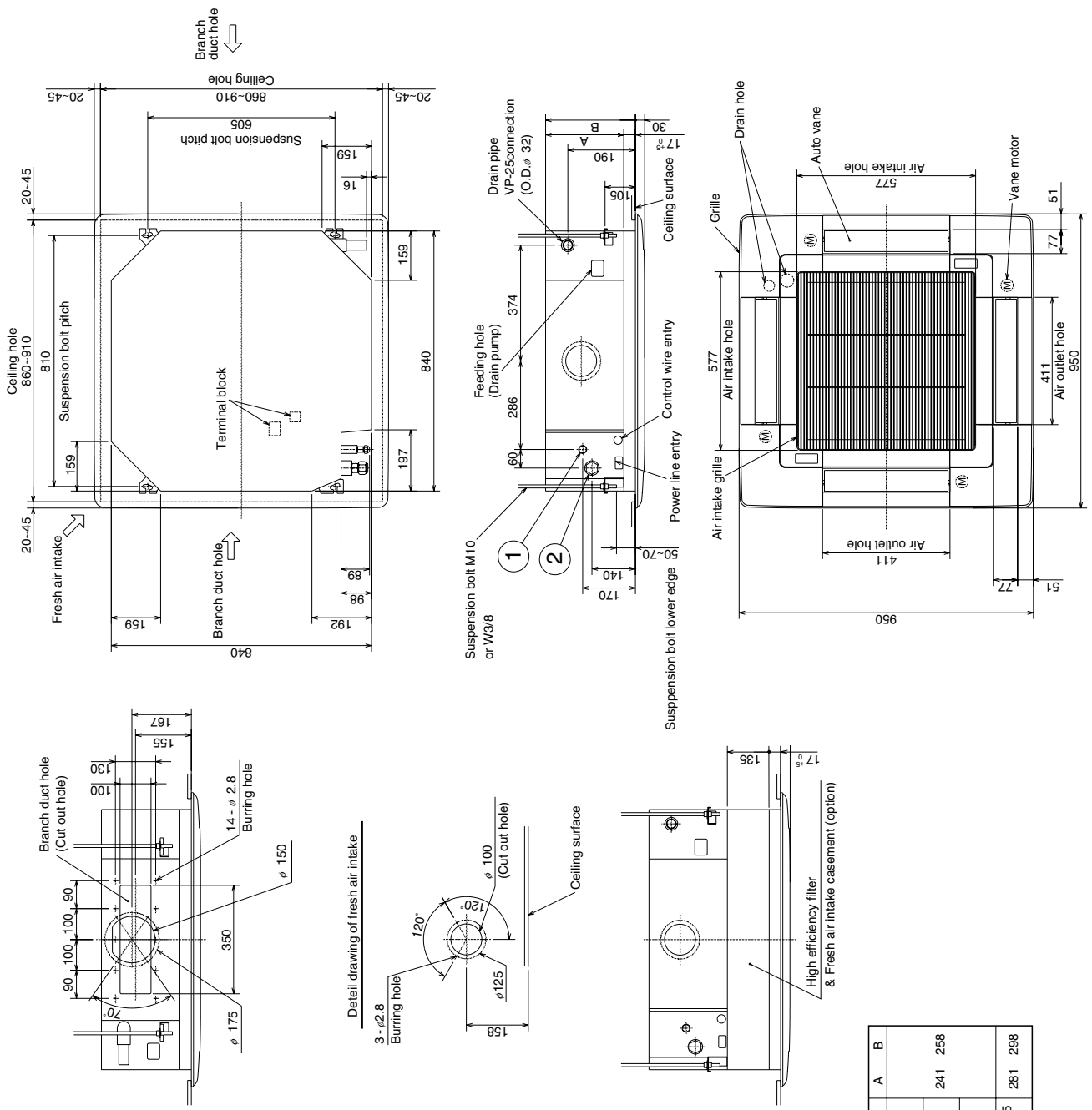



# 3. External Dimensions

**PLFY-P32~125VAM-E**

Unit : mm



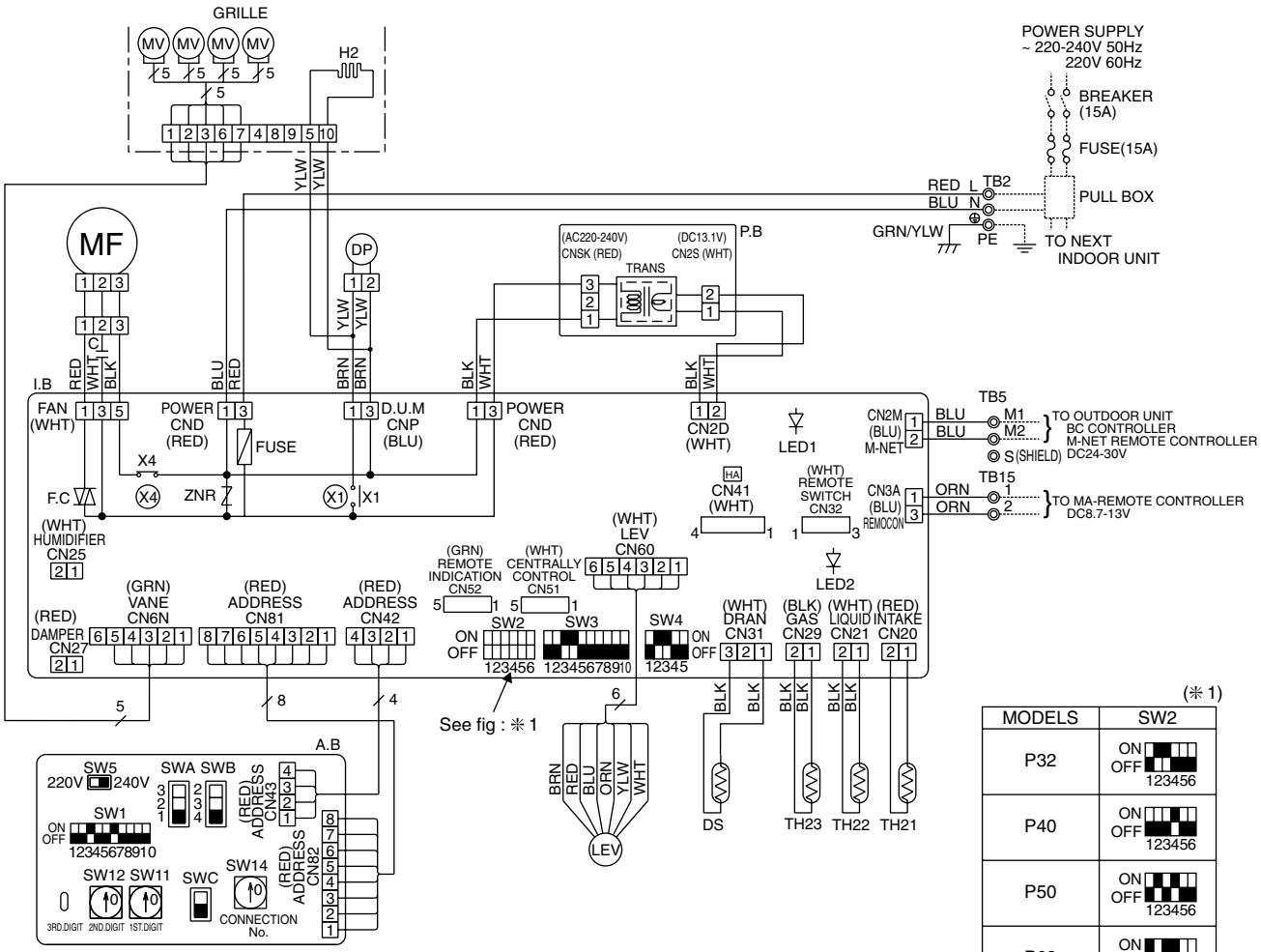

| Models | ① Liquid Pipe | ② Gas Pipe | A | B |
|---|---|---|---|---|
| PLFY-P32VAM-E | ø 6.35 | ø 12.7 | 241 | 258 |
| PLFY-P40VAM-E | | | | |
| PLFY-P50VAM-E | ø 6.35 / ø 12.7 (Compatible) | ø 12.7 / ø 15.88 (Compatible) | | |
| PLFY-P63VAM-E | ø 9.52 | ø 15.88 | 281 | 298 |
| PLFY-P80VAM-E | | | | |
| PLFY-P100VAM-E | | ø 15.88 / ø 19.05 (Compatible) | | |
| PLFY-P125VAM-E | | | | |

# 4. Electrical Wiring Diagrams

## ● PLFY-P32~125VAM-E

<SYMBOL EXPLANATION>

| SYMBOL | NAME | | SYMBOL | NAME | | SYMBOL | NAME | |
|---|---|---|---|---|---|---|---|---|
| P.B | INDOOR POWER BOARD | | C | CAPACITOR(FAN MOTOR) | | TH23 | THERMISTOR | PIPE TEMPERATURE DETECTION / GAS (0˚C/15kΩ, 25˚C/5.4kΩ) |
| I.B | INDOOR CONTROLLER BOARD | | MF | FAN MOTOR(WITH INNER THERMO) | | | | |
| CN25 | CONNECTOR | HUMIDIFIER | MV | VANE MOTOR | | | | |
| CN32 | | REMOTE SWITCH | DP | DRAIN WATER LIFTING-UP MACH | | A.B | CIRCUIT BOARD | |
| CN41 | | HA TERMINAL-A | DS | DRAIN SENSOR | | SW1 | SWITCH | MODE SELECTION |
| CN51 | | CENTRALLY CONTROL | H2 | DEW PREVENTION HEATER | | SW5 | | VOLTAGE SELECTION |
| CN52 | | REMOTE INDICATION | TB2 | TERMINAL BLOCK | POWER SUPPLY | SW11 | | ADDRESS SETTING 1ST DIGIT |
| SW2 | SWITCH | CAPACITY CODE | TB5 | | TRANSMISSION | SW12 | | ADDRESS SETTING 2ND DIGIT |
| SW3 | | MODE SELECTION | TB15 | | TRANSMISSION | SW14 | | CONNECTION No. |
| SW4 | | MODEL SELECTION | LEV | LINEAR EXPANSION VALVE | | SWA | | CEILING HEIGHT SELECTOR |
| ZNR | VARISTOR | | TH21 | THERMISTOR | ROOM TEMPERATURE DETECTION (0˚C/15kΩ, 25˚C/5.4kΩ) | SWB | | DISCHARGE OUTLET NUMBER SELECTOR |
| FUSE | FUSE (6.3A/250V) | | | | | SWC | | OPTION SELECTOR |
| F.C | FAN PHASE CONTROL | | | | | | | |
| X1 | AUX.RELAY | DRAIN PUMP | TH22 | | PIPE TEMPERATURE DETECTION / LIQUID (0˚C/15kΩ, 25˚C/5.4kΩ) | | | |
| X4 | | FAN MOTOR | | | | | | |
| LED1 | POWER SUPPLY(I.B) | | | | | | | |
| LED2 | POWER SUPPLY(I.B) | | | | | | | |




(✻1)

| MODELS | SW2 |
|---|---|
| P32 | ON OFF 123456 |
| P40 | ON OFF 123456 |
| P50 | ON OFF 123456 |
| P63 | ON OFF 123456 |
| P80 | ON OFF 123456 |
| P100 | ON OFF 123456 |
| P125 | ON OFF 123456 |

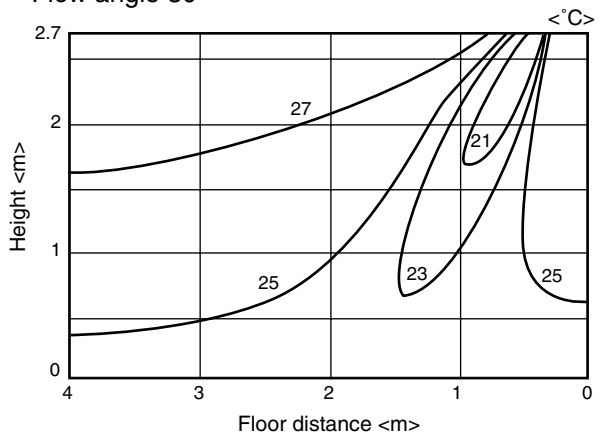
NOTE

1.At servicing for outdoor unit,always follow the wiring diagram of outdoor unit.
2.Symbol(S) of TB5 is the shield wire connection.
3.Symbols used in wiring diagram above are,◎:Terminal block, ▭▭▭:Connector.
4.The setting of the SW2 dip switches differs in the capacity for the detail, see the table below.
5.Please set the switch SW5 according to the power supply voltage.
Set SW5 to 240V side when the power supply is 230 and 240 volts.
When the power supply is 220 volts,set SW5 to 220V side.

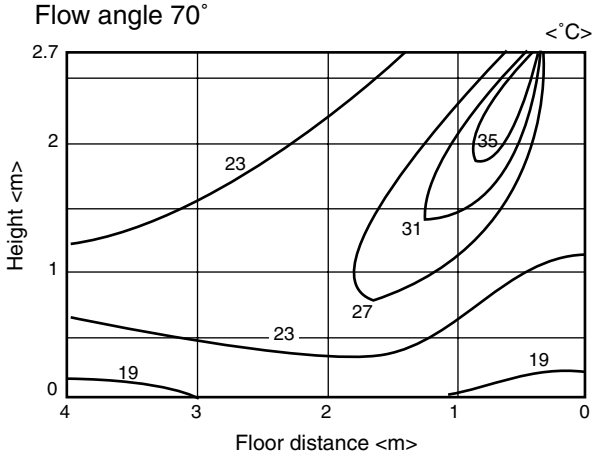
# 5. Temperature/Airflow distribution

● Temperature distribution

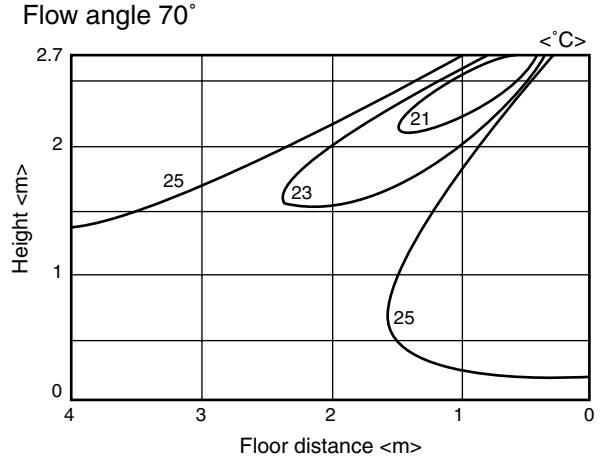
<Cooling mode>
Flow angle 30˚




<Heating mode>
Flow angle 70˚

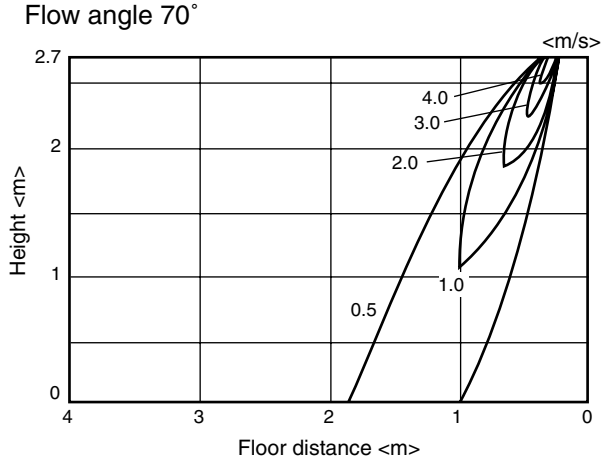



<Cooling mode>
Flow angle 70˚

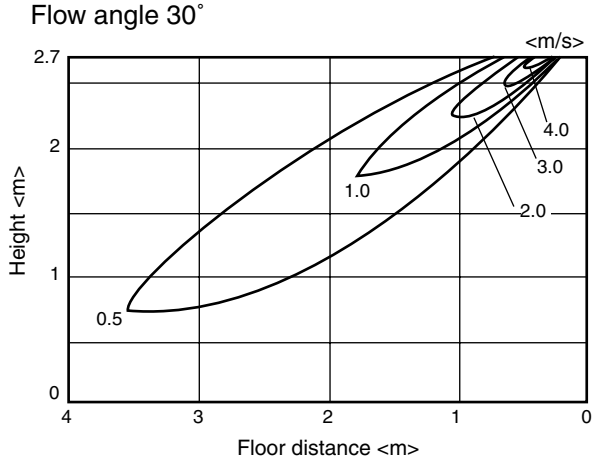



● Airflow distribution

<Fan mode>
Flow angle 70˚




<Fan mode>
Flow angle 30˚




PLFY-P-VAM-E

# 6. Options

| Description | Model | Applicable capacity |
|---|---|---|
| Decoration panel | PLP-6AA | P32~P125 |
| Air outlet shutter plate | PAC-SG06SP-E | P32~P125 |
| High efficiency filter element | PAC-SE13KF-E<br>(PAC-SE21TM-E is necessary to use this filter) | P32~P125 |
| | PAC-SG01KF | P32~P125 |
| Multi-function casement | PAC-SG03TM-E | P32~P125 |

Wall mounted

PKFY-P-VAM-E
PKFY-P-VGM-E

# CONTENTS

1. Specifications ..... Ⅰ-106

2. Sound Levels ..... Ⅰ-107
2-1 Noise levels ..... Ⅰ-107
2-2 NC curves ..... Ⅰ-107

3. External Dimensions ..... Ⅰ-108

4. Electrical Wiring Diagrams ..... Ⅰ-110
4-1 PKFY-P-VAM-E ..... Ⅰ-110
4-2 PKFY-P-VGM-E ..... Ⅰ-111

5. Temperature/Airflow distribution ..... Ⅰ-112
5-1 PKFY-P-VAM-E ..... Ⅰ-112
5-2 PKFY-P-VGM-E ..... Ⅰ-113

# 1. Specifications

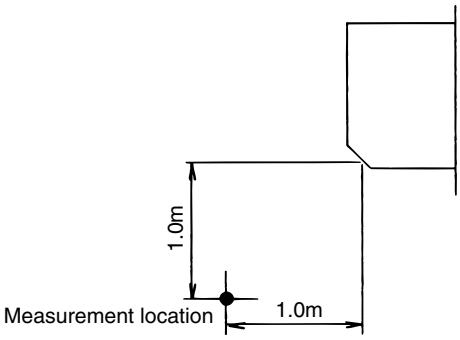
| | | | PKFY-P20VAM-E | PKFY-P25VAM-E | PKFY-P32VGM-E | PKFY-P40VGM-E | PKFY-P50VGM-E |
|---|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz ~ 220V 60Hz | | | | |
| Cooling capacity | ✻1 | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 |
| | ✻2 | kcal/h | 2,000 | 2,500 | 3,150 | 4,000 | 5,000 |
| Heating capacity | ✻1 | kW | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 |
| Power consumption | Cooling | kW | 0.04 | | 0.07 | | |
| | Heating | kW | 0.04 | | 0.07 | | |
| Current | Cooling | A | 0.20 | | 0.32 | | |
| | Heating | A | 0.20 | | 0.32 | | |
| External finish(Munsel No.) | | | Plastic 2.60Y 8.66/0.69 | | Plastic <PS,ABS> white 0.70Y 8.59/0.97 | | |
| Dimension | Height | mm | 295 | | 340 | | |
| | Width | mm | 815 | | 990 | | |
| | Depth | mm | 158 | | 235 | | |
| Net weight | | kg | 8.5 | | 16 | | |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | | |
| Fan | Type | | Line flow fan × 1 | | | | |
| | Airflow rate ✻3 (Lo-Mid2-Mid1-Hi) | m³/min | 4.9-5.2-5.6-5.9 | | 8-9.5-10.5-11.5 | | 9-10-11-12 |
| | External static pressure | Pa | 0 | | | | |
| Motor | Type | | Single phase induction motor | | | | |
| | Output | kW | 0.017 | | 0.030 | | |
| Air filter | | | PP Honeycomb (long life) | | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | | | | ø 12.7 / ø 15.88 (Compatible) |
| | Liquid (Flare) | mm | ø 6.35 | | | | ø 6.35 / ø 9.52 (Compatible) |
| Drain pipe dimension | | | I.D. ø16 (VP-16) | | I.D. ø20 (VP-20) | | |
| Noise level (Lo-Mid2-Mid1-Hi) ✻3 ✻4 | | dB(A) | 32-33-35-36 | | 33-36-38-41 | | 34-37-40-43 |

Note: ✻1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
✻2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
✻3 Airflow rate/noise level are in (low-middle2-middle1-high).
✻4 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

Wall mounted

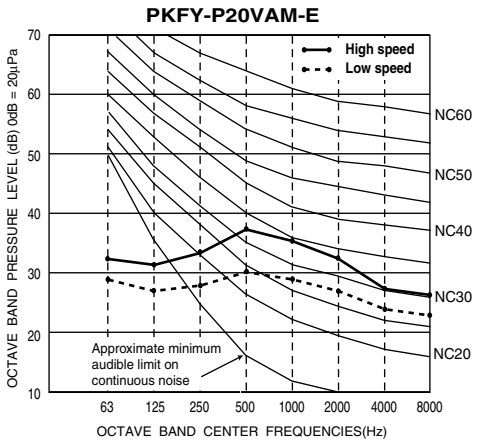


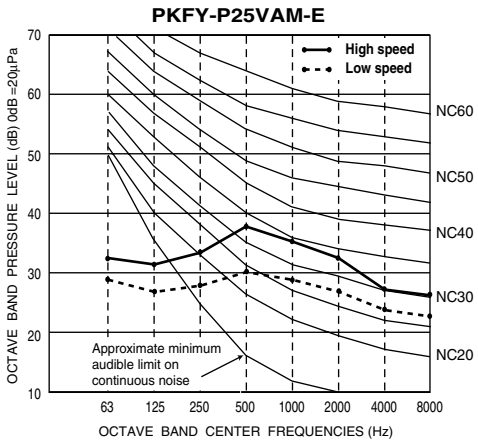

Noise level at anechoic room
(Low-Middle2-Middle1-High)

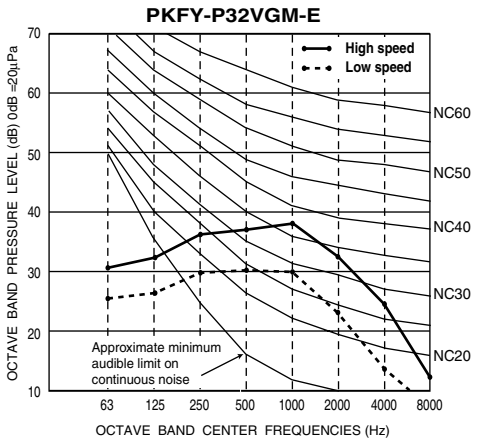
Unit : dB(A)

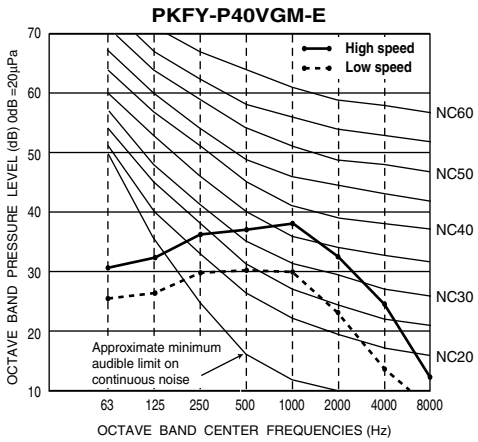
| Model | Noise level (A weighted) |
|---|---|
| PKFY-P20VAM-E<br>PKFY-P25VAM-E | 32-33-35-36 |
| PKFY-P32VGM-E<br>PKFY-P40VGM-E | 33-36-38-41 |
| PKFY-P50VGM-E | 34-37-40-43 |

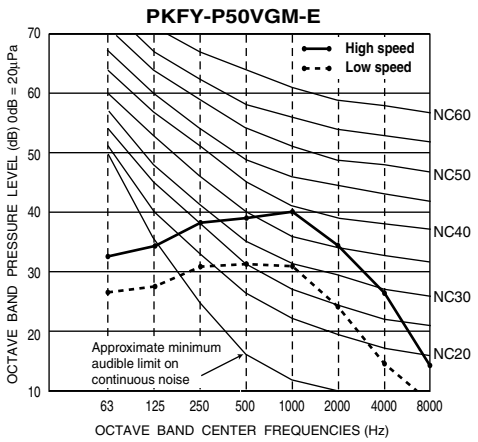
## 2-2. NC curves



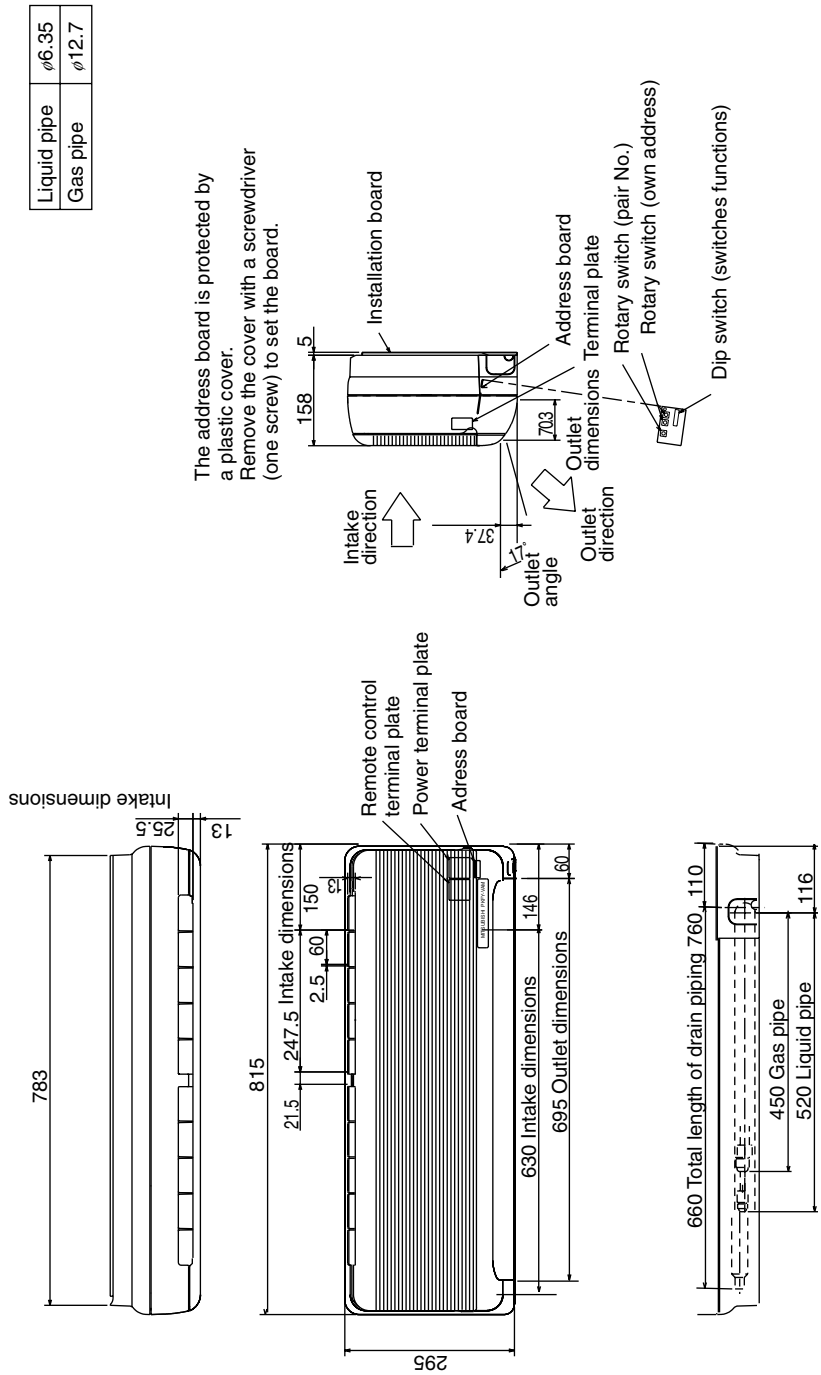



# 3. External Dimensions

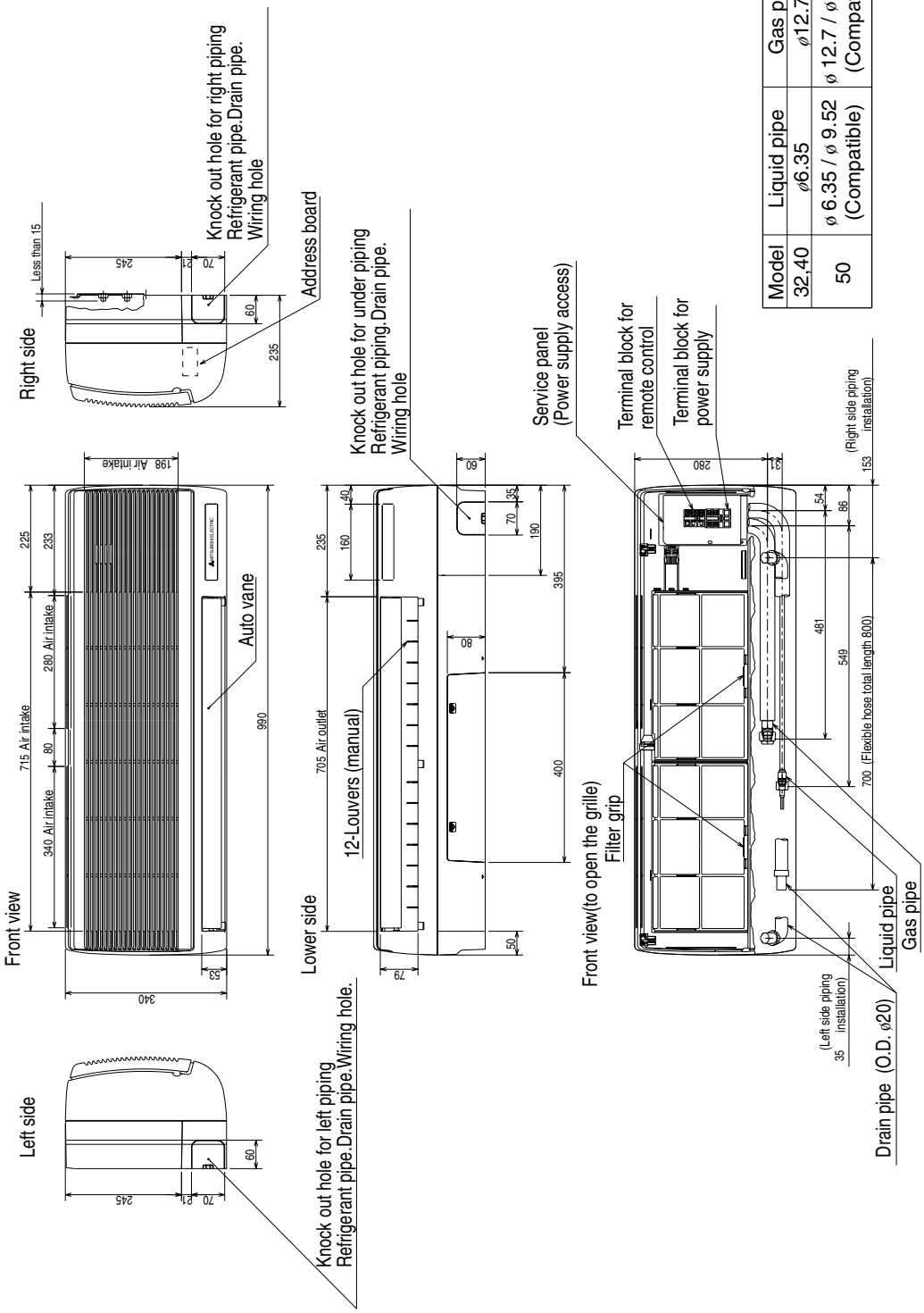
**PKFY-P20, 25VAM-E**

Unit : mm



**PKFY-P32,40,50VGM-E**

Unit : mm



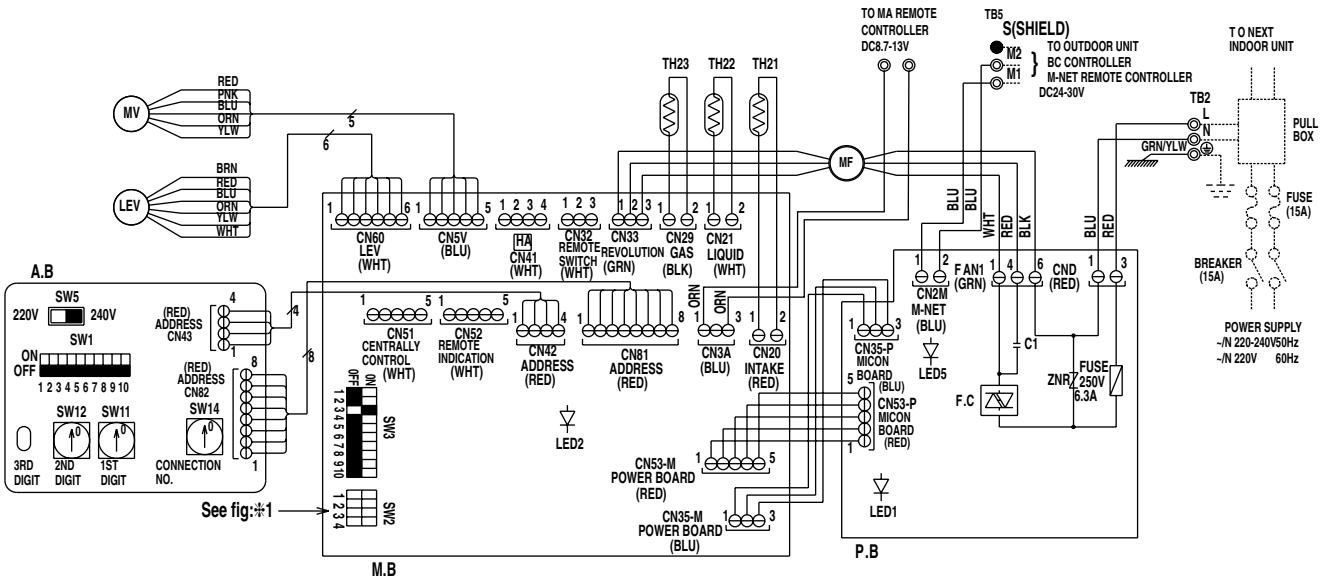

| Model | Liquid pipe | Gas pipe |
|---|---|---|
| 32,40 | ø6.35 | ø12.7 |
| 50 | ø 6.35 / ø 9.52 (Compatible) | ø 12.7 / ø 15.88 (Compatible) |

# 4. Electrical Wiring Diagrams

## 4-1 PKFY-P-VAM-E

<SYMBOL EXPLANATION>

| Symbol | Name | | Symbol | Name | | Symbol | Name | |
|---|---|---|---|---|---|---|---|---|
| M.B | Indoor controller board | | TH23 | Thermistor | Pipe temp. detection/Gas (0˚C / 15kΩ, 25˚C / 5.4kΩ) | TB2 | Terminal block | Power supply |
| CN32 | Connector | Remote switch | | | | TB5 | | MA-Remote controller |
| CN41 | | HA terminal - A | P.B | Indoor power board | | A.B | Circuit board | Address |
| CN51 | | Centrally control | ZNR | Varistor | | SW1 <A.B> | Switch | Mode selection |
| CN52 | | Remote indication | FUSE | Fuse (6.3A) | | SW5 <A.B> | | Voltage selection |
| SW2 | Switch | Capacity code | F.C | Fan phase control | | SW11 <A.B> | | Address setting 1st digit |
| SW3 | | Mode selection | MF | Fan motor | | SW12 <A.B> | | Address setting 2nd digit |
| TH21 | Thermistor | Room temp. detection (0˚C / 15kΩ, 25˚C / 5.4kΩ) | C1 | Capacity (fan motor) | | SW14 <A.B> | | Connection No. |
| | | | MV | Vane motor | | | | |
| TH22 | | Pipe temp. detection/liquid (0˚C / 15kΩ, 25˚C / 5.4kΩ) | LEV | Linear expansion valve | | | | |




**Note**

1. At servicing for outdoor unit, always follow the wiring diagram of outdoor unit.
2. In case of using MA-Remote controller, please connect to TB15.(Remote controller wire is non-polar.)
3. In case of using M-NET, please connect to the wire.(BLU, two wire) <M1, M2>of CN2M (Transmission line is non-polar.)
4. Symbols used in wiring diagram above are, ◎ : terminal block, ⊖: connector, ● : direct wire connection.
5. The setting of the SW2 dip switches differs in the capacity for the detail, refer to the fig: ❊1.
6. Please set the switch SW5 accordng to the power supply voltage.
   SW5 to 240V side when the power supply is 230 and 240 volts.
   When the power supply is 220 volts, set SW5 to 220V side.

Led on indoor board for sevice

| Mark | Meaning | Function |
|---|---|---|
| LED1 | Main power supply | Main power supply (indoor unit:220-240V) power on ⇒lamp is lit |
| LED2 | Power supply for MA-Remote controller | Power supply for MA-Remote controller on→ lamp is lit |

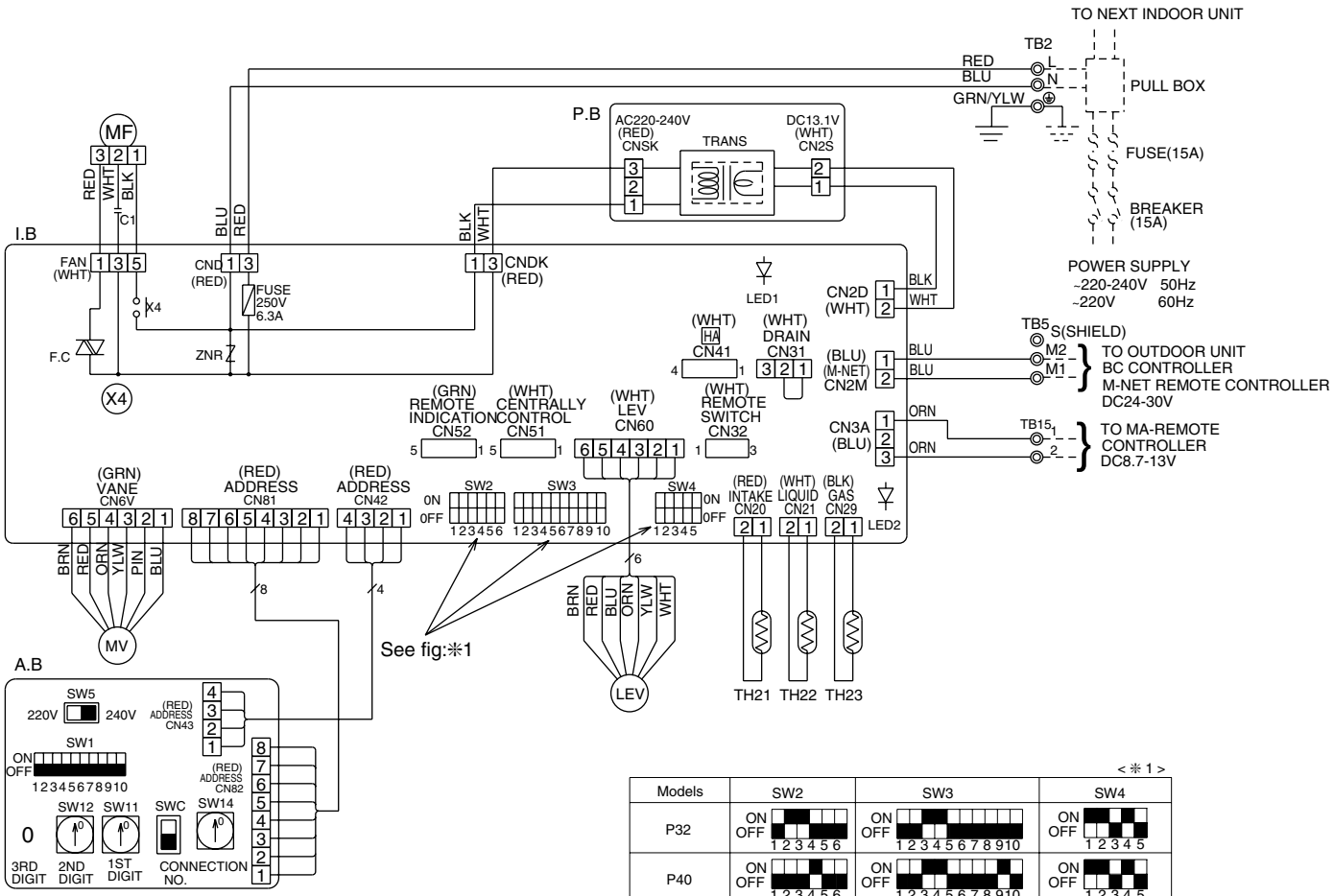
<❊ 1>

| MODELS | SW2 | MODELS | SW2 |
|---|---|---|---|
| P20 | ON OFF 1 2 3 4 | P25 | ON OFF 1 2 3 4 |

# 4-2 PKFY-P-VGM-E

<SYMBOL EXPLANATION>

| Symbol | | Name | | Symbol | Name | | Symbol | | Name | |
|---|---|---|---|---|---|---|---|---|---|---|
| I.B | | Indoor controller board | | TH21 | Thermistor | Room temp. detection (0˚C/15kΩ,25˚C/5.4kΩ) | A.B | | Circuit board | |
| | CN32 | Connector | Remote switch | | | | | SW1 | Switch | Mode selection |
| | CN41 | | HA terminal-A | TH22 | | Pipe temp. detection/liquid (0˚C/15kΩ,25˚C/5.4kΩ) | | SW5 | | Voltage selection |
| | CN51 | | Centrally control | | | | | SW11 | | Address setting 1st digit |
| | CN52 | | Remote indication | TH23 | | Pipe temp. detection/Gas (0˚C/15kΩ,25˚C/5.4kΩ) | | SW12 | | Address setting 2nd digit |
| | SW2 | Switch | Capacity code | | | | | SW14 | | Connection No. |
| | SW3 | | Mode selection | MF | Fan motor (with inner thermostat) | | | SWC | | Option selector |
| | SW4 | | Model selection | C1 | Capacitor (fan motor) | | P.B | | Indoor power board | |
| | ZNR | Varistor | | MV | Vane motor | | | | | |
| | X4 | Aux.Relay (Fan motor) | | TB2 | Terminal block | Power supply | | | | |
| | FUSE | Fuse (6.3A) | | TB5 | | Transmission | | | | |
| | F.C | Fan phase control | | TB15 | | MA-Remote controller | | | | |
| | | | | LEV | Linear expansion valve | | | | | |




< ※1 >

| Models | SW2 | SW3 | SW4 |
|---|---|---|---|
| P32 | ON OFF 1 2 3 4 5 6 | ON OFF 1 2 3 4 5 6 7 8 9 10 | ON OFF 1 2 3 4 5 |
| P40 | ON OFF 1 2 3 4 5 6 | ON OFF 1 2 3 4 5 6 7 8 9 10 | ON OFF 1 2 3 4 5 |
| P50 | ON OFF 1 2 3 4 5 6 | ON OFF 1 2 3 4 5 6 7 8 9 10 | ON OFF 1 2 3 4 5 |

NOTE

1.At servicing for outdoor unit,always follow the wiring diagram of outdoor unit.
2.In case of using MA-Remote controller, please connect to TB15.
(Remote controller wire is non-polar.)
3.In case of using M-NET, please connect to TB5.(Transmission line is non-polar.)
4.Symbol[S] of TB5 is the shield wire connection.
5.Symbols used in wiring diagram above are,
◎:Terminal block, ▭▭▭ :Connector.
6.The setting of the SW2 dip switches differs in the capacity. For the detail,refer to the fig: ※1.
7.Please set the switch SW5 according to the power supply voltage.
Set SW5 to 240V side when the power supply is 230 and 240 volts.
When the power supply is 220 volts,set SW5 to 220V side.

Led on indoor board for sevice

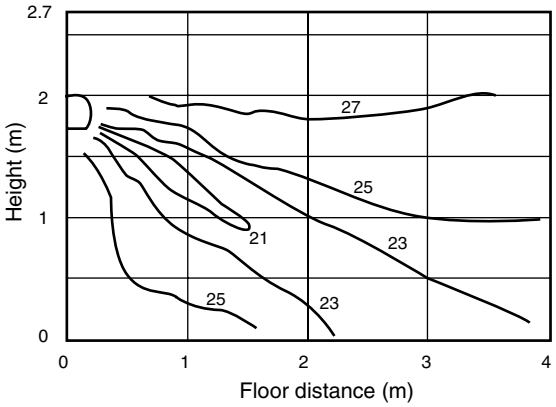
| Mark | Meaning | Function |
|---|---|---|
| LED1 | Main power supply | Main power supply (indoor unit:220-240V) power on ⇒lamp is lit |
| LED2 | Power supply for MA-Remote controller | Power supply for MA-Remote controller on ➡ lamp is lit |

# 5. Temperature/Airflow distribution

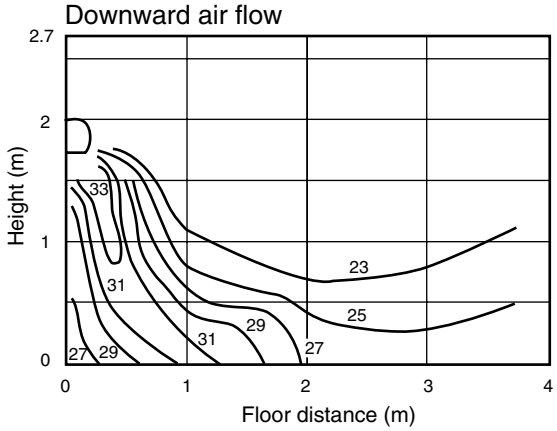
## 5-1 PKFY-P-VAM-E

● Temperature distribution

<Cooling mode>
Horizontal air flow

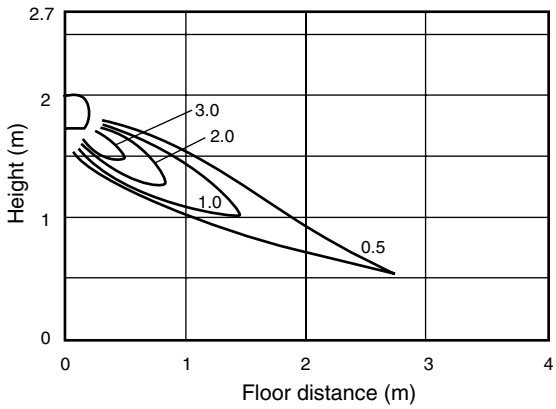



<Heating mode>
Downward air flow

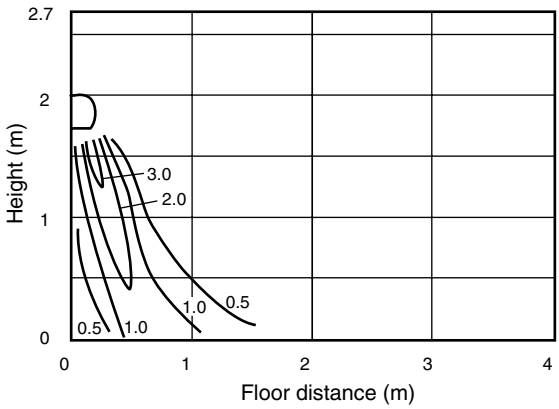



● Airflow distribution

<Fan mode>
Horizontal air flow



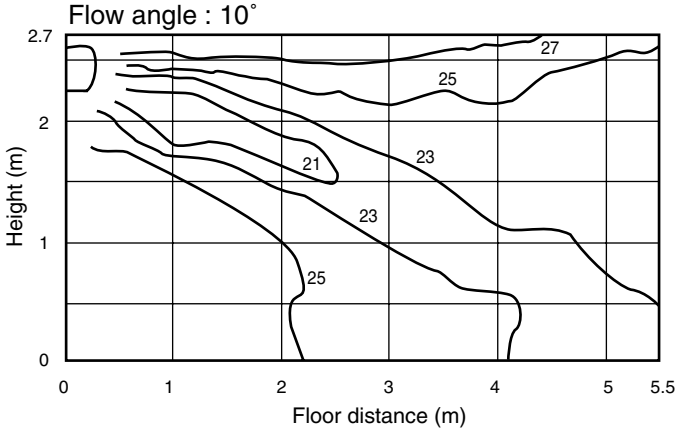

<Fan mode>
Downward air flow



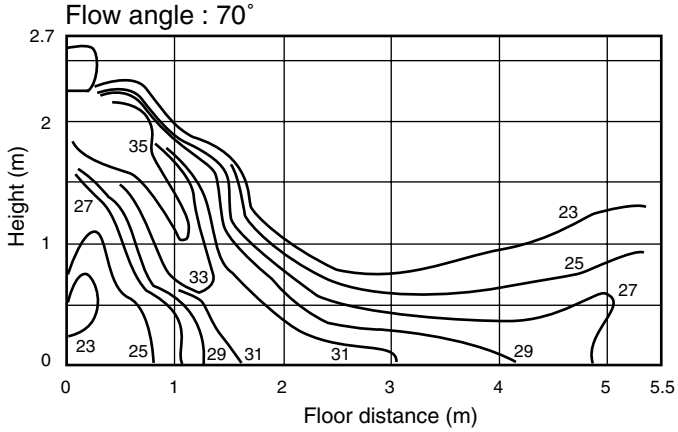
## 5-2 PKFY-P-VGM-E

● Temperature distribution

<Cooling mode>
Flow angle : 10˚

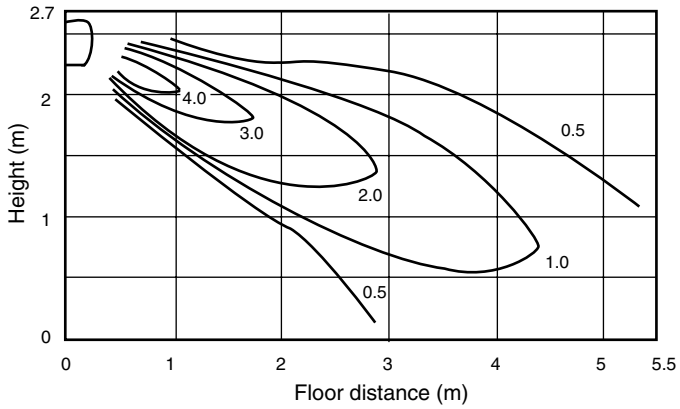



<Heating mode>
Flow angle : 70˚

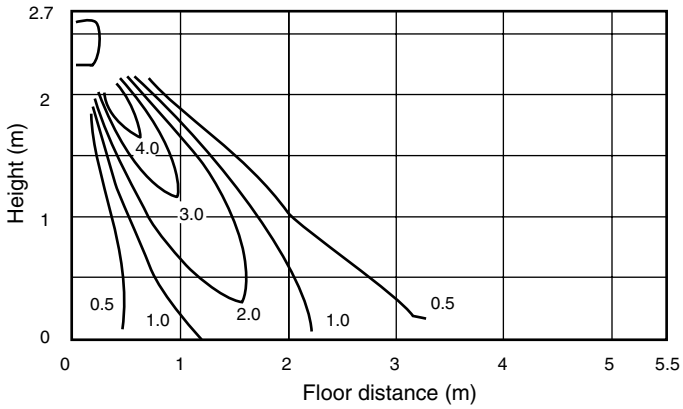



● Airflow distribution

<Fan mode>
Flow angle : 10˚




<Fan mode>
Flow angle : 70˚



Ceiling suspended PCFY-P-VGM-E

# CONTENTS

1. Specifications ..... Ⅱ-116

2. Sound Levels ..... Ⅱ-117
   2-1 Sound levels ..... Ⅱ-117
   2-2 NC curves ..... Ⅱ-117

3. External Dimension ..... Ⅱ-118

4. Wiring Diagram ..... Ⅱ-119

5. Temperature/Airflow distribution ..... Ⅱ-120

# 1. Specifications



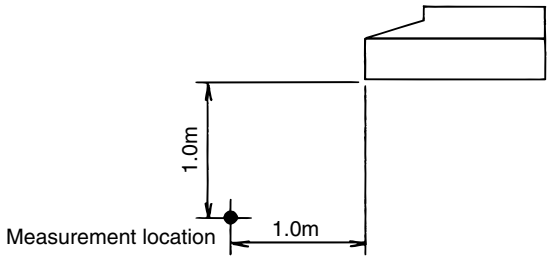
| | | | PCFY-P40VGM-E | PCFY-P63VGM-E | PCFY-P100VGM-E | PCFY-P125VGM-E |
|---|---|---|---|---|---|---|
| Power source | | | ~ 220-240V 50Hz / ~220V 60Hz | | | |
| Cooling capacity | ※1 | kW | 4.5 | 7.1 | 11.2 | 14.0 |
| | ※2 | kcal/h | 4,000 | 6,300 | 10,000 | 12,500 |
| Heating capacity | ※1 | kW | 5.0 | 8.0 | 12.5 | 16.0 |
| Power consumption | Cooling | kW | 0.10 | 0.13 | 0.16 | 0.24 |
| | Heating | kW | 0.10 | 0.13 | 0.16 | 0.24 |
| Current | Cooling | A | 0.46 | 0.60 | 0.73 | 1.10 |
| | Heating | A | 0.46 | 0.60 | 0.73 | 1.10 |
| External finish(Munsel No.) | | | 0.70Y 8.59/0.97 | | | |
| Dimension ※3 | Height | mm | 210 | | 270 | |
| | Width | mm | 1,000 | 1,310 | | 1,620 |
| | Depth | mm | 680 | | | |
| Net weight | ※3 | kg | 27 | 34 | 37 | 43 |
| Heat exchanger | | | Cross fin (Aluminum plate fin and copper tube) | | | |
| Fan | Type | | Sirocco fan× 2 | Sirocco fan× 3 | | Sirocco fan× 4 |
| | Airflow rate ※3 (Lo-Mid2-Mid1-Hi) | $m^3$/min | 8-10-11-12 | 12-14-16-18 | 18-20-23-25 | 26-28-32-35 |
| | External static pressure | Pa | 0 | | | |
| Motor | Type | | Single phase induction motor | | | |
| | Output | kW | 0.054 | 0.070 | 0.090 | 0.150 |
| Air filter | | | PP Honeycomb (long life) | | | |
| Refrigerant pipe dimension | Gas (Flare) | mm | ø 12.7 | ø 15.88 | ø 15.88 / ø 19.05 (Compatible) | |
| | Liquid (Flare) | mm | ø 6.35 | ø 9.52 | | |
| Drain pipe dimension | | | I.D. ø26 (VP-25) | | | |
| Noise level (Lo-Mid2-Mid1-Hi) ※3 ※4 | | dB(A) | 29-33-36-38 | 32-34-37-39 | 36-38-41-43 | 37-39-42-44 |

Note: ※1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19˚CWB,Outdoor 35˚CDB
Heating : Indoor 20˚CDB,Outdoor 7˚CDB/6˚CWB
※2 Cooling capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27˚CDB/19.5˚CWB,Outdoor 35˚CDB (WR2: water 30˚C)
※3 External dimension/net weight are shown in (unit/panel),and airflw rate/noise level are in (low-middle 2-middle 1-high).
※4 It is measured in anechoic room.

# 2. Sound Levels

## 2-1. Noise levels

Ceiling suspended



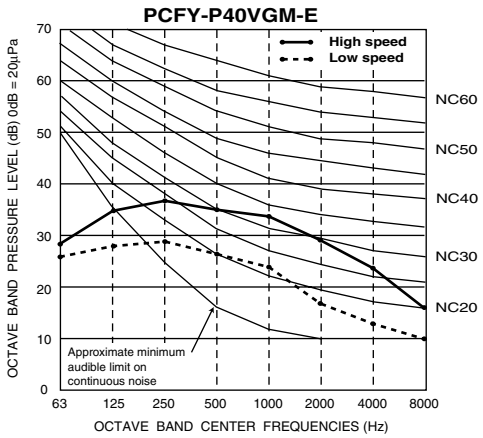

Noise level at anechoic room
(Low-Middle2-Middle1-High)

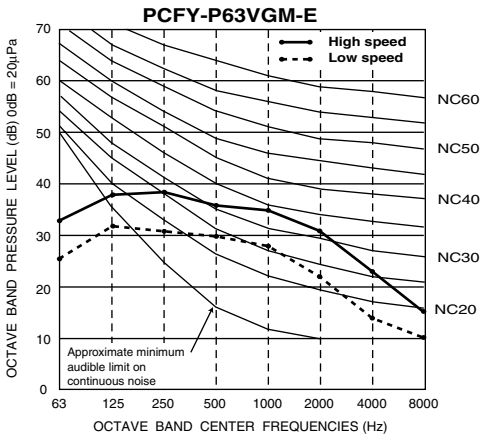
Unit : dB(A)

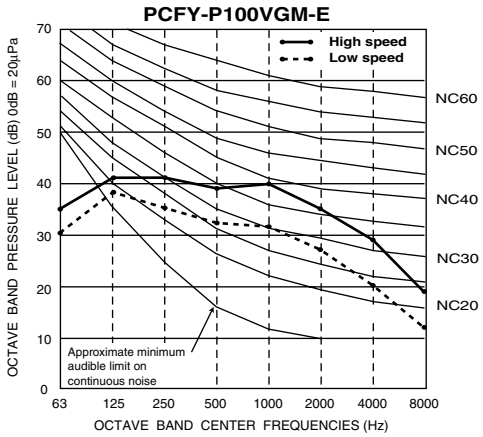
| Model | Noise level (A weighted) |
|---|---|
| PCFY-P40VGM-E | 29-33-36-38 |
| PCFY-P63VGM-E | 32-34-37-39 |
| PCFY-P100VGM-E | 36-38-41-43 |
| PCFY-P125VGM-E | 37-39-42-44 |

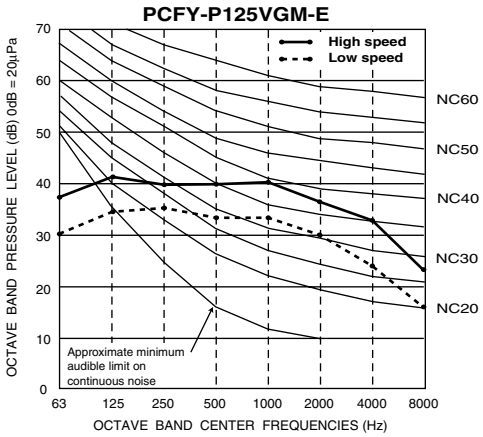
PCFY-P-VGM-E

## 2-2. NC curves



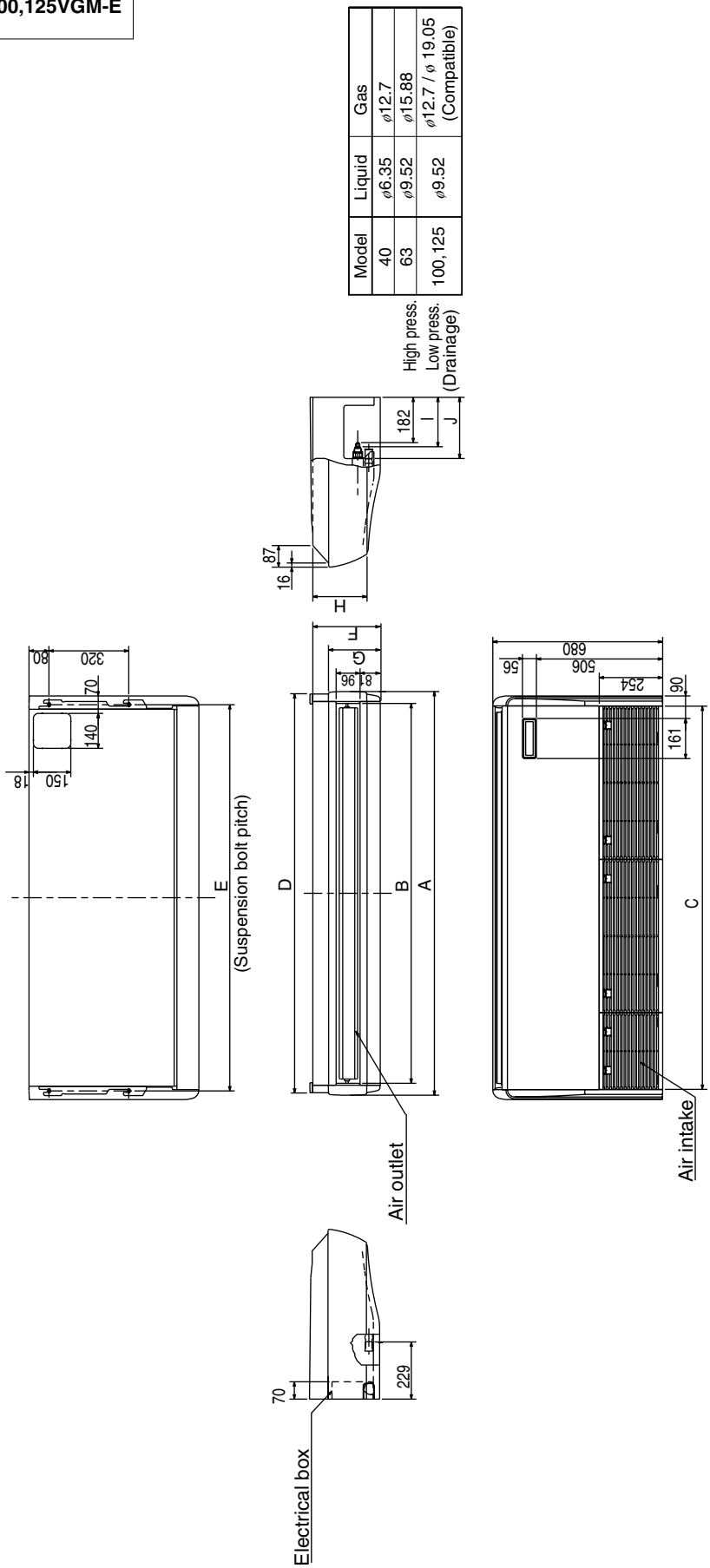



# 3. External Dimension

**PCFY-P40,63,100,125VGM-E**

Unit : mm




| Model | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| PCFY -P40VGM-E | 1,000 | 904 | 918 | 983 | 933 | 210 | 180 | 157 | 201 | 241 |
| PCFY -P63VGM-E | 1,310 | 1,214 | 1,228 | 1,290 | 1,240 | 210 | 180 | 157 | 201 | 241 |
| PCFY -P100VGM-E | 1,310 | 1,214 | 1,228 | 1,290 | 1,240 | 270 | 207 | 217 | 198 | 245 |
| PCFY -P125VGM-E | 1,620 | 1,524 | 1,535 | 1,600 | 1,547 | 270 | 207 | 217 | 198 | 245 |

# 4. Electrical Wiring Diagram

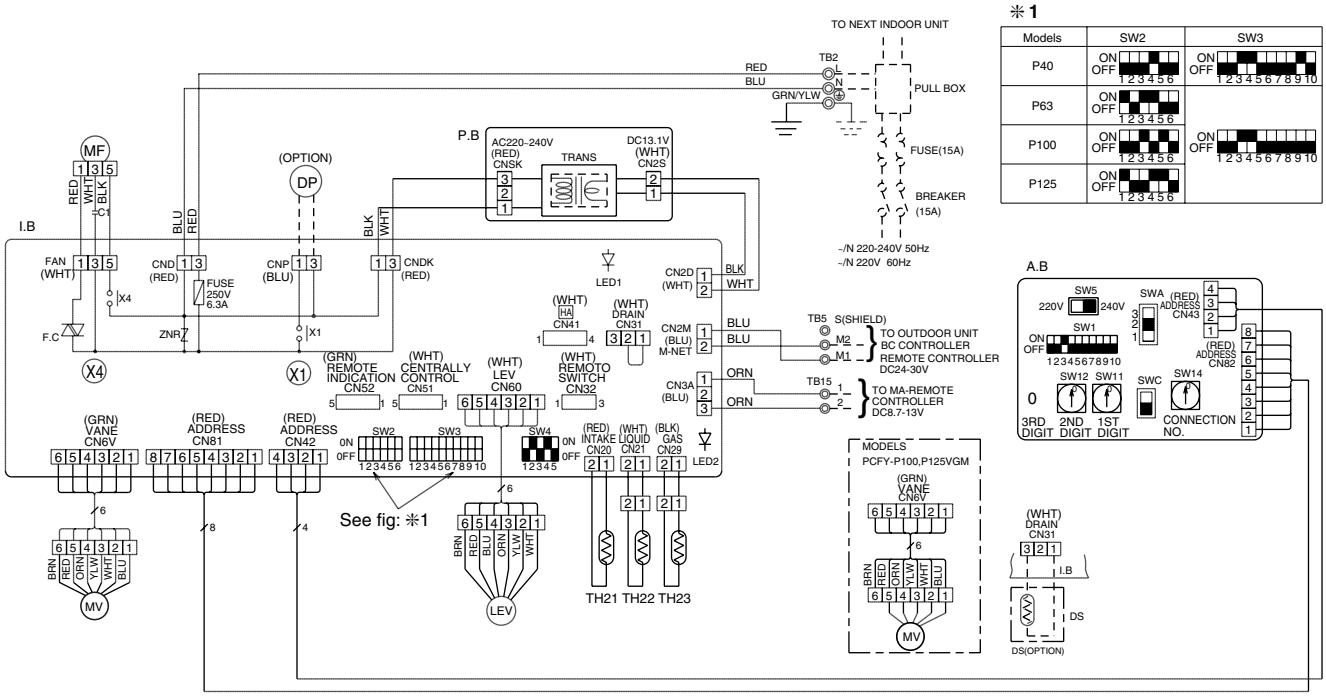


<SYMBOL EXPLANATION>

| Symbol | | Name | | Symbol | Name | | Symbol | | Name | |
|---|---|---|---|---|---|---|---|---|---|---|
| I.B | | Indoor controller board | | C1 | Capacitor(fan motor) | | A.B | | Circuit board | Address |
| | CN32 | Connector | Remote switch | LEV | Linear expansion valve | | | SW1 | Switch | Mode selection |
| | CN51 | | Centrally control | MF | Fan motor(with inner thermo) | | | SW5 | | Voltage selection |
| | CN52 | | Remote indication | MV | Vane motor | | | SW11 | | Address setting 1st digit |
| | CNP | | Drain-up machine | TH21 | Thermistor | Room temp. detection (0˚C/15kΩ,25˚C/5.4kΩ) | | SW12 | | Address setting 2nd digit |
| | F.C | Fan phase control | | | | | | SW14 | | Connection No. |
| | FUSE | Fuse (6.3A) | | TH22 | | Pipe temp. detection / Liquid (0˚C/15kΩ,25˚C/5.4kΩ) | | SWA | Ceiling heigh selector | |
| | SW2 | Switch | Capacity code | | | | | SWC | Option selector | |
| | SW3 | | Mode selection | TH23 | | Pipe temp. detection / Gas (0˚C/15kΩ,25˚C/5.4kΩ) | | | | |
| | SW4 | | Model selection | | | | | | | |
| | X1 | Aux.Relay | Drain-up machine | TB2 | Terminal block | Power supply | | | | |
| | X4 | | Fan motor | TB5 | | Transmission | | | | |
| | ZNR | Varistor | | TB15 | | MA-remote controller | | | | |
| P.B | | Indoor power board | | DP | Drain-up machine (OPTION) | | | | | |
| | | | | DS | Drain sensor (OPTION) | | | | | |

Led on indoor board for sevice

| Mark | Meaning | Function |
|---|---|---|
| LED1 | Main power supply | Main power supply (indoor unit:220-240V) power on ⇒ lamp is lit |
| LED2 | Power supply for MA-Remote controller | Power supply for MA-Remote controller on → lamp is lit |




※1

| Models | SW2 | SW3 |
|---|---|---|
| P40 | ON OFF 1 2 3 4 5 6 | ON OFF 1 2 3 4 5 6 7 8 9 10 |
| P63 | ON OFF 1 2 3 4 5 6 | |
| P100 | ON OFF 1 2 3 4 5 6 | ON OFF 1 2 3 4 5 6 7 8 9 10 |
| P125 | ON OFF 1 2 3 4 5 6 | |

Note

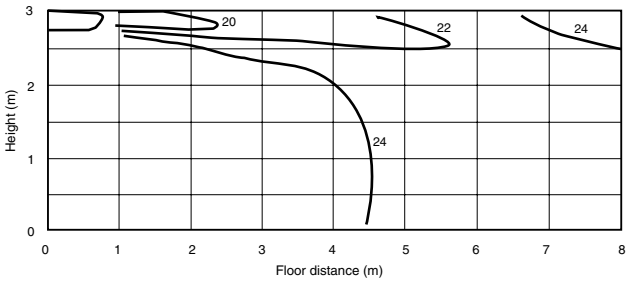
1.At servicing for outdoor unit,always follow the wiring diagram of outdoor unit.
2.In case of using MA-Remote controller, please connect to TB15.
(Remote controller wire is non-polar.)
3.In case of using M-NET, please connect to TB5.(Transmission line is non-polar.)
4.Symbol[S] of TB5 is the shield wire connection.
5.Symbols used in wiring diagram above are,
◎:Terminal block, ☐☐☐ :Connector.
6. The setting of the SW2 dip switches differs in the capacity. For the detail,refer to the fig: ※1.
7. Please set the switch SW5 according to the power supply voltage.
Set SW5 to 240V side when the power supply is 230 and 240 volts.
When the power supply is 220 volts,set SW5 to 220V side.
8. Fasten terminal of the terminal board "TB5" equips lock system.
To remove the fasten terminal,pull it while pressing the protrudingn portion (locking lever)of the terminal.
Connection of the fasten terminal,protruding portion shouid face upward.

# 5. Temperature/Airflow distribution

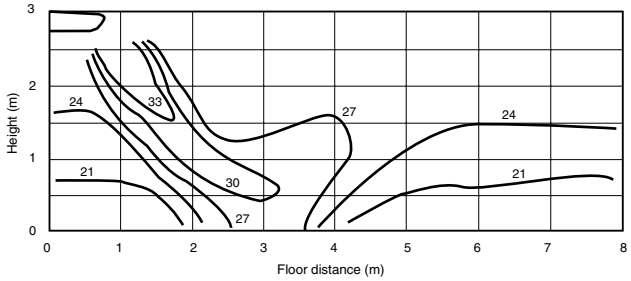
PCFY-P-VGM-E

## ● Temperature distribution

<Cooling mode>
Flow angle : 0˚

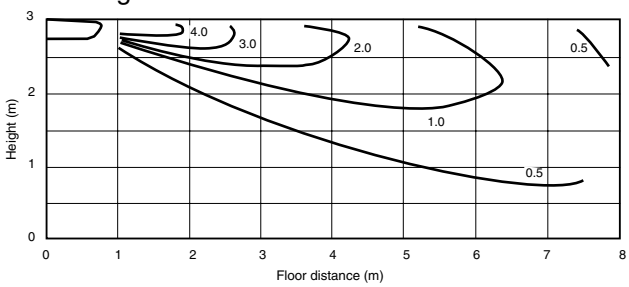



<Heating mode>
Flow angle : 60˚




## ● Airflow distribution

<Fan mode>
Flow angle : 0˚




<Fan mode>
Flow angle : 60˚

# CITY MULTI SYSTEM DESIGN

## CONTENTS

1. Restrictions on refrigerant piping lengths ····· Ⅱ-2

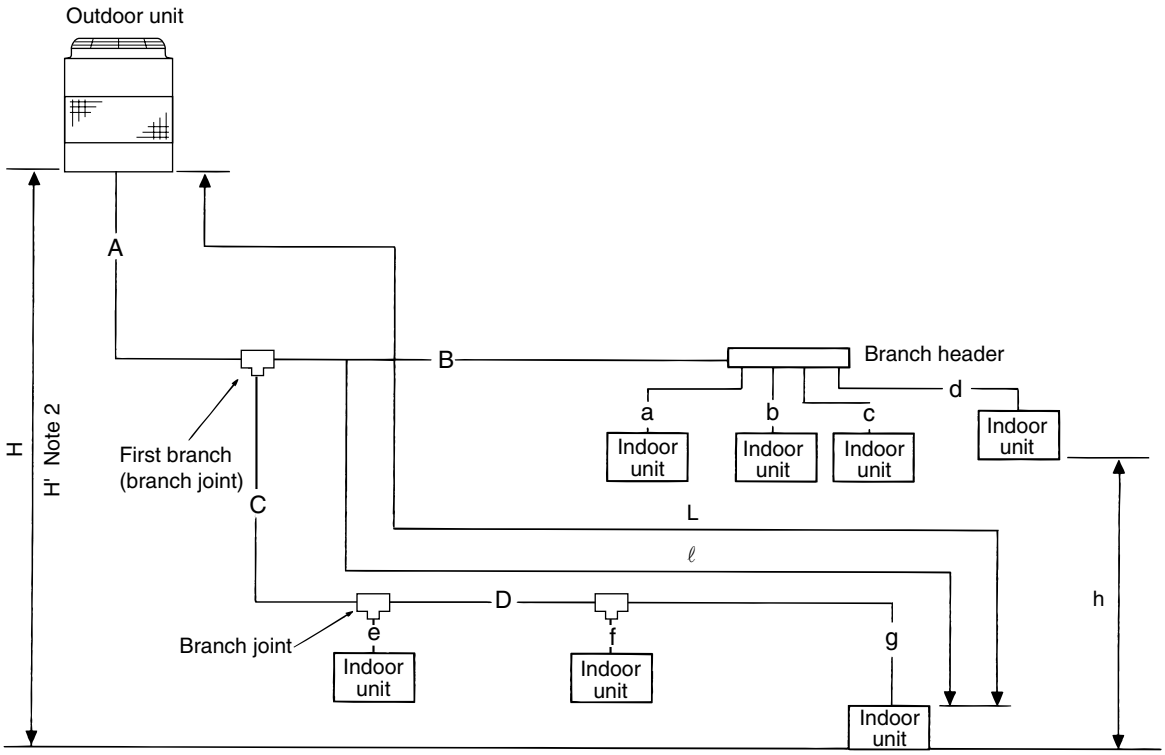
2. Refrigerant piping selection ····· Ⅱ-6

3. Example of refrigerant piping selection ····· Ⅱ-8

4. Calculation of additional refrigerant charge ····· Ⅱ-10

# 1. Restrictions on refrigerant piping lengths

① PUHY-P200~P650(8HP~26HP)
PUY-P200~P350(8HP~14HP)



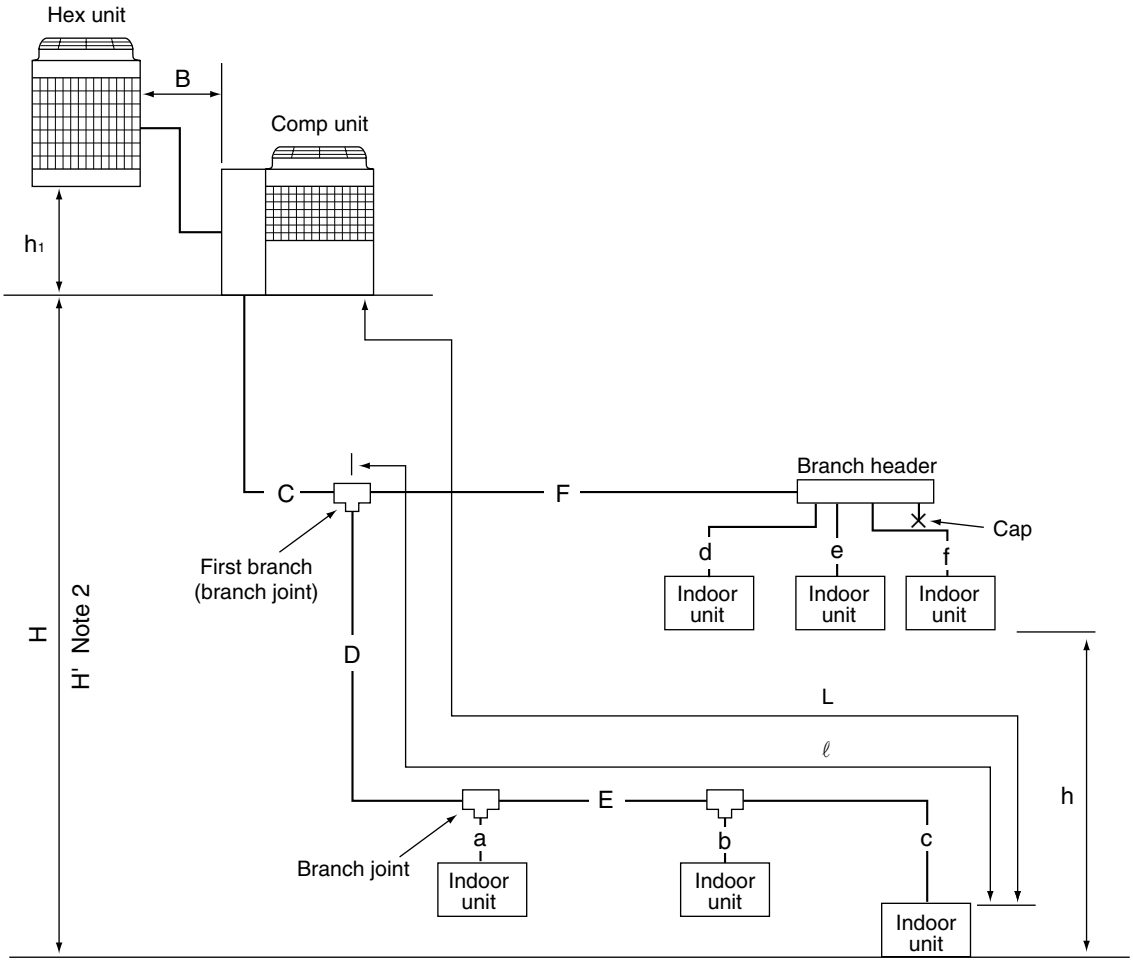

Notes: 1. No further branching in the pipes is possible after the header branch.
2. When cooling operation is performed when the outdoor temp. is 0˚C or lower : H'= 4m or less.
3. Equivalent pipe length (m) : Actual pipe length + A × number of bent.

Table A

| Outdoor unit model | A | Outdoor unit model | A |
|---|---|---|---|
| P200 | 0.35 | P450 | 0.50 |
| P250 | 0.42 | P500 | 0.50 |
| P300 | 0.42 | P550 | 0.50 |
| P350 | 0.47 | P600 | 0.50 |
| P400 | 0.50 | P650 | 0.50 |

| Item | | Pipe section | Allowable length | Equivalent length |
|---|---|---|---|---|
| Total pipe length | | A+B+C+D +a+b+c+d+e+f+g | 300m max. | – |
| Furthest pipe length (L) | | A+C+D+g or A+B+d | 150m max | 175m max. |
| Furthest pipe length ( ℓ ) after first branch | | C+D+g or B+d | 40m max. | 40m max. |
| Btwn. indoor & outdoor units | Outdoor unit installed above | H | 50m max. | – |
| | Outdoor unit installed below | H' | 40m max. | – |
| Btwn. indoor & indoor units | | h | 15m max. | – |

② PUHY-P700·750·800 (28·30·32HP)




Notes: 1. Mount the Hex unit on the left and Comp unit on the right. (as seen from the front of the unit)

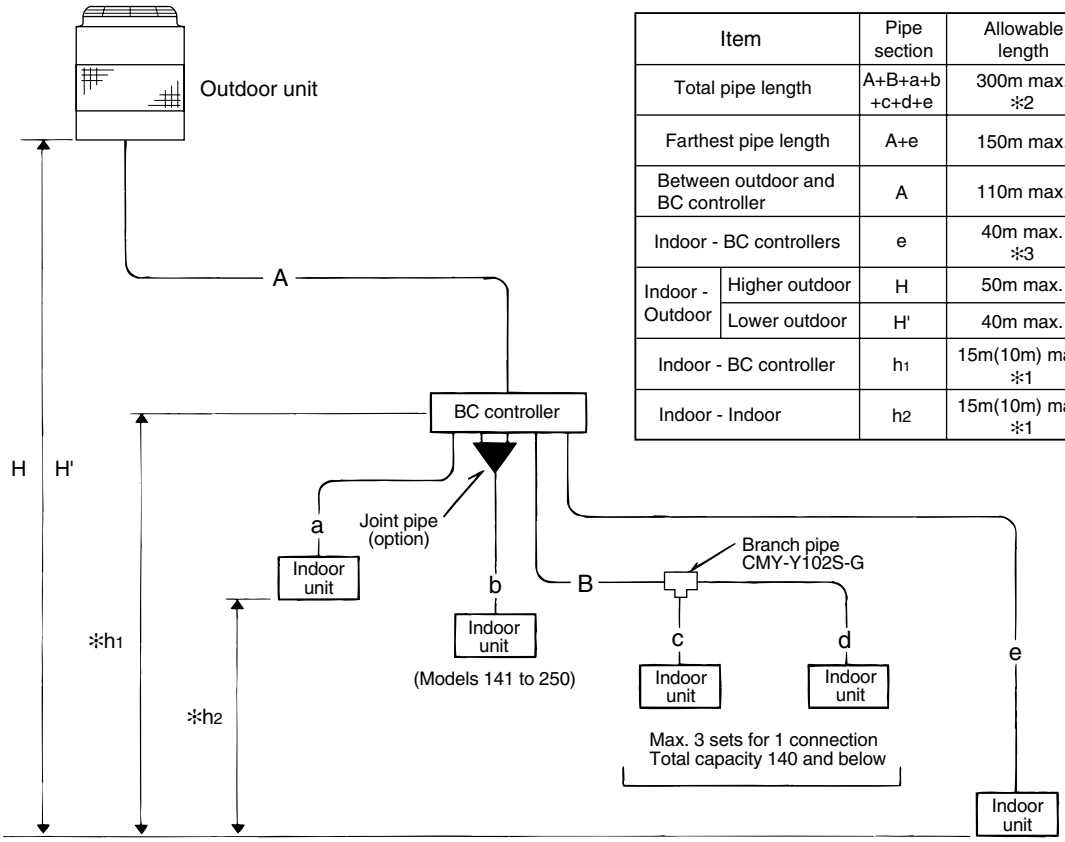
2. When cooling operation is performed when the outdoor temp. is 0˚C or lower : H'= 4m or less.

3. Equivalent pipe length (m) : Actual pipe length + model 700 : 0.70 / model 750 : 0.70 × number of bent. / model 800 : 0.70

4. No further branching in the pipes is possible after the header branch.

| Item | | Pipe section | Allowable length | Equivalent length |
|---|---|---|---|---|
| Total pipe length | | A+B+C+D+E+F +a+b+c+d+e+f | 300m max. | – |
| Furthest pipe length (L) | | A(B)+C+D+E+c | 150m max | 175m |
| Furthest pipe length ( ℓ ) after first branch | | D+E+c | 40m max. | – |
| Btwn. Hex unit & Comp unit | | B | 10m max. | 12m max. |
| Btwn. Hex unit & Comp unit | | $h_1$ | 0.1m max. | – |
| Btwn. indoor & outdoor units | Outdoor unit installed above | H | 50m max. | – |
| | Outdoor unit installed below | H' | 40m max. | – |
| Btwn. indoor & indoor units | | h | 15m max. | – |

③ PURY-P200·250·300·350 (8·10·12·14HP)




| Item | | Pipe section | Allowable length | Equivalent length |
|---|---|---|---|---|
| Total pipe length | | A+B+a+b +c+d+e | 300m max. *2 | – |
| Farthest pipe length | | A+e | 150m max. | 175m max. |
| Between outdoor and BC controller | | A | 110m max. | 110m max. |
| Indoor - BC controllers | | e | 40m max. *3 | 40m max. *3 |
| Indoor - Outdoor | Higher outdoor | H | 50m max. | – |
| | Lower outdoor | H' | 40m max. | – |
| Indoor - BC controller | | $h_1$ | 15m(10m) max. *1 | – |
| Indoor - Indoor | | $h_2$ | 15m(10m) max. *1 | – |

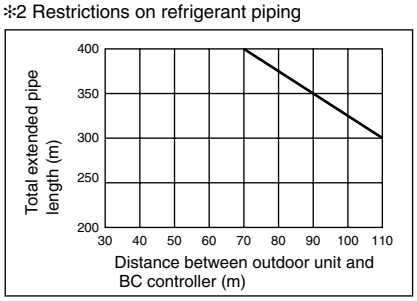
Equivalent pipe length (m) : Actual pipe length + A × number of bent.

Table A

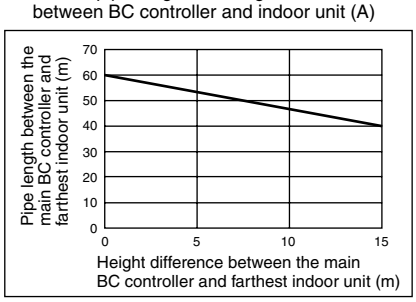
| Outdoor unit model | A |
|---|---|
| P200 | 0.35 |
| P250 | 0.42 |
| P300 | 0.42 |
| P350 | 0.47 |

*1 When connecting indoor units that are P200-type or above, the allowable pipe length between indoor units and between indoor units and the BC controller must be less than 10m.
*2 When the total extended length exceeds 300m, refer to the figure below, restrictions on refrigerant piping.
*3 When the piping length between the BC controller and the farthest indoor unit exceeds 40 m, refer to the figure below for restrictions on refrigerant piping length. (except for P200-type or above indoor units)
*4 When connecting indoor units that are P200-type or above, do not use branch joints or branch headers.
*5 Do not connect P200-type or above indoor units to other indoor units with different capacities at the same branch node.
*6 When connecting two BC controller sub units, include the length of the lines to these units in the allowable and equivalent lengths in the table above.

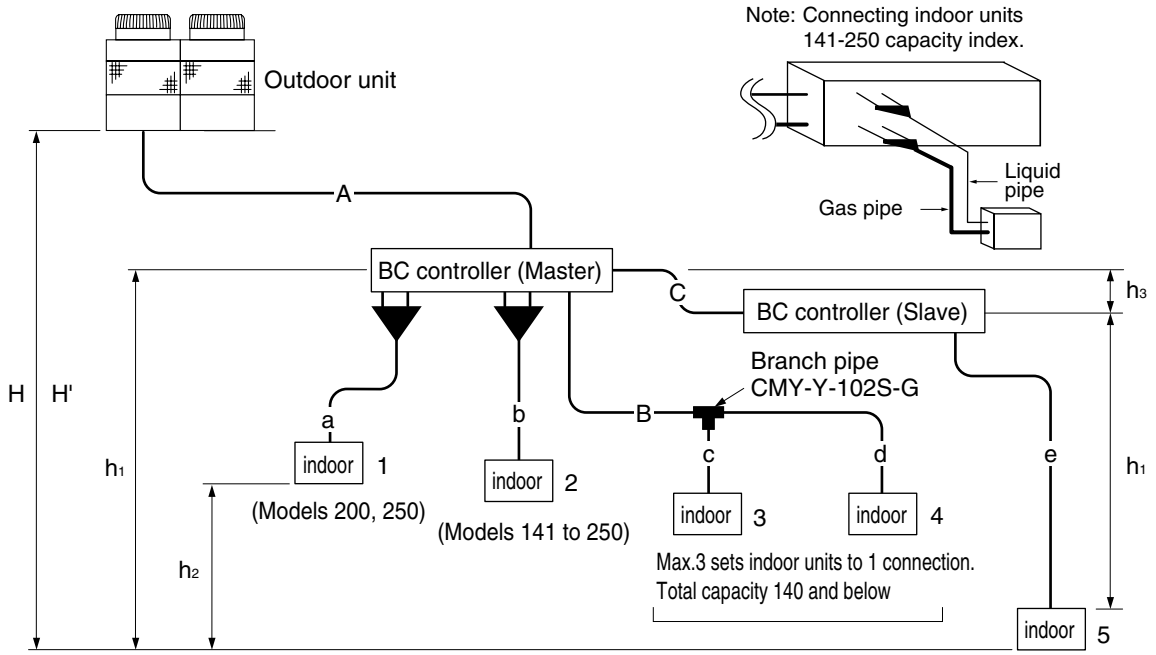
*2 Restrictions on refrigerant piping




*3 Branch pipe length and height difference between BC controller and indoor unit (A)



④ PURY-P400·450·500·550·600·650 (16·18·20·22·24·26HP)




| Item | | | Pipe section | Allowable length | Equivalent length |
|---|---|---|---|---|---|
| Length | Total pipe length | | A+B+C+a+b+c+d+e | 300m max. ⁎2 | – |
| | Furthest pipe length | | A+C+e | 150m max. | 175m max. |
| | Outdoor-BC (Master) | | A | 110m max. | 110m max. |
| | BC(Master or Slave)-Indoor | | B+d or C+e | 40m max. ⁎3 | 40m max. ⁎3 |
| Height difference | Indoor -Outdoor | Higher outdoor | H | 50m max. | – |
| | | Lower outdoor | H' | – | – |
| | Indoor-BC (Master, Slave) | | $h_1$ | 15m (10m) max. | – |
| | Indoor-Indoor | | $h_2$ | 15m (10m) max. ⁎1 | – |
| | BC (Master)-BC (Slave) | | $h_3$ | 15m (10m) max. ⁎1 ⁎6 | – |

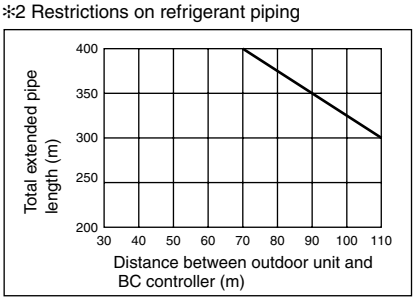
To connect indoor units in a system with branching nodes of more than 16, two to three branch controllers are required, and three pipes are required to connect the BC controller and the indoor units.
Equivalent pipe length : Allowable pipe length + A × number of bent

Table A

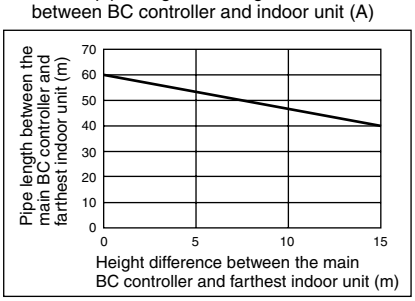
| Outdoor unit model | A | Outdoor unit model | A |
|---|---|---|---|
| P400 | 0.50 | P550 | 0.50 |
| P450 | 0.50 | P600 | 0.50 |
| P500 | 0.50 | P650 | 0.50 |

⁎1 When connecting indoor units that are P200-type or above, the allowable pipe length between indoor units and between indoor units and the BC controller must be less than 10m.
⁎2 When the total extended length exceeds 300m, refer to the figure below, restrictions on refrigerant piping.
⁎3 When the piping length between the BC controller and the farthest indoor unit exceeds 40 m, refer to the figure below for restrictions on refrigerant piping length. (except for P200-type or above indoor units)
⁎4 When connecting indoor units that are P200-type or above, do not use branch joints or branch headers.
⁎5 Do not connect P200-type or above indoor units to other indoor units with different capacities at the same branch node.
⁎6 When connecting two BC controller sub units, include the length of the lines to these units in the allowable and equivalent lengths in the table above.

⁎2 Restrictions on refrigerant piping

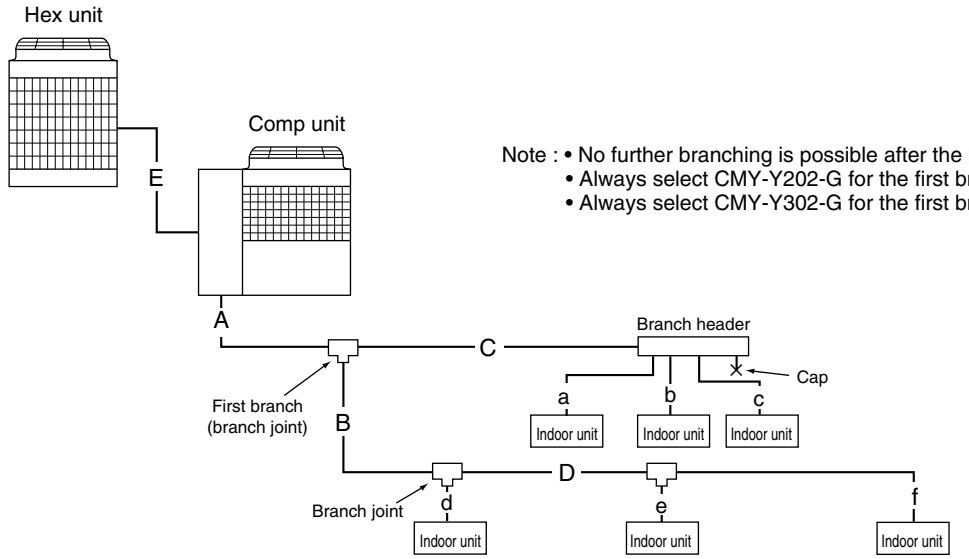



⁎3 Branch pipe length and height difference between BC controller and indoor unit (A)



# 2. Refrigerant piping selection

① PUHY, PUY




Note : • No further branching is possible after the header branch.
• Always select CMY-Y202-G for the first branch of P450~P650.
• Always select CMY-Y302-G for the first branch of P700, 750, 800.

### (1) Outdoor unit - 1st branch (Pipe A)

| Outdoor unit model | Liquid pipe | Gas pipe |
|---|---|---|
| P200 | ø 9.52 | ø 19.05 |
| P250 | *1 ø 9.52 | ø 22.2 |
| P300 | *2 ø 9.52 | ø 22.2 |
| P350 | ø 12.7 | ø 28.58 |
| P400 | ø 12.7 | ø 28.58 |
| P450 | ø 15.88 | ø 28.58 |
| P500 | ø 15.88 | ø 28.58 |
| P550 | ø 15.88 | ø 28.58 |
| P600 | ø 15.88 | ø 28.58 |
| P650 | ø 15.88 | ø 28.58 |
| P700 | ø 19.05 | ø 34.93 |
| P750 | ø 19.05 | ø 34.93 |
| P800 | ø 19.05 | ø 34.93 |

*1 ø 12.7 for over 90m
*2 ø 12.7 for over 40m

### (2) Branch joint / Header

| Type of branch pipe | Total capacity of indoor units | Branch pipe model |
|---|---|---|
| Joint | ~ 140 | CMY-Y102S-G |
| | 141 ~ 400 | CMY-Y102L-G |
| | 401 ~ 650 | CMY-Y202-G |
| | The 1st branch of P450~P650 | |
| | 651 or above | CMY-Y302-G |
| | The 1st branch of P700, 750, 800 | |
| Header | For 4 branches (~200) | CMY-Y104-G |
| | For 8 branches (~400) | CMY-Y108-G |
| | For 10 branches (~650) | CMY-Y1010-G |

### (3) Branch - Branch (Pipe B,C,D)

| Total capacity of indoor units | Liquid pipe | Gas pipe |
|---|---|---|
| ~ 140 | ø 9.52 | ø 15.88 |
| 141 ~ 200 | ø 9.52 | ø 19.05 |
| 201 ~ 300 | ø 9.52 | ø 22.2 |
| 301 ~ 400 | ø 12.7 | ø 28.58 |
| 401 ~ 650 | ø 15.88 | ø 28.58 |
| 651 ~ 800 | ø 19.05 | ø 34.93 |
| 801 ~ | ø 19.05 | ø 41.28 |

* Please choose the pipe thickness according to your country standard referring to above chart.

### (4) Branch - Indoor unit (Pipe a, b, c, d, e, f)

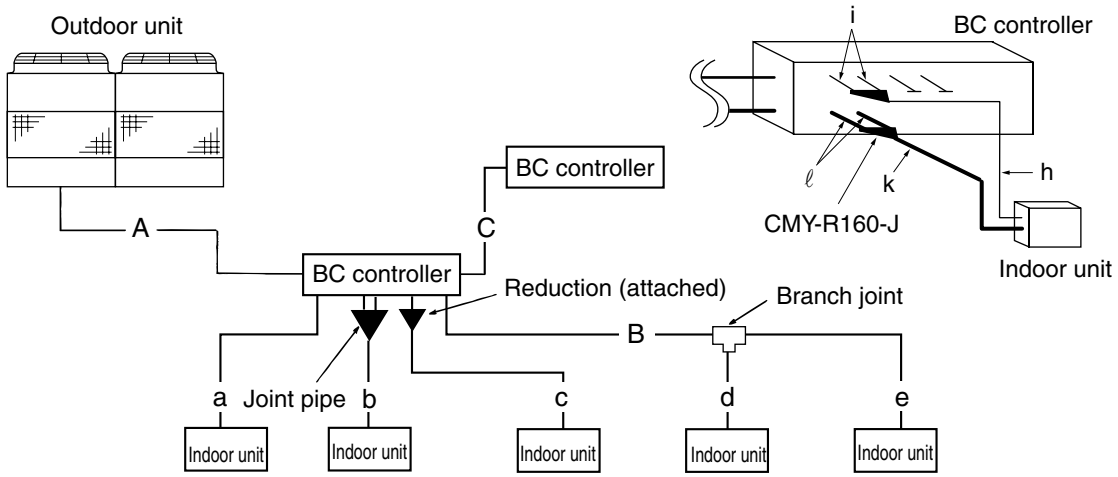
| Indoor unit model | Liquid pipe | Gas pipe |
|---|---|---|
| P20, P25, P32, P40, P50 | ø 6.35 | ø 12.7 |
| P63, P71, P80 P100, P125, P140 | ø9.52 | ø 15.88 |
| P200 | ø 9.52 | ø 19.05 |
| P250 | ø 9.52 | ø 22.2 |

• Indoor unit capacities
The capacity of an indoor unit is the same as the number used for its type identification.
Examples:
PEFY-P63VM → Capacity = 63

### (5) Comp unit - Hex unit (Pipe E)

| Outdoor unit model | Liquid pipe | Gas pipe |
|---|---|---|
| P700 | ø12.7 | ø28.58 |
| P750 | ø12.7 | ø28.58 |
| P800 | ø12.7 | ø28.58 |

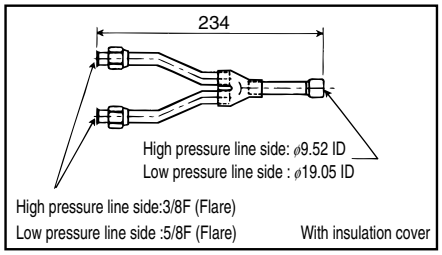
② PURY




### (1) Outdoor unit - BC controller (Pipe A)

| Outdoor unit model | High press. side | Low press. side |
|---|---|---|
| P200 | ø 15.88 | ø 19.05 |
| P250 | ø 19.05 | ø 22.2 |
| P300 | ø 19.05 | ø 22.2 |
| P350 | ø 19.05 | ø 28.58 |
| P400 | ø 22.2 | ø 28.58 |
| P450 | ø 22.2 | ø 28.58 |
| P500 | ø 22.2 | ø 28.58 |
| P550 | ø 28.58 | ø 28.58 |
| P600 | ø 28.58 | ø 28.58 |
| P650 | ø 28.58 | ø 28.58 |

• Joint pipe CMY-R160-J




### (2) Branch joint

| Total capacity of indoor units | Branch joint |
|---|---|
| ~ 140 | CMY-Y102S-G |

### (3) BC controller - Branch (Pipe B)

| Total capacity of indoor units | Liquid pipe | Gas pipe |
|---|---|---|
| ~ 140 | ø 9.52 | ø 15.88 |

### (4) BC controller - BC controller (Pipe C)

| Total capacity of indoor units | High press gas pipe | Low press gas pipe | Liquid pipe |
|---|---|---|---|
| ~ 200 | ø 15.88 | ø 19.05 | ø 9.52 |
| 201 ~ 300 | ø 19.05 | ø 22.2 | ø 12.7 |
| 301 ~ 350 | ø 19.05 | ø 28.58 | ø 12.7 |

### (5) Branch or BC controller - Indoor unit (Pipe a,b,c,d,e,f,g)

| Indoor unit model | Liquid pipe | Gas pipe |
|---|---|---|
| P20, P25<br>P32, P40, P50 | ø 6.35 | ø 12.7 |
| P63, P71, P80<br>P100, P125, P140 | ø 9.52 | ø 15.88 |

| Indoor unit model | Liquid pipe | | Gas pipe | |
|---|---|---|---|---|
| | h | i | k | ℓ |
| P200 | ø 9.52 | ø 9.52 | ø 19.05 | ø 15.88 |
| P250 | ø 9.52 | ø 9.52 | ø 22.2 | ø 15.88 |

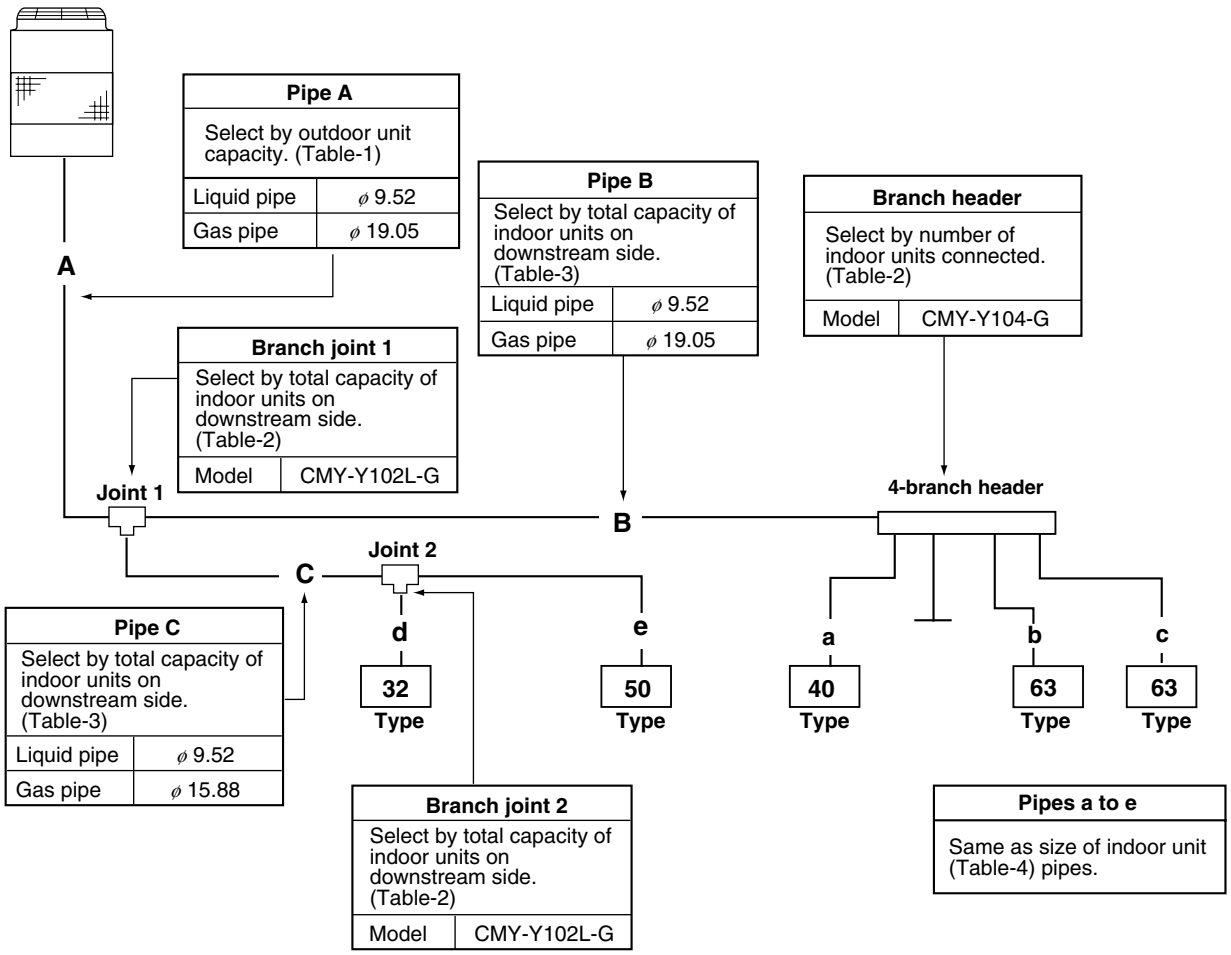
❊ Please choose the pipe thickness according to your country standard referring to above chart.

• Indoor unit capacities
The capacity of an indoor unit is the same as the number used for its type identification.
Examples:PEFY-P63VM ➞ Capacity = 63

# 3. Example of refrigerant piping selection

① Example 1

**Outdoor unit : PUHY-P200**




**(1) Selection of branch pipe kit**

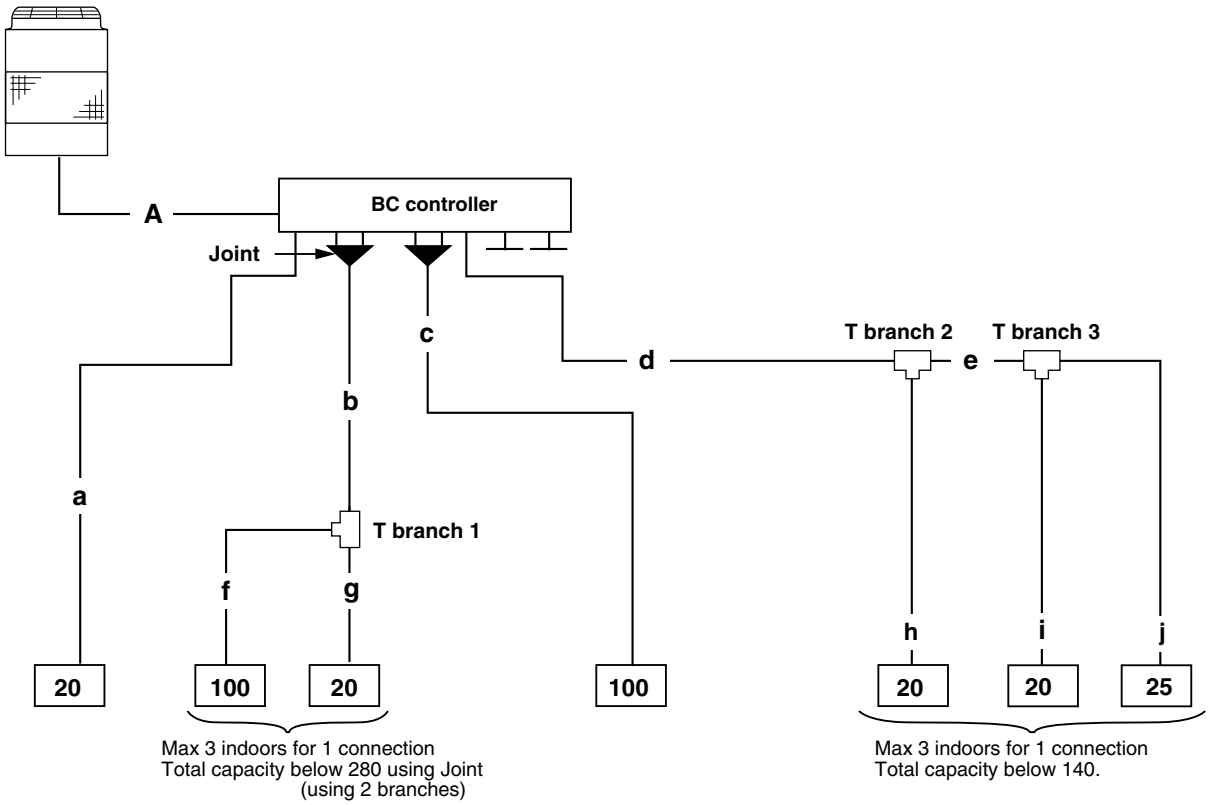
| Branch area | Branch pipe kit selection method | Branch pipe kit model |
|---|---|---|
| Joint 1 | 32 + 40 + 50 + 63 + 63 = 248 (201 or above) | CMY-Y102L-G |
| Joint 2 | 32 + 50 = 82 (200 or below) | CMY-Y102S-G |
| Header | For 4 branches with 8 HP outdoor unit | CMY-Y104-G |

**(2) Selection of pipe size**

| Pipe area | Refrigerant pipe selection method | Liquid pipe size | Gas pipe size |
|---|---|---|---|
| A | Same as size of outdoor unit's refrigerant pipe | ø9.52 | ø19.05 |
| B | 40 + 63 + 63 = 166 (141~ 200) | ø9.52 | ø19.05 |
| C | 32 + 50 = 82 ( ~ 140) | ø9.52 | ø15.88 |
| a | Same as size of indoor unit's refrigerant pipe | ø6.35 | ø12.7 |
| b | 〃 | ø9.52 | ø15.88 |
| c | 〃 | ø9.52 | ø15.88 |
| d | 〃 | ø6.35 | ø12.7 |
| e | 〃 | ø9.52 | ø15.88 |

② Example 2

**Outdoor unit : PURY-P250**




**(1) Selection of branch pipe kit**

| Branch area | Branch pipe kit selection method | Branch pipe kit model |
|---|---|---|
| Joint | – | CMY-R160-J |
| T branch 1 | Capacity Index = 100 + 20 = 120 | CMY-Y102L-G |
| T branch 2 | Capacity Index = 20 + 20 + 25 = 65 | CMY-Y102S-G |
| T branch 3 | Capacity Index = 20 + 25 = 45 | CMY-Y102S-G |

**(2) Selection of pipe size**

| Pipe area | Refrigerant pipe selection method | High pressure | Low pressure |
|---|---|---|---|
| A | Outdoor unit pipe | ø19.05 | ø22.2 |
| a | Capacity Index = 20 | ø6.35 | ø12.7 |
| b | Capacity Index = 120 (100+20) | ø12.7 | ø19.05 |
| c | Capacity Index = 100 | ø9.52 | ø15.88 |
| d | Capacity Index = 65 (20+20+25) | ø9.52 | ø15.88 |
| e | Capacity Index = 45 (20+25) | ø9.52 | ø15.88 |
| f | Capacity Index = 100 | ø9.52 | ø15.88 |
| g | Capacity Index = 20 | ø6.35 | ø12.7 |
| h | Capacity Index = 20 | ø6.35 | ø12.7 |
| i | Capacity Index = 20 | ø6.35 | ø12.7 |
| j | Capacity Index = 25 | ø6.35 | ø12.7 |

# 4. Calculation of additional refrigerant charge

① PUHY, PUY

### (1) Refrigerant charge

The following amount of refrigerant is being charged into the outdoor unit at factory shipment. As the amount does not include that for extended piping, charge it additionally in the filed.

• PUHY

| Outdoor unit | P200 | P250 | P300 | P350 | P400 | P450 | P500 | P550 |
|---|---|---|---|---|---|---|---|---|
| Refrigerant charge | 7.0kg | 9.5kg | 9.5kg | 9.5kg | 13.0kg | 22.0kg | 22.0kg | 22.0kg |

| Outdoor unit | P600 | P650 | P700 | P750 | P800 |
|---|---|---|---|---|---|
| Refrigerant charge | 22.0kg | 22.0kg | 27.0kg | 27.0kg | 27.0kg |

• PUY

| Outdoor unit | P200 | P250 | P300 | P350 |
|---|---|---|---|---|
| Refrigerant charge | 7.0kg | 9.5kg | 9.5kg | 9.5kg |

### (2) Formula to obtain an amount of additional refrigerant charge

The additional amount of refrigerant to be added is calculated from the size of the extended liquid pipes and their length (in meters).

Additional amount (kg) = $(0.29 \times L_1) + (0.2 \times L_2) + (0.12 \times L_3) + (0.06 \times L_4) + (0.024 \times L_5) + A$

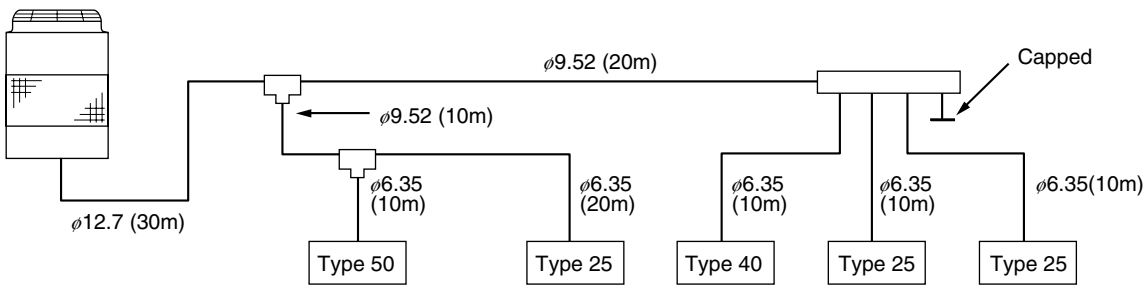
Where
$L_1$ : Length of ø19.05 liquid pipe (m)
$L_2$ : Length of ø15.88 liquid pipe (m)
$L_3$ : Length of ø12.7 liquid pipe (m)
$L_4$ : Length of ø9.52 liquid pipe (m)
$L_5$ : Length of ø6.35 liquid pipe (m)

A: Additional refrigerant charge by total capacity of indoor units connected.

| Total capacity of indoor units connected | Additional refrigerant charge (A) |
|---|---|
| ~ 160 | 1.5 |
| 161 ~ 330 | 2.0 |
| 331 ~ 480 | 2.5 |
| 481 ~ 630 | 3.0 |
| 631 ~ 710 | 4.0 |
| 711 ~ 890 | 5.0 |
| 891 ~ 1070 | 6.0 |

※1 : Any fractions below 0.01kg in the result of the calculation should be round up.
(Examples : 10.52 → 10.6kg)

**Example: PUHY-P350**




This calculation concerns only the liquid pipes.

ø12.7 : 30m
ø9.52 : 10m + 20m = 30m
ø6.35 : 20m + 10m + 10m + 10m + 10m = 60m

Total capacity of indoor units connected:
40 + 25 + 40 + 25 + 25 = 155

Calculation of additional amount :

Additional amount (kg) = $(0.12 \times 30) + (0.06 \times 30) + (0.024 \times 60) + 1.5 = 8.34$ kg

The result of 8.34 kg is rounded up to one decimal place (0.1kg). Therefore,

Additional amount = 8.3 kg

② PURY

### (1) Refrigerant charge

The following amount of refrigerant is being charged into the outdoor unit at factory shipment. As the amount does not include that for extended piping, charge it additionally in the filed.

| Outdoor unit | P200 | P250 | P300 | P350 | P400 | P450 | P500 | P550 |
|---|---|---|---|---|---|---|---|---|
| Refrigerant charge | 10.5kg | 13.0kg | 13.0kg | 13.0kg | 13.0kg | 16.5kg | 22.0kg | 22.0kg |

| Outdoor unit | P600 | P650 |
|---|---|---|
| Refrigerant charge | 22.0kg | 22.0kg |

### (2) Formula to obtain an amount of additional refrigerant charge

The calculation of additional refrigerant charge is based on the size and length of extended high pressure side piping.

$$\text{Additional amount (kg)} = (0.36 \times L_0) + (0.23 \times L_1) + (0.16 \times L_2) + (0.11 \times L_3) + (0.012 \times L_4) + (0.06 \times L_5) + (0.024 \times L_6) + A + B$$

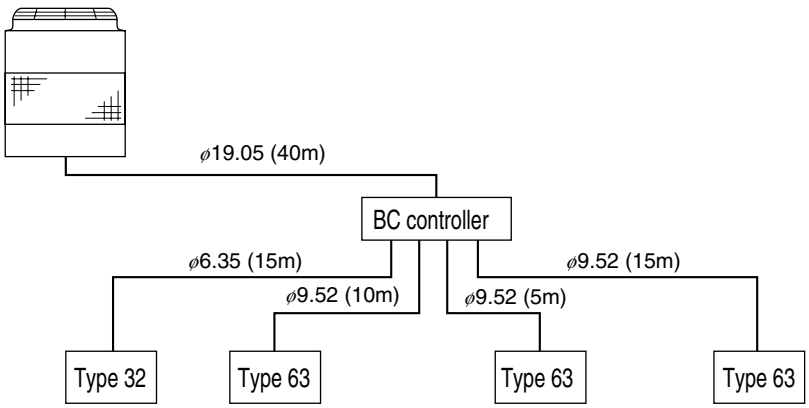
Where
- $L_0$ : Length of high pressure pipe ø28.58 (m)
- $L_1$ : Length of high pressure pipe ø22.2 (m)
- $L_2$ : Length of high pressure pipe ø19.05 (m)
- $L_3$ : Length of high pressure pipe ø15.88 (m)
- $L_4$ : Length of liquid pipe ø12.7 (m)
- $L_5$ : Length of liquid pipe ø9.52 (m)
- $L_6$ : Length of liquid pipe ø6.35 (m)

A: Additional refrigerant charge by total capacity of indoor units connected.
B: Additional refrigerant charge for BC controller. (Slave)

| Total capacity of indoor units connected | Additional refrigerant charge (A) | |
|---|---|---|
| | A | B |
| ~ 160 | 1.5 | One unit ··· 1.0<br>Two units ··· 2.0 |
| 161 ~ 330 | 2.0 | |
| 331 ~ 480 | 2.5 | |
| 481 ~ 630 | 3.0 | |
| 631 ~ 710 | 4.0 | |
| 711 ~ 890 | 5.0 | |
| 891 ~ | 6.0 | |

Note: Raise a fraction of the calculation result less than 0.01kg to a unit. (Examples : 10.52 → 10.6kg)

**Example: PURY-P350**




This calculation concerns only the liquid (high press) pipes.

ø19.05 : 40m
ø9.52 : 10m + 15m = 25m
ø6.35 : 15m

Total capacity of indoor units connected:
32 + 63 + 63 + 63 = 221

Calculation of additional amount :

Additional amount (kg) = (0.16 × 40) + (0.06 × 30) + (0.024 × 15) + 2 = 10.56 kg

The result of 10.56 kg is rounded up to one decimal place (0.1kg). Therefore,

Additional amount = 10.6 kg

# CITY MULTI DATA BOOK R410A Series

2004

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: MITSUBISHI DENKI BLDG., 2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

Issued in Apr. 2004 MEE03K221
Printed in Japan

New publication effective Apr. 2004.
Specifications subject to change without notice.