

# LG

## MULTI/SINGLE

Indoor unit

R32 Heat Pump (50 / 60Hz)

0CTI5-08B (Replaces 0CTI5-08A)

# TOTAL HVAC SOLUTION PROVIDER

## ENGINEERING PRODUCT DATA BOOK

# MULTI/SINGLE

Indoor unit

**General information**

**Product data**



# MULTI/SINGLE

Indoor unit

## General information

1. Model Line Up
2. External Appearance
3. Nomenclature

# 1. Model Line Up

Category		Chassis Name	Capacity Index [kW (kBtu/h)]											
			1.5 (5)	2.1 (7)	2.5 (9)	3.5 (12)	4.2 (15)	5.0 (18)	7.1 (24)	7.5 (30)	10.0 (36)	12.0 (42)	14.0 (48)	15.0 (60)
Wall Mounted Unit (1)	Deluxe	SJ		○	○	○								
		SK						○	○					
	Standard plus	SJ	○	○	○	○	○							
		SK						○	○					
	Standard	SJ		○	○	○								
		SK						○	○					
Wall Mounted Unit (2)	Deluxe	SJ			○*	○*								
		SK						○*	○*					
	Standard plus	SJ			○*	○*								
		SK						○*	○*					
	Standard	SJ			○*	○*								
		SK						○*						
Wall Mounted Unit (3)	Standard plus (S)	SJ	○	○	○	○	○							
SK							○	○						
Wall Mounted Unit (4)		SR								◎	◎			
ART COOL Mirror	AM**BP NS*	SJ		○	○	○								
		SK						○	○					
	AC**BQ NS*	SJ			○*	○*								
		SK						○*	○*					
ART COOL Gallery		SF			○	○								
ART COOL Silver		SJ			○*	○*								
		SK						○*						
Ceiling Mounted Cassette	1-way	TU			○	○								
	4-Way	TR	○	○	●	●								
		TQ						●						
	Dual Vane 4-Way	TP-B							●	◎				
		TM-A									◎	◎	◎	◎
Ceiling Concealed Duct	Middle Static Pressure	M1						●	●	◎				
		M2									◎	◎		
		M3											◎	◎
	Low Static Pressure (Slim)	L5			●	●								
		L6						●						
		L3							●					
Ceiling Suspended Unit		VM1						◎	◎	◎				
		VM2									◎	◎	◎	◎
Console		QA			◎	◎		◎						

## Note

- Refer the Combination Table of Product Data Book for Outdoor Units.
  - ◎ : Connectable with SINGLE model only.
  - : Connectable with MULTI model only(R32/R410A common use).
  - : Connectable with SINGLE or MULTI model(R32/R410A common use for MULTI model only.).
  - \* : Residential Single Split compatible.
- This product contains Fluorinated greenhouse gases.

## 2. External Appearance

<p>• <b>Wall Mounted Unit (1)</b></p> <p>AMNW07GSJL0 [DM07RP NSJ]          ASNW09GJ1Z0 [DM09RP NSJ]          ASNW12GJ1Z0 [DM12RP NSJ]          ASNW18GK1Z0 [DM18RP NSK]          ASNW24GK1Z0 [DM24RP NSK]</p> <p>AMNW05GSJB0 [PM05SP NSJ]          AMNW07GSJB0 [PM07SP NSJ]          ESNW09GJ2F0 [PM09SP NSJ]          ESNW12GJ2F0 [PM12SP NSJ]          AMNW15GSJB0 [PM15SP NSJ]          ESNW18GK2F0 [PM18SP NSK]          ESNW24GK2F0 [PM24SP NSK]</p> <p>AMNW07GSJA0 [PM07EP NSJ]          ESNW09GJ3A0 [PM09EP NSJ]          ESNW12GJ3A0 [PM12EP NSJ]          ESNW18GK3A0 [PM18EP NSK]          AMNW24GSKA0 [PM24EP NSK]</p> 	<p>• <b>Wall Mounted Unit (2)</b></p> <p>S3NM09JL1ZA [DC09RQ NSJ]          S3NM12JL1ZA [DC12RQ NSJ]          S3NM18KL1ZA [DC18RQ NSK]          S3NM24K21ZA [DC24RQ NSK]</p> <p>S3NM09JA2FA [PC09SQ NSJ]          S3NM12JA2FA [PC12SQ NSJ]          S3NM18KL2FA [PC18SQ NSK]          S3NM24K22FA [PC24SQ NSK]</p> <p>S3NM09JA3BA [SC09EQ NSJ]          S3NM12JA3BA [SC12EQ NSJ]          S3NM18KL3BA [SC18EQ NSK]</p> 
<p>• <b>ARTCOOL Gallery</b></p> <p>ZMNW09GAF10 [MA09R NF1]          ZMNW12GAF10 [MA12R NF1]</p> 	<p>• <b>Wall Mounted Unit (3)</b></p> <p>ZMNW05GSJC0 [MJ05PC NSJ]          ZMNW07GSJC0 [MJ07PC NSJ]          ZMNW09GSJC0 [MJ09PC NSJ]          ZMNW12GSJC0 [MJ12PC NSJ]          ZMNW15GSJC0 [MJ15PC NSJ]          ZMNW18GSKC0 [MJ18PC NSK]          ZMNW24GSKC0 [MJ24PC NSK]</p> 
<p>• <b>ARTCOOL Mirror</b></p> <p>AMNW07GSJR0 [AM07BP NSJ]          USNW09GJRZ0 [AM09BP NSJ]          USNW12GJRZ0 [AM12BP NSJ]          USNW18GKRZ0 [AM18BP NSK]          AMNW24GSKR0 [AM24BP NSK]          S3NM09JARZA [AC09BQ NSJ]          S3NM12JARZA [AC12BQ NSJ]          S3NM18KLRA [AC18BQ NSK]          S3NM24K2RZA [AC24BQ NSK]</p> 	<p>• <b>Wall Mounted Unit (4)</b></p> <p>ZJNW30GRLA1 [US30F NR0]          ZJNW36GRLA1 [US36F NR0]</p> 
<p>• <b>ARTCOOL Silver</b></p> <p>S3NM09JASZA [AC09SQ NSJ]          S3NM12JASZA [AC12SQ NSJ]          S3NM18KLSZA [AC18SQ NSK]</p> 	<p>• <b>ARTCOOL Silver</b></p> <p>S3NM09JASZA [AC09SQ NSJ]          S3NM12JASZA [AC12SQ NSJ]          S3NM18KLSZA [AC18SQ NSK]</p> 
<p>• <b>Ceiling Suspended Unit</b></p> <p>ZVNW18GM1A1 [UV18F N10]          ZVNW24GM1A1 [UV24F N10]          ZVNW30GM1A1 [UV30F N10]          ZVNW36GM2A1 [UV36F N20]          ZVNW42GM2A1 [UV42F N20]          ZVNW48GM2A1 [UV48F N20]          ZVNW60GM2A1 [UV60F N20]</p> 	<p>• <b>Ceiling Mounted Cassette 4-way</b></p> <p>ZMNW05GTRA0 [MT06R NR0]          ZMNW07GTRA0 [MT08R NR0]          ZTNW09GRLA1 [CT09F NR0]          ZTNW12GRLA1 [CT12F NR0]          ZTNW18GQLA1 [CT18F NQ0]</p> 
<p>• <b>Ceiling Mounted Cassette 1-way</b></p> <p>ZMNW09GTUA0 [MT09R NU1]          ZMNW12GTUA0 [MT11R NU1]</p> 	<p>• <b>Ceiling Mounted Cassette (Dual Vane 4-Way)</b></p> <p>ZTNW24GBLA1 [CT24F NB0]          ZTNW30GBLA1 [UT30F NB0]          ZTNW36GALA1 [UT36F NA0]          ZTNW42GALA1 [UT42F NA0]          ZTNW48GALA1 [UT48F NA0]          ZTNW60GALA1 [UT60F NA0]</p> 
<p>• <b>Ceiling Concealed Duct – Middle static pressure</b></p> <p>ZBNW18GM1A1 [CM18F N10]          ZBNW24GM1A1 [CM24F N10]          ZBNW30GM1A1 [UM30F N10]          ZBNW36GM2A1 [UM36F N20]          ZBNW42GM2A1 [UM42F N20]          ZBNW48GM3A1 [UM48F N30]          ZBNW60GM3A1 [UM60F N30]</p> 	<p>• <b>Ceiling Concealed Duct – Low static pressure</b></p> <p>ZBNW09GL5A1 [CL09F N50]          ZBNW12GL5A1 [CL12F N50]          ZBNW18GL6A1 [CL18F N60]          ZBNW24GL3A1 [CL24F N30]</p> 
<p>• <b>Console</b></p> <p>ZQNW09GALA1 [UQ09F NA0]          ZQNW12GALA1 [UQ12F NA0]          ZQNW18GALA1 [UQ18F NA0]</p> 	

## 3. Nomenclature

### 3.1 Factory Model Name

#### ■ Basic (Except for the exception case below)

Model Name	ZTN	W	18	G	Q	L	A	1
No.	1	2	3	4	5	6	7	8

No.	Signification
1	<b>Z*N : Indoor units using R32</b> * Indicates Product type M : Only for Multi systems T : Ceiling Mounted Cassette B : Ceiling Concealed Duct V : Ceiling Suspended Unit  <b>A*N, E*N, U*N : Indoor units using R410A and R32 Commonly</b> * Indicates Product type M : Only for Multi systems J, S : Wall Mounted unit / ARTCOOL Mirror
2	<b>Model type</b> W/H : DC Inverter Heat pump
3	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	<b>Electrical rating</b> G: 1Ø, 220-240V, 50 Hz / 1Ø, 220V, 60 Hz
5	<b>Indoor unit type for ASN-, ESN-, USN-, Z*N- series models</b> Chassis name  <b>Indoor unit type for AMN-, Z*N- series models</b> S : Wall Mounted Unit / ART COOL Mirror T : Ceiling Mounted Cassette A : ART COOL
6	<b>Indoor unit type for ASN-, ESN-, USN-, ZTN- series models</b> L : Basic 1 : Deluxe type 2 : Standard plus type 3 : Standard type R : ARTCOOL Mirror type  <b>Indoor unit type for AMN-, Z*N- series models</b> Chassis name
7	<b>Product type (Z*N- series)</b> A : Basic, C : Standard plus (S)  <b>Functions for Wall Mounted Unit (AMN-, ASN-, ESN- series)</b> L/Z : Ionizer + 4 Way Air flow + Wi-Fi B/F : Non-Ionizer + 4 Way Air flow + Wi-Fi  <b>Functions for ART COOL Mirror (USN- series)</b> Z : Ionizer + 4 Way  <b>Panel Color for ART COOL Mirror(AMN- series)</b> R : Mirror  <b>Panel Color for ART COOL</b> 1 : Gallery
8	<b>Serial number</b>

### 3. Nomenclature

#### ■ Wall Mounted Unit (2)

Model Name	S	3	N	M	09	J	L	1	Z	A
No.	1	2	3	4	5	6	7	8	9	10

No.	Signification
1	<b>Product Type</b> S : Split
2	<b>Refrigerant</b> 3 : R32 4 : R410A
3	<b>Supply Type</b> N : Indoor Unit U : Outdoor Unit
4	<b>Model Type</b> M : Common Indoor unit for Multi and Residential system
5	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
6	<b>Indoor unit Chassis name</b> J : SJ K : SK
7	<b>Outdoor unit Chassis name for Residential system</b> L : UL2 2 : U24A 4 : U4
8	<b>Look &amp; Color (SJ, SK Chassis)</b> R : ART COOL (Mirror Black) 1 : R Look (White Panel : Transparent) 2 : Semi-R Look (White Panel : Silver Deco) 3 : E Look (White Pane)
9	<b>Function</b> B : Non-Ionizer + 4way F : Non-Ionizer + 4way + Wi-Fi Z : Ionizer + 4way + Wi-Fi
10	<b>Standard Model No.</b>

### 3. Nomenclature

#### 3.2 Buyer Model Name

##### ■ Basic (Except for the exception case below)

Model Name	C	T	18	F	N	Q	0
No.	1	2	3	4	5	6	7

No.	Signification
1	<b>Connectable Outdoor unit type</b> M : Indoor units only for Multi systems U : Indoor units only for Single CAC systems C : Common Indoor Unit for Multi and Single CAC
2	<b>Product type</b> T : Ceiling Mounted Cassette M, B, L: Ceiling Concealed Duct V : Ceiling Suspended Unit A : ART COOL J : Wall Mounted Unit Q : Console
3	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	<b>Detailed product type</b> R : Indoor Units using R32 F : Free Combination
5	<b>Indoor Unit / Outdoor Units</b> N : Indoor Unit U : Outdoor Unit
6	<b>Chassis name</b>
7	<b>Serial number</b>

### 3. Nomenclature

#### ■ Wall Mounted Unit / ARTCOOL Mirror / ARTCOOL Silver

Model Name	P	M	07	E	P	N	SJ
No.	1	2	3	4	5	6	7

No.	Signification
1	<b>Product type</b> D : Deluxe P : Standard or Standard plus A : ARTCOOL Mirror
2	<b>Connectable Outdoor unit type</b> M, C : Common Indoor unit for Multi and Residential system
3	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	<b>Product Look</b> R : R-Look E : E-Look S : Semi R-Look B : Mirror-Look
5	<b>Serial</b>
6	<b>Indoor Unit / Outdoor Units</b> N : Indoor Unit U : Outdoor Unit
7	<b>Chassis name</b>

### 3. Nomenclature

#### ■ Wall Mounted Unit (2)

Model Name	D	C	09	R	Q	N	SJ
No.	1	2	3	4	5	6	7

No.	Signification
1	<b>Product type</b> D : Deluxe P : Standard plus S : Standard A : ARTCOOL Mirror
2	<b>Connectable Outdoor unit type</b> C : Multi Compatible
3	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	<b>Product Look</b> R : R-Look S : Semi R-Look E : E-Look B : Black Mirror-Look
5	<b>Serial</b>
6	<b>Indoor Unit / Outdoor Units</b> N : Indoor Unit U : Outdoor Unit
7	<b>Chassis name</b>



### 3. Nomenclature

#### ■ Wall Mounted Unit (3)

Model Name	M	J	05	PC	N	SJ
No.	1	2	3	4	5	6

No.	Signification
1	<b>Connectable Outdoor unit type</b> M : Indoor units only for Multi systems
2	<b>Product type</b> J : Wall Mounted Unit
3	<b>Nominal Capacity</b> Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	<b>Detailed product type</b> PC : Standard plus (S)
5	<b>Indoor Unit / Outdoor Units</b> N : Indoor Unit U : Outdoor Unit
6	<b>Chassis name</b>

# **MULTI/SINGLE**

Indoor unit

## **Product data**

**Wall Mounted Unit (1)**

**Wall Mounted Unit (2)**

**Wall Mounted Unit (3)**

**Wall Mounted Unit (4)**

**ARTCOOL Mirror**

**ARTCOOL**

**ARTCOOL Silver**

**Ceiling Mounted cassette 1-way**

**Ceiling Mounted cassette 4-way**

**Ceiling Mounted cassette (Dual Vane 4-Way)**

**Ceiling concealed duct - Middle static pressure**

**Ceiling concealed duct - Low static pressure**

**Ceiling Suspended Unit**

**Console**

# **MULTI/SINGLE**

Indoor unit

## **Wall Mounted Unit (1)**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ■ Deluxe

### ◆ List of function

Category	Functions	AMNW07GSJL0 [DM07RP NSJ], ASNW09GJ1Z0 [DM09RP NSJ] ASNW12GJ1Z0 [DM12RP NSJ], ASNW18GK1Z0 [DM18RP NSK] ASNW24GK1Z0 [DM24RP NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	AMNW07GSJL0 [DM07RP NSJ] ASNW09GJ1Z0 [DM09RP NSJ] ASNW12GJ1Z0 [DM12RP NSJ] ASNW18GK1Z0 [DM18RP NSK] ASNW24GK1Z0 [DM24RP NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

# 1. List of functions

## ■ Standard plus

### ◆ List of function

Category	Functions	AMNW05GSJB0 [PM05SP NSJ], AMNW07GSJB0 [PM07SP NSJ] ESNW09GJ2F0 [PM09SP NSJ], ESNW12GJ2F0 [PM12SP NSJ] AMNW15GSJB0 [PM15SP NSJ], ESNW18GK2F0 [PM18SP NSK] ESNW24GK2F0 [PM24SP NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	AMNW05GSJB0 [PM05SP NSJ] AMNW07GSJB0 [PM07SP NSJ] ESNW09GJ2F0 [PM09SP NSJ] ESNW12GJ2F0 [PM12SP NSJ] AMNW15GSJB0 [PM15SP NSJ] ESNW18GK2F0 [PM18SP NSK] ESNW24GK2F0 [PM24SP NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
		PDRYCB400	2 Points Dry Contact (For Setback)	O
	Communication type	PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X
<b>Note</b> 1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product. 2. * : Some advanced functions controlled by individual controller cannot be operated. 3. ** : It could not be operated some functions. 4. *** : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal. 5. If you need more detail, please refer to the <b>BECON</b> PDB or the manual of product. ( <a href="http://partner.lge.com/global">http://partner.lge.com/global</a> : Home> Doc.Library> Product > Control(BECON))				

# 1. List of functions

## ■ Standard

### ◆ List of function

Category	Functions	AMNW07GSJA0 [PM07EP NSJ] ESNW09GJ3A0 [PM09EP NSJ] ESNW12GJ3A0 [PM12EP NSJ] ESNW18GK3A0 [PM18EP NSK] AMNW24GSKA0 [PM24EP NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (Manual)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	X
	Two thermistor control*	X
Special Functions	Auto Elevation Grille	X
	Wi-Fi	X
Humidity Control		X
Wireless Remote Controller		O**
Wired Remote Controller		X
Network Solution(LGAP)		X

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.



# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	AMNW07GSJA0 [PM07EP NSJ] ESNW09GJ3A0 [PM09EP NSJ] ESNW12GJ3A0 [PM12EP NSJ] ESNW18GK3A0 [PM18EP NSK] AMNW24GSKA0[PM24EP NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	X
		PQRCHCA0Q(W)	for Hotel	X
	Standard	PREMTB001	Standard II (White)	X
		PREMTBB01	Standard II (Black)	X
		PREMTB100**	Standard III (White)	X
		PREMTBB10**	Standard III (Black)	X
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	X
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	X
		PDRYCB300	For 3rd Party Thermostat	X
		PDRYCB500	For Modbus	X
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	X
	Wi-Fi Controller*	PWFMDD200	-	X
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

### ■ Deluxe

Model Name				AMNW07GSJL0 [DM07RP NSJ]	ASNW09GJ1Z0 [DM09RP NSJ]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling		kW	2.1	2.5
	Heating		kW	2.3	3.2
Power Input	Min./Nom./Max.		W	9 / 17 / 30	9 / 18 / 30
Running Current	Min./Nom./Max.		A	0.12 / 0.15 / 0.20	0.12 / 0.16 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	892 x 381 x 249	892 x 381 x 249
		W x H x D	inch	35-1/8 x 15 x 9-13/16	35-1/8 x 15 x 9-13/16
Weight	Body		kg (lbs)	8.3 (18.3)	8.3 (18.3)
	Shipping		kg (lbs)	11.6 (25.6)	11.6 (25.6)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 23 x 22) x 1	(2 x 23 x 22) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.20 (2.15)	0.20 (2.15)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	7.5 / 6.1 / 4.9	7.7 / 6.4 / 5.0
		H / M / L	ft <sup>3</sup> /min	265 / 215 / 173	272 / 226 / 177
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		H / M / L	dB(A)	35 / 31 / 26	36 / 32 / 27
Sound Power Level		Rated	dB(A)	56	56
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ASNW12GJ1Z0 [DM12RP NSJ]	ASNW18GK1Z0 [DM18RP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		3.5	5.0
	Heating	kW		4.0	5.8
Power Input	Min./Nom./Max.	W		9 / 19 / 30	26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.12 / 0.17 / 0.20	0.22 / 0.28 / 0.40
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 x 308 x 189	998 x 345 x 210
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	892 x 381 x 249	1,063 x 420 x 274
		W x H x D	inch	35-1/8 x 15 x 9-13/16	41-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)		8.3 (18.3)	12.0 (26.5)
	Shipping	kg (lbs)		11.6 (25.6)	15.8 (34.8)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 23 x 22) x 1	(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.20 (2.15)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	8.1 / 6.7 / 5.3	14.2 / 11.3 / 9.9
		H / M / L	ft <sup>3</sup> /min	286 / 237 / 187	501 / 399 / 350
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	60 x 1
Sound Pressure Level	H / M / L	dB(A)		38 / 34 / 29	44 / 38 / 34
Sound Power Level	Rated	dB(A)		56	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ASNW24GK1Z0 [DM24RP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,063 x 420 x 274
		W x H x D	inch	14-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)		12.0 (26.5)
	Shipping	kg (lbs)		15.9 (35.1)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	15.2 / 12.7 / 10.2
		H / M / L	ft <sup>3</sup> /min	537 / 448 / 360
Fan Motor	Type		-	BLDC
	Output		W x No.	60 x 1
Sound Pressure Level		H / M / L	dB(A)	47 / 41 / 36
Sound Power Level		Rated	dB(A)	64
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Protector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

### ■ Standard plus

Model Name				AMNW05GSJB0 [PM05SP NSJ]	AMNW07GSJB0 [PM07SP NSJ]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling		kW	1.5	2.1
	Heating		kW	1.6	2.3
Power Input	Min./Nom./Max.		W	11 / 16 / 30	11 / 17 / 30
Running Current	Min./Nom./Max.		A	0.10 / 0.13 / 0.20	0.10 / 0.14 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	909 x 383 x 256	909 x 383 x 256
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	35-25/32 x 15-3/32 x 10-3/32
Weight	Body		kg (lbs)	8.7 (19.2)	8.7 (19.2)
	Shipping		kg (lbs)	12.0 (26.5)	12.0 (26.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 15 x 21) x 1	(2 x 15 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)	0.19 (2.05)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	8.3 / 6.7 / 5.6	8.6 / 7.2 / 5.6
		H / M / L	ft <sup>3</sup> /min	293 / 237 / 198	304 / 254 / 198
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		H / M / L	dB(A)	34 / 31 / 27	35 / 32 / 27
Sound Power Level		Rated	dB(A)	57	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ESNW09GJ2F0 [PM09SP NSJ]	ESNW12GJ2F0 [PM12SP NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		2.5	3.5
	Heating	kW		3.2	3.8
Power Input	Min./Nom./Max.	W		11 / 18 / 30	11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20	0.10 / 0.17 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 x 308 x 189	837 x 308 x 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	909 x 383 x 256	909 x 383 x 256
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	35-25/32 x 15-3/32 x 10-3/32
Weight	Body	kg (lbs)		8.7 (19.2)	8.7 (19.2)
	Shipping	kg (lbs)		12.0 (26.5)	12.0 (26.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 15 x 21) x 1	(2 x 15 x 21) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.19 (2.05)	0.19 (2.05)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	9.2 / 7.4 / 5.6	9.6 / 8.1 / 5.6
		H / M / L	ft <sup>3</sup> /min	325 / 261 / 198	339 / 286 / 198
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	30 x 1
Sound Pressure Level	H / M / L	dB(A)		36 / 33 / 27	40 / 35 / 27
Sound Power Level	Rated	dB(A)		57	57
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				AMNW15GSJB0 [PM15SP NSJ]	ESNW18GK2F0 [PM18SP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		4.2	5.0
	Heating	kW		5.4	5.8
Power Input	Min./Nom./Max.	W		12 / 21 / 30	26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.12 / 0.18 / 0.20	0.22 / 0.28 / 0.40
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 x 308 x 189	998 x 345 x 210
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	909 x 383 x 256	1,080 x 422 x 281
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		8.7 (19.2)	12.0 (26.5)
	Shipping	kg (lbs)		12.0 (26.5)	15.8 (34.8)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 15 x 21) x 1	(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.19 (2.05)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	10.0 / 8.5 / 6.1	14.2 / 11.3 / 9.9
		H / M / L	ft <sup>3</sup> /min	353 / 300 / 215	501 / 399 / 350
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	60 x 1
Sound Pressure Level	H / M / L	dB(A)		41 / 36 / 29	44 / 38 / 35
Sound Power Level	Rated	dB(A)		57	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ESNW24GK2F0 [PM24SP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,080 x 422 x 281
		W x H x D	inch	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		12.8 (28.2)
	Shipping	kg (lbs)		16.2 (35.7)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	15.2 / 12.7 / 10.2
		H / M / L	ft <sup>3</sup> /min	537 / 449 / 360
Fan Motor	Type		-	BLDC
	Output		W x No.	60 x 1
Sound Pressure Level		H / M / L	dB(A)	46 / 41 / 36
Sound Power Level		Rated	dB(A)	65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices				Fuse
				Thermal Protector for Fan Motor
Connections Method				Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.



## 2. Specifications

### ■ Standard

Model Name				AMNW07GSJA0 [PM07EP NSJ]	ESNW09GJ3A0 [PM09EP NSJ]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling		kW	2.1	2.5
	Heating		kW	2.3	3.2
Power Input	Min./Nom./Max.		W x No.	11 / 17 / 30	11 / 18 / 30
Running Current	Min./Nom./Max.		A	0.10 / 0.14 / 0.20	0.10 / 0.16 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	909 x 383 x 256	909 x 383 x 256
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	35-25/32 x 15-3/32 x10-3/32
Weight	Body		kg (lbs)	8.5 (18.7)	8.5 (18.7)
	Shipping		kg (lbs)	11.0 (24.3)	11.0 (24.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 15 x 21) x 1	(2 x 15 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)	0.19 (2.05)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	8.6 / 7.2 / 5.6	9.2 / 7.4 / 5.6
		H / M / L	ft <sup>3</sup> /min	304 / 254 / 198	325 / 261 / 198
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		H / M / L	dB(A)	35 / 32 / 27	36 / 33 / 27
Sound Power Level		Rated	dB(A)	57	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Connections Method
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ESNW12GJ3A0 [PM12EP NSJ]	ESNW18GK3A0 [PM18EP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		3.5	5.0
	Heating	kW		3.8	5.8
Power Input	Min./Nom./Max.	W x No.		11 / 19 / 30	26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.10 / 0.17 / 0.20	0.22 / 0.28 / 0.40
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 x 308 x 189	998 x 345 x 210
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	909 x 383 x 256	1,080 x 422 x 281
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		8.5 (18.7)	11.6 (25.6)
	Shipping	kg (lbs)		11.0 (24.3)	14.6 (32.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 15 x 21) x 1	(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.19 (2.05)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	9.6 / 8.1 / 5.6	14.2 / 11.3 / 9.9
		H / M / L	ft <sup>3</sup> /min	339 / 286 / 198	501 / 399 / 350
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	60 x 1
Sound Pressure Level	H / M / L	dB(A)		40 / 35 / 27	44 / 38 / 35
Sound Power Level	Rated	dB(A)		57	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 12.7(1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				AMNW24GSKA0 [PM24EP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W x No.		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Casing Color		-		White
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,080 x 422 x 281
		W x H x D	inch	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		12.5 (27.6)
	Shipping	kg (lbs)		15.8 (34.8)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 16 x 20) x 1 + (1 x 8 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	15.2 / 12.7 / 10.2
		H / M / L	ft <sup>3</sup> /min	537 / 448 / 360
Fan Motor	Type	-		BLDC
	Output	W x No.		60 x 1
Sound Pressure Level	H / M / L	dB(A)		46 / 41 / 36
Sound Power Level	Rated	dB(A)		65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7(1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)

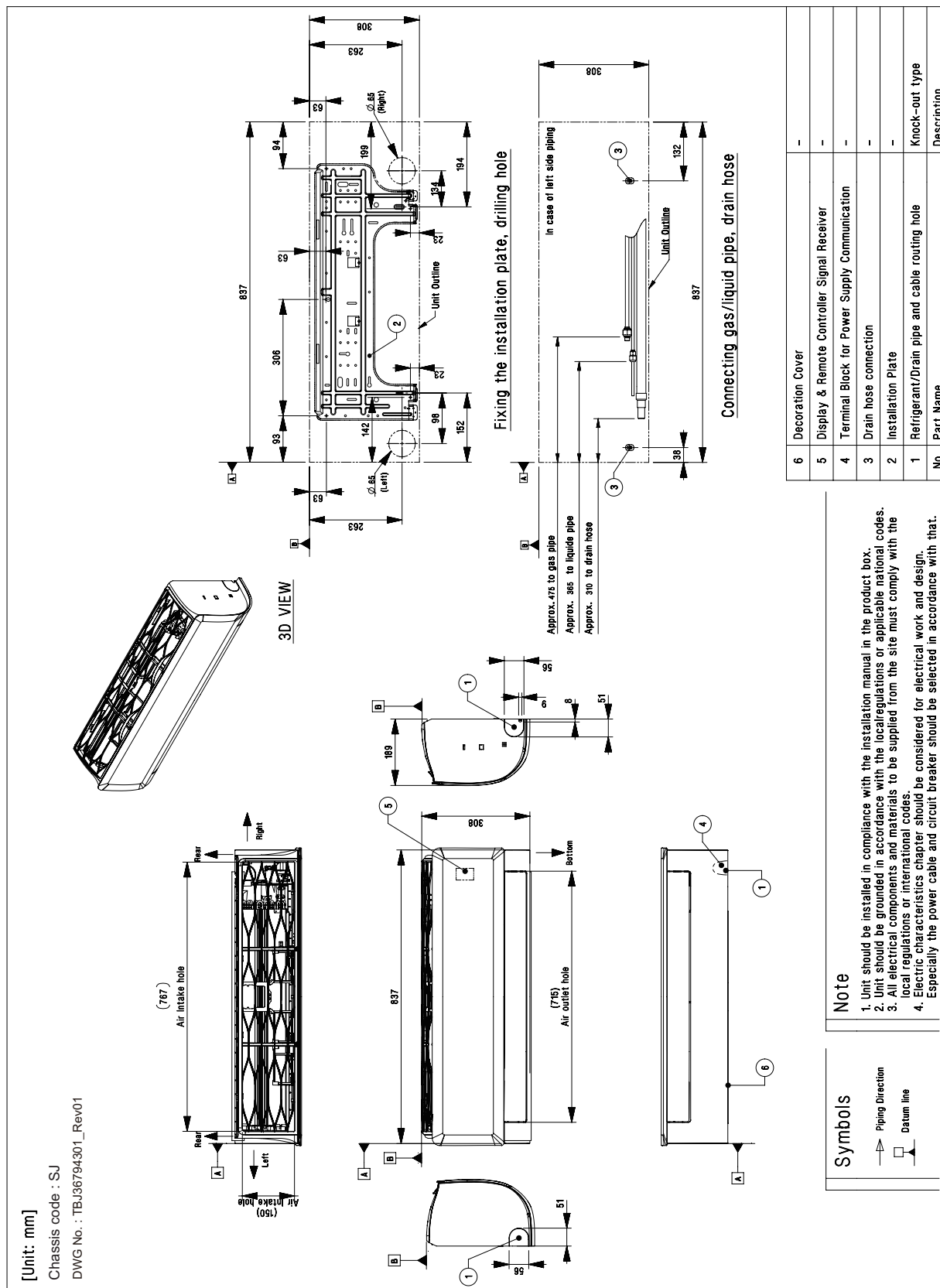
### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 3. Dimensions

### ■ Deluxe (SJ Chassis)

- ◆ AMNW07GSJL0 [DM07RP NSJ], ASNW09GJ1Z0 [DM09RP NSJ],  
ASNW12GJ1Z0 [DM12RP NSJ]

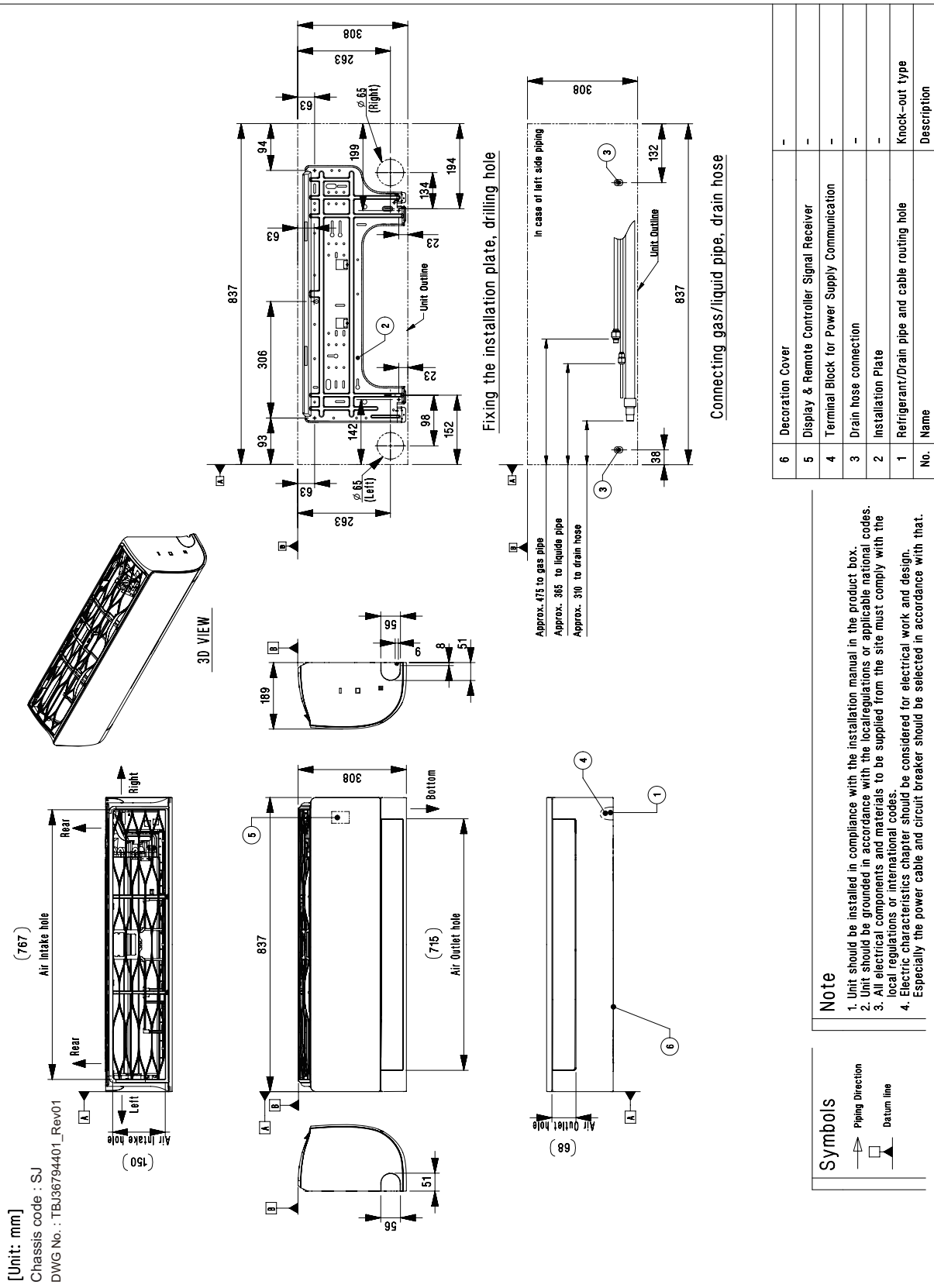


### ■ Standard Plus / Standard (SJ Chassis)

[Unit: mm]

Chassis code : SJ

DWG No.: TBJ36794401\_Rev01

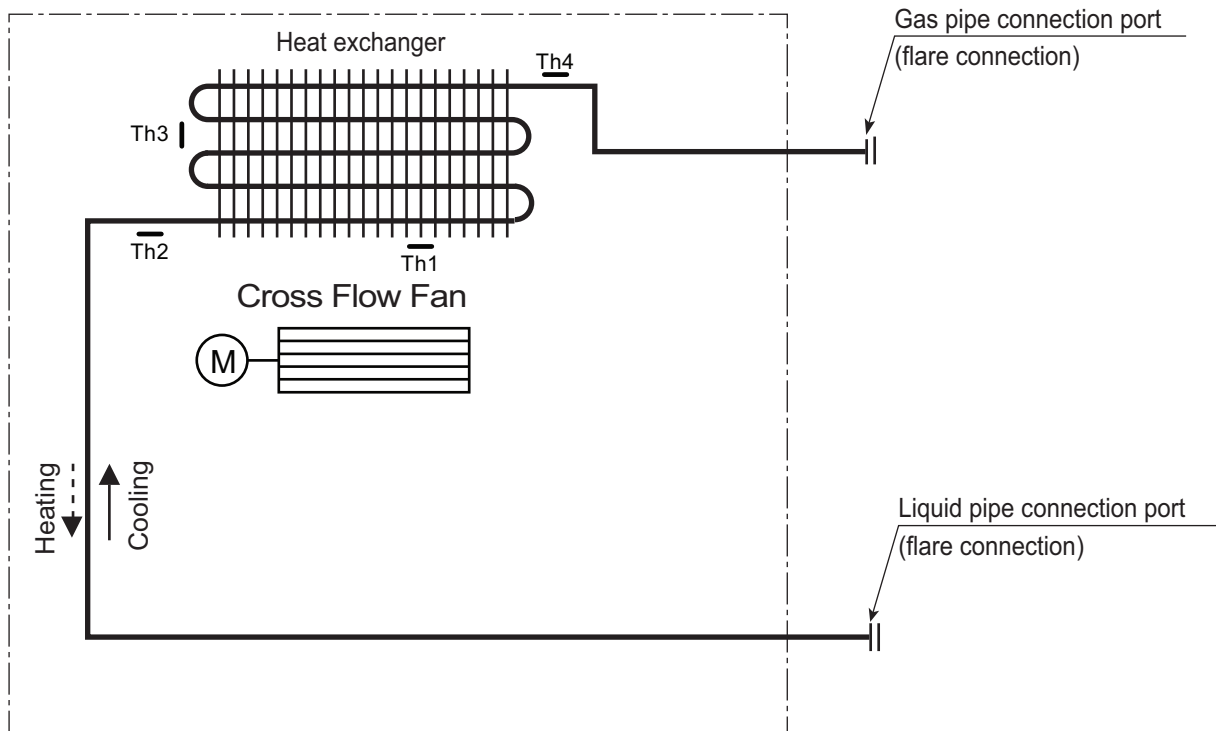


◆ ASNW18GK1Z0 [DM18RP NSK], ASNW24GK1Z0 [DM24RP NSK], ESNW18GK2F0 [PM18SP NSK], ESNW24GK2F0 [PM24SP NSK], ESNW18GK3A0 [PM18EP NSK], AMNW24GSKA0 [PM24EP NSK]



## 4. Piping diagrams

### ■ Models : Deluxe, Standard Plus, Standard



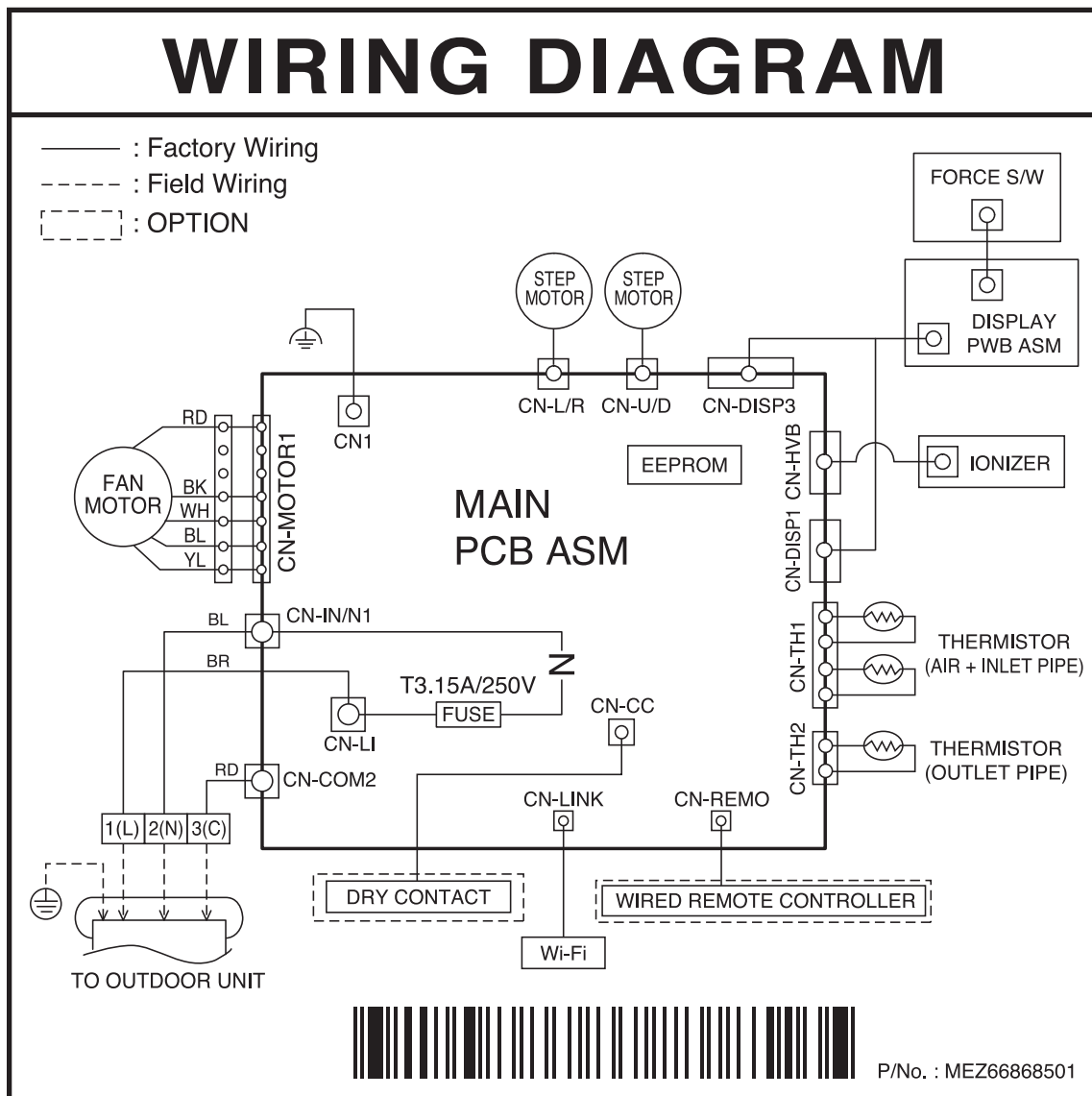
LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1
Th2	Thermistor for evaporator inlet temperature	
Th3*	Thermistor for evaporator middle temperature	CN-TH3
Th4	Thermistor for evaporator outlet temperature	CN-TH2

- \* : AMNW07GSJL0 [DM07RP NSJ] Model not available.

## 5. Wiring Diagrams

### ■ Deluxe

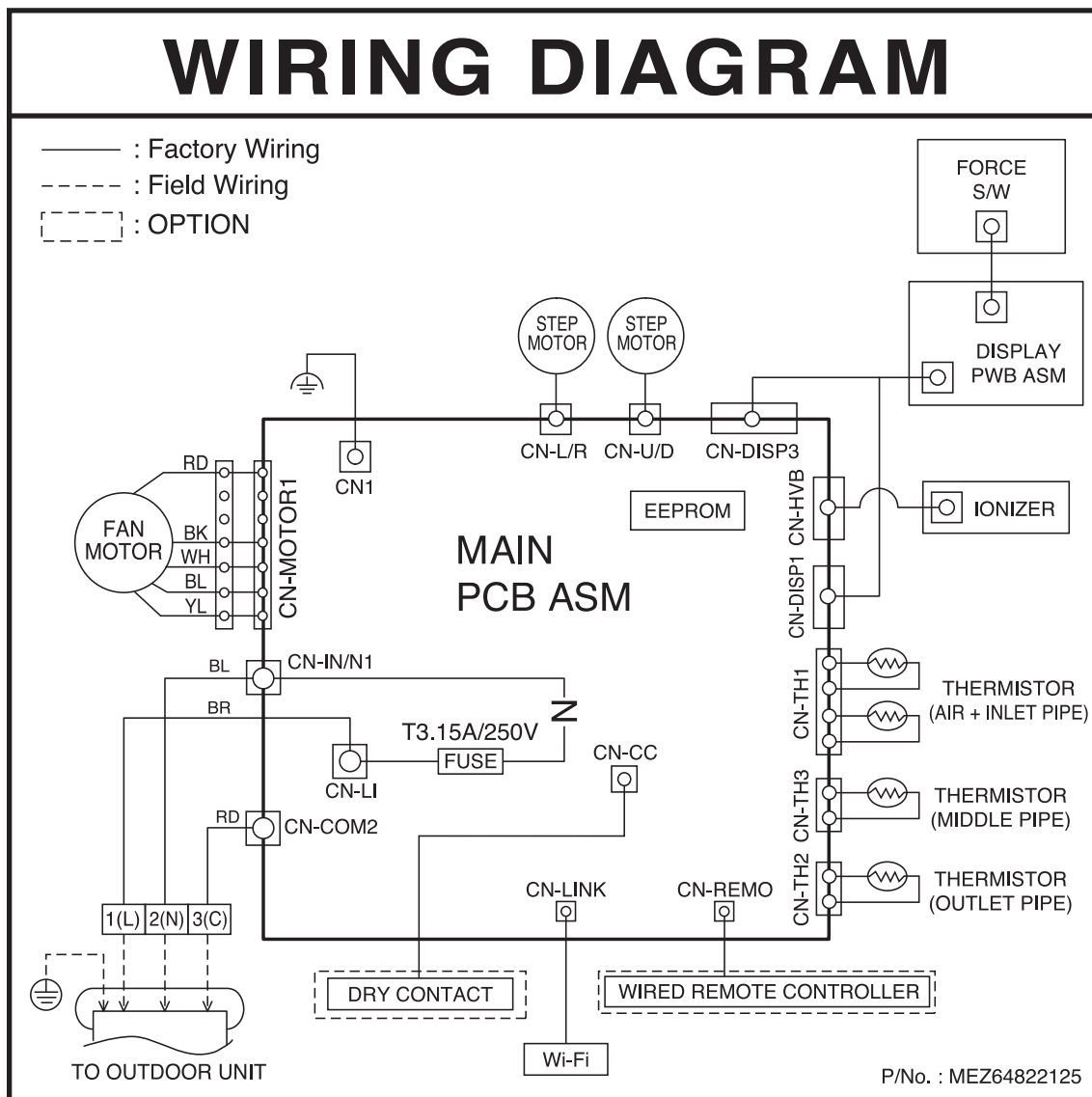
#### ◆ AMNW07GSJL0 [DM07RP NSJ]





## 5. Wiring Diagrams

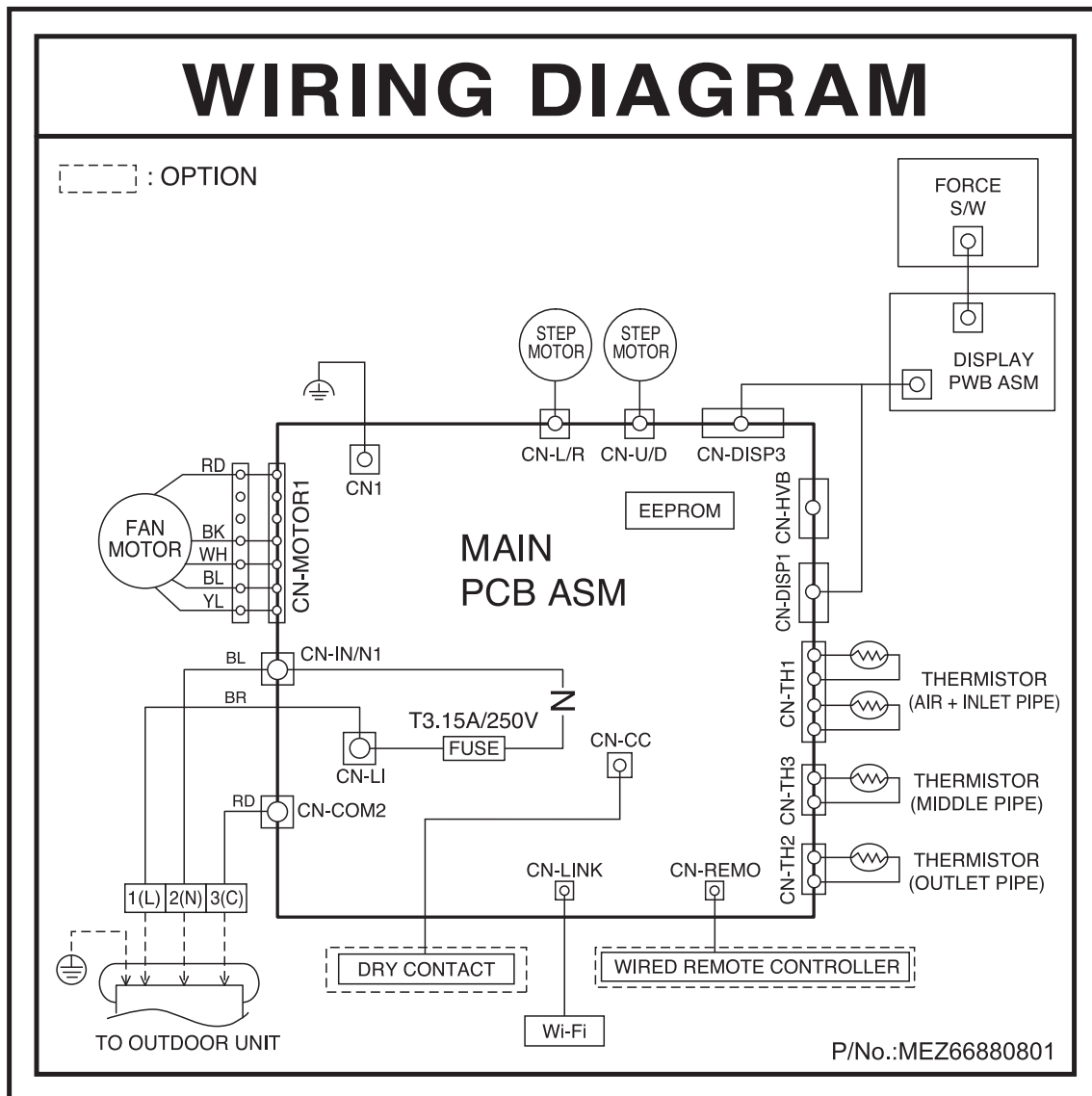
◆ ASNW09GJ1Z0 [DM09RP NSJ], ASNW12GJ1Z0 [DM12RP NSJ], ASNW18GK1Z0 [DM18RP NSK], ASNW24GK1Z0 [DM24RP NSK]



## 5. Wiring Diagrams

### ■ Standard plus

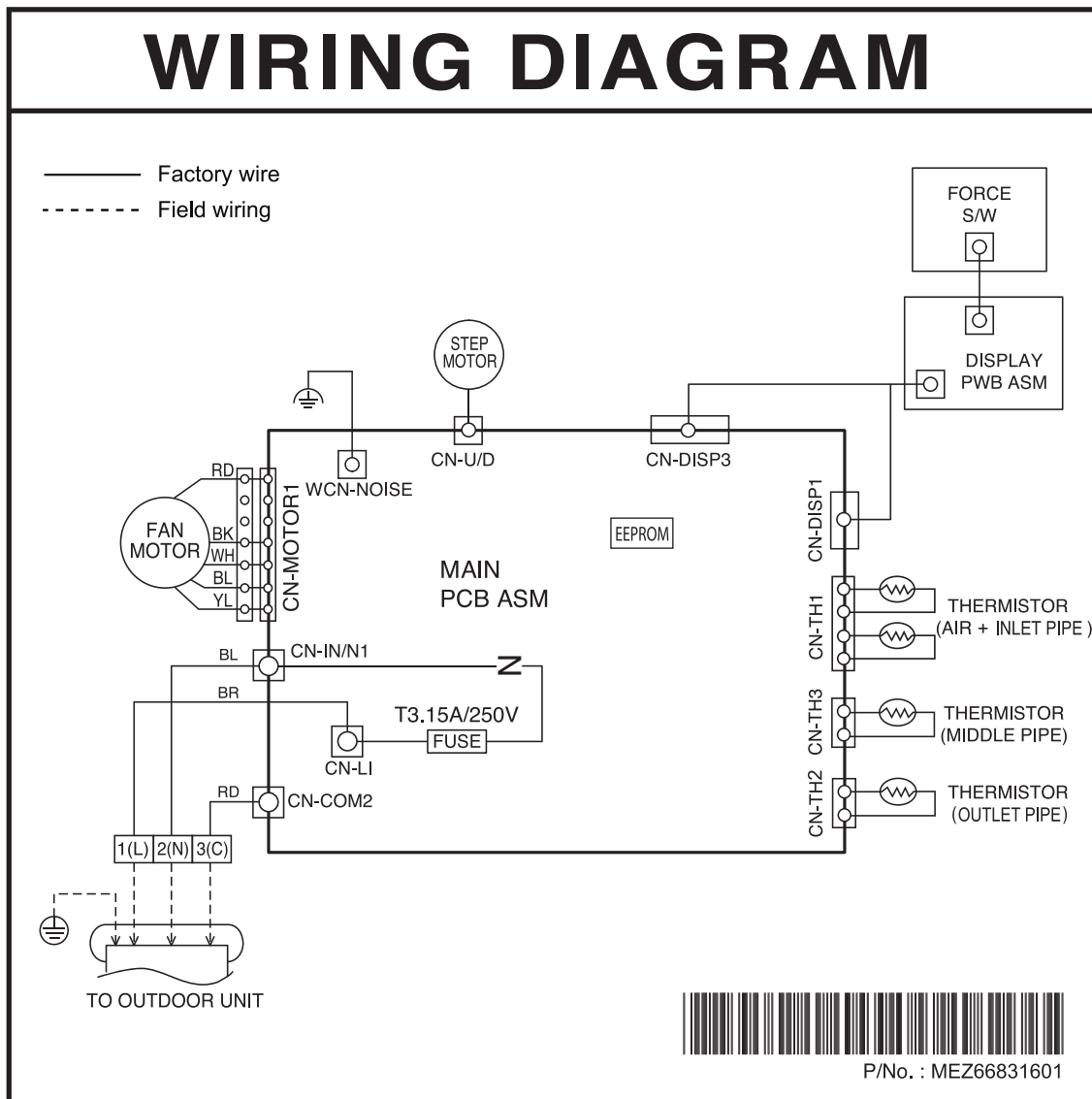
◆ AMNW05GSJB0 [PM05SP NSJ], AMNW07GSJB0 [PM07SP NSJ], ESNW09GJ2F0 [PM09SP NSJ], ESNW12GJ2F0 [PM12SP NSJ], AMNW15GSJB0 [PM15SP NSJ], ESNW18GK2F0 [PM18SP NSK], ESNW24GK2F0 [PM24SP NSK]



## 5. Wiring Diagrams

### ■ Standard

◆ AMNW07GSJA0 [PM07EP NSJ], ESNW09GJ3A0 [PM09EP NSJ], ESNW12GJ3A0 [PM12EP NSJ], ESNW18GK3A0 [PM18EP NSK], AMNW24GSKA0 [PM24EP NSK]



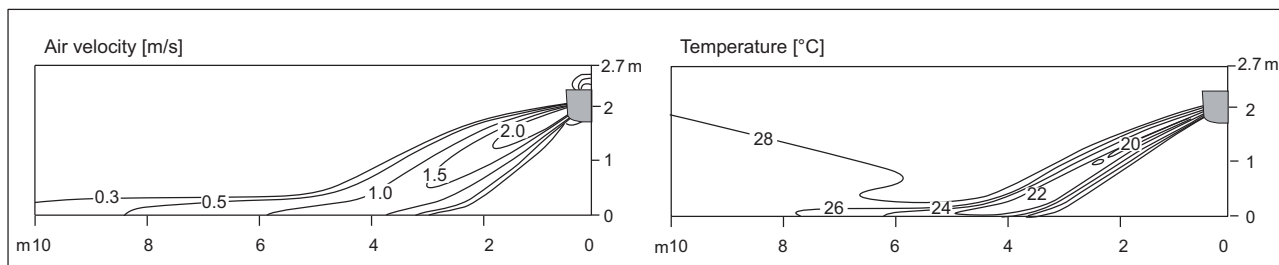
## 6. Air flow and temperature distributions (reference data)

■ **Models :** AMNW07GSJL0 [DM07RP NSJ], ASNW09GJ1Z0 [DM09RP NSJ]  
ASNW12GJ1Z0 [DM12RP NSJ]

### ◆ Cooling

#### Side View

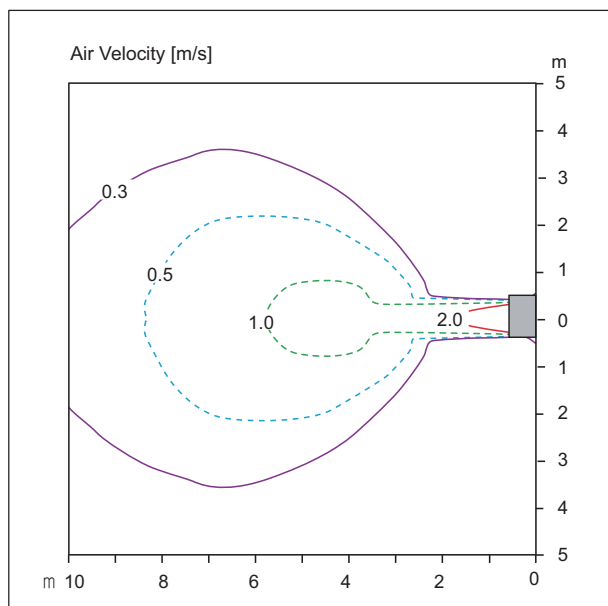
Discharge angle: 35°



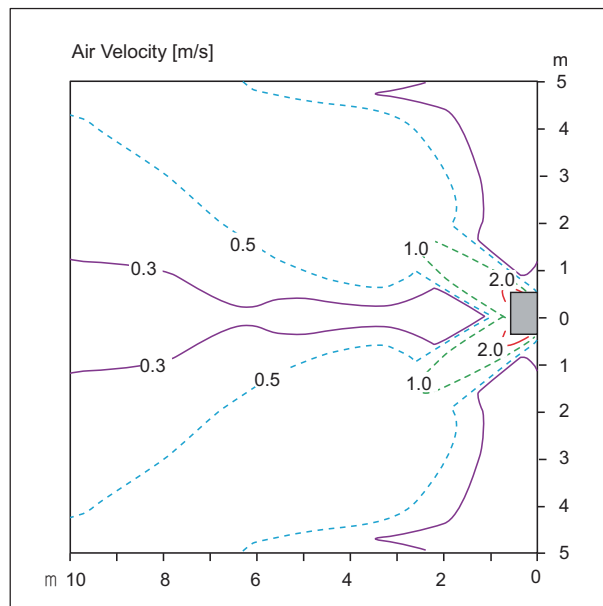
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.0m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

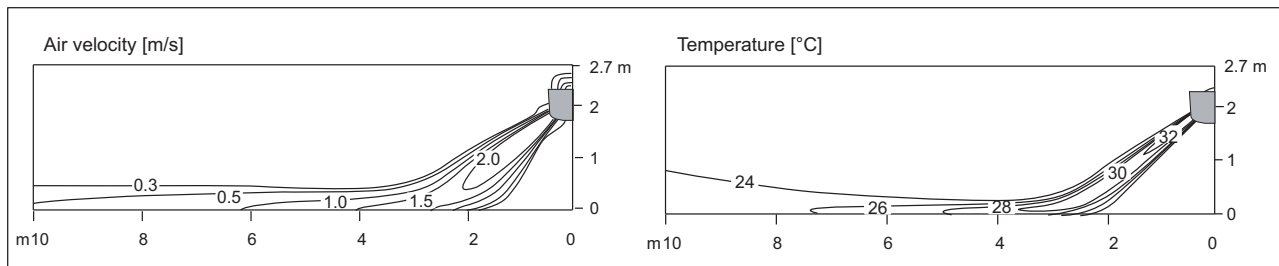
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

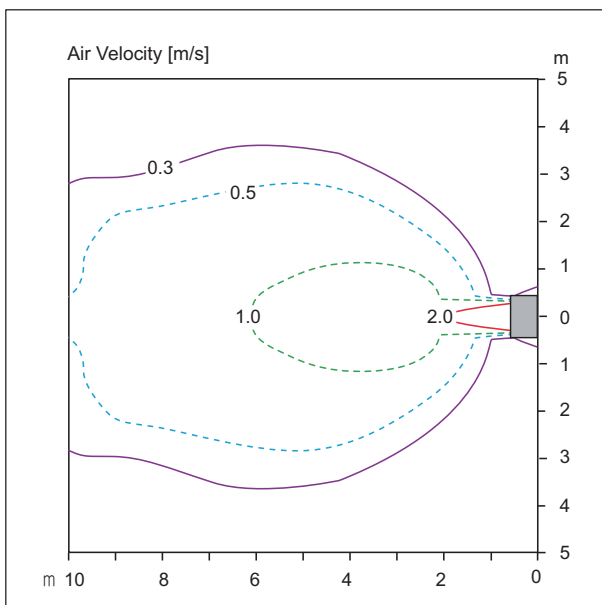
Discharge angle: 55°



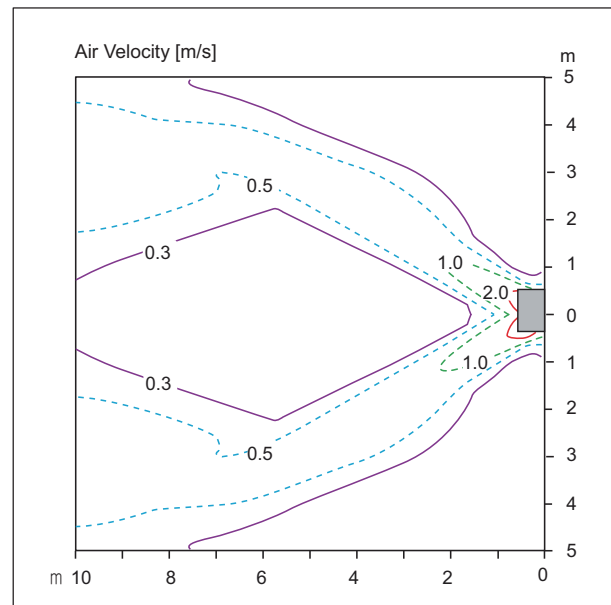
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.2m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

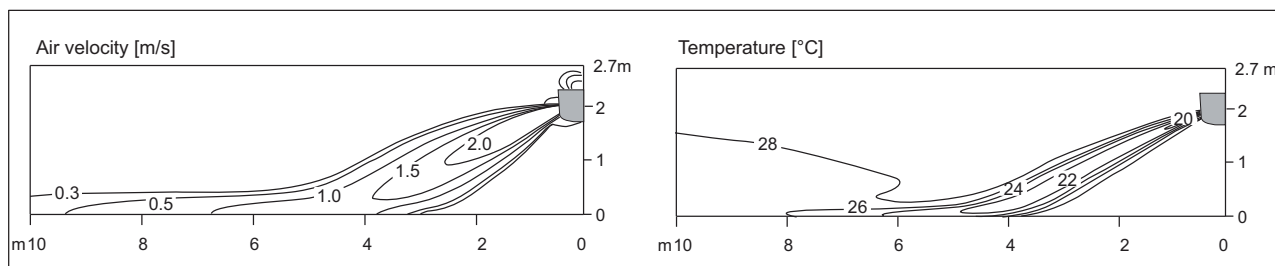
## 6. Air flow and temperature distributions (reference data)

■ **Models :** AMNW05GSJB0 [PM05SP NSJ], AMNW07GSJA0 [PM07EP NSJ]  
 AMNW07GSJB0 [PM07SP NSJ], ESNW09GJ3A0 [PM09EP NSJ]  
 ESNW09GJ2F0 [PM09SP NSJ], ESNW12GJ3A0 [PM12EP NSJ]  
 ESNW12GJ2F0 [PM12SP NSJ], AMNW15GSJB0 [PM15SP NSJ]

### ◆ Cooling

#### Side View

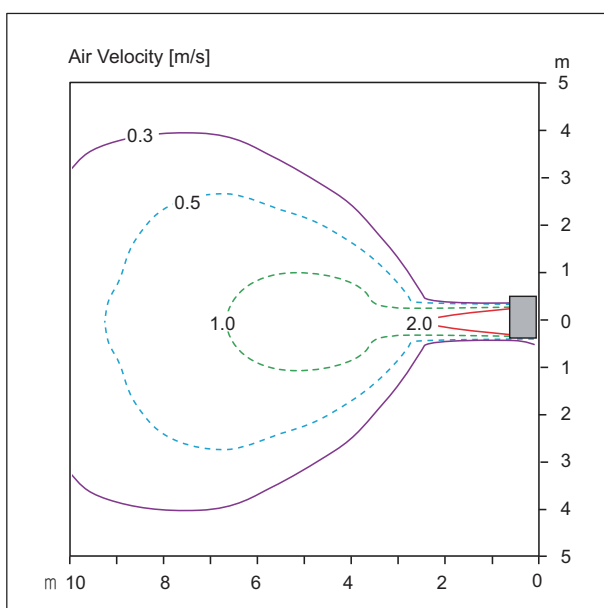
Discharge angle: 35°



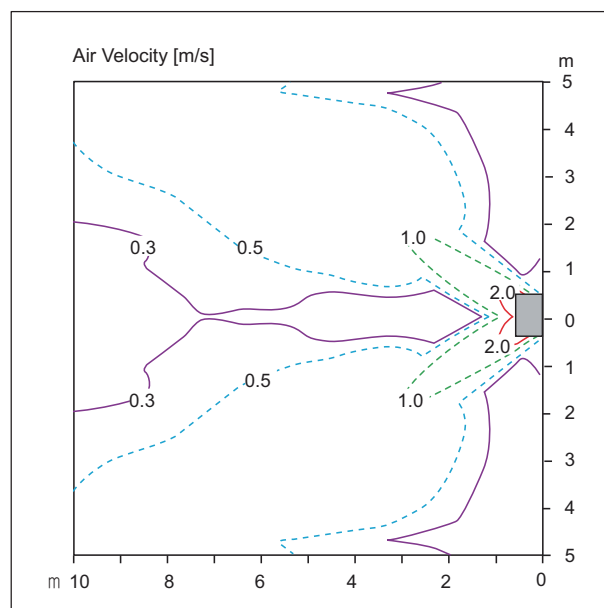
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

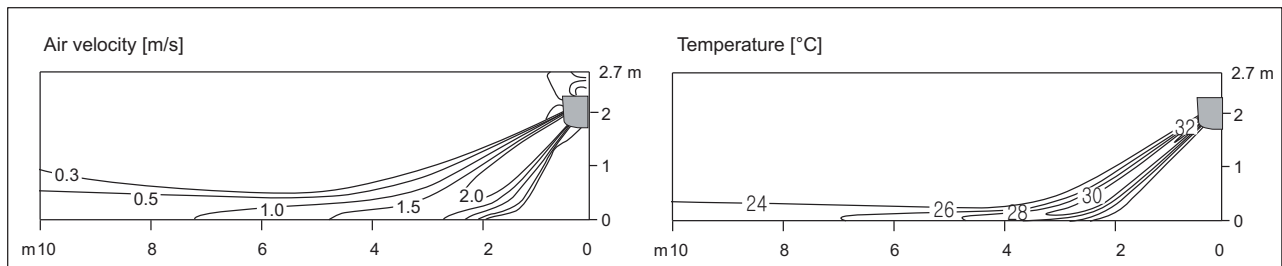
- These figures are accordance with normal certain condition and environment.  
 (Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

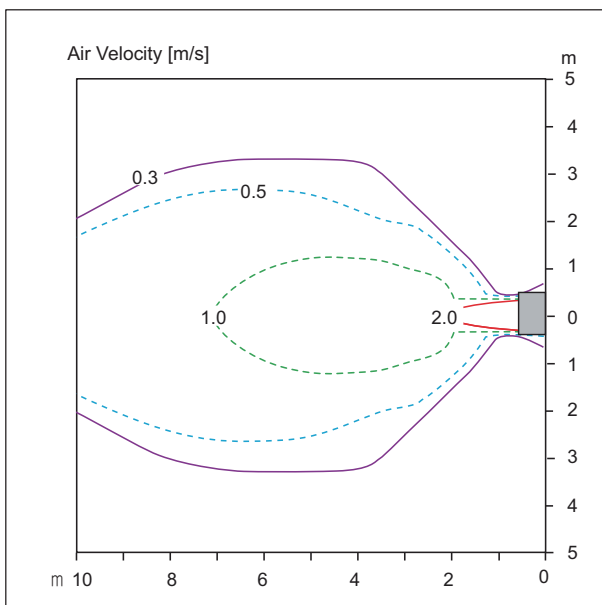
Discharge angle: 55°



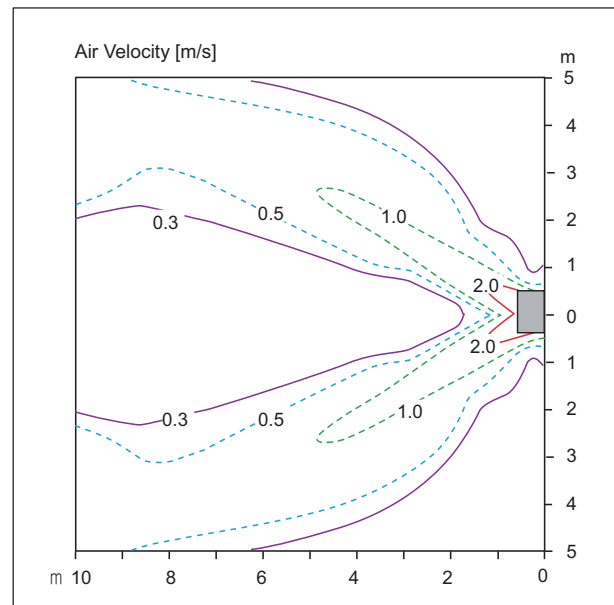
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

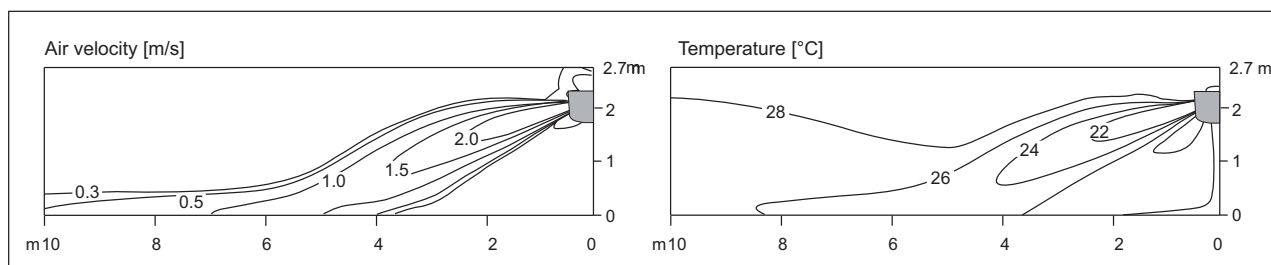
## 6. Air flow and temperature distributions (reference data)

■ Models : ASNW18GK1Z0 [DM18RP NSK], ESNW18GK3A0 [PM18EP NSK]  
ESNW18GK2F0 [PM18SP NSK]

### ◆ Cooling

#### Side View

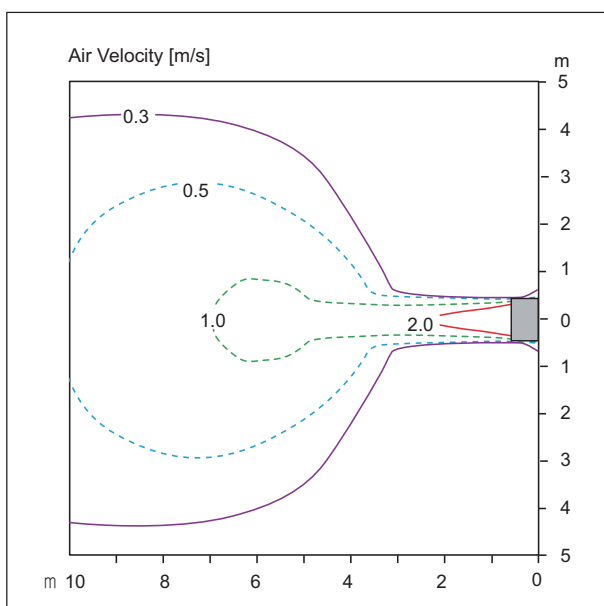
Discharge angle: 25°



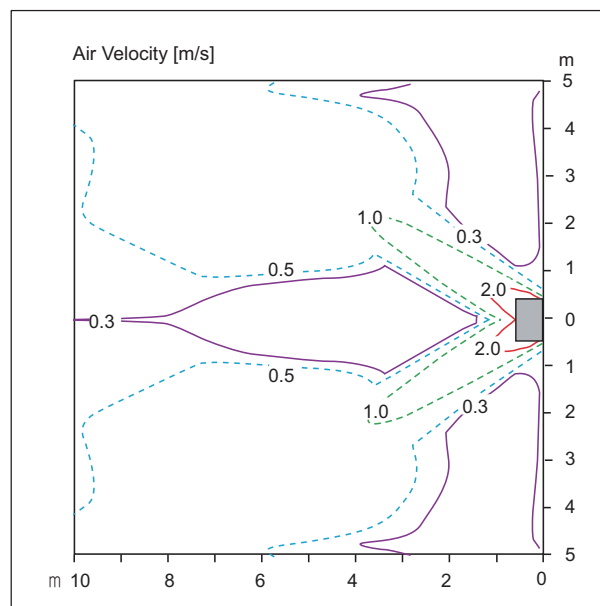
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

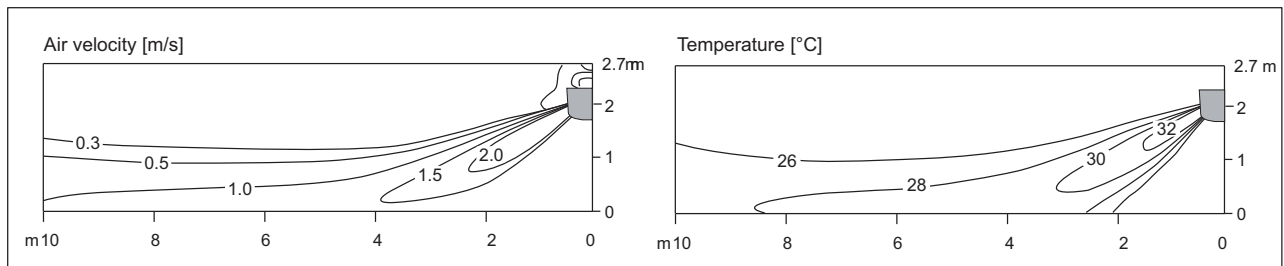


## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

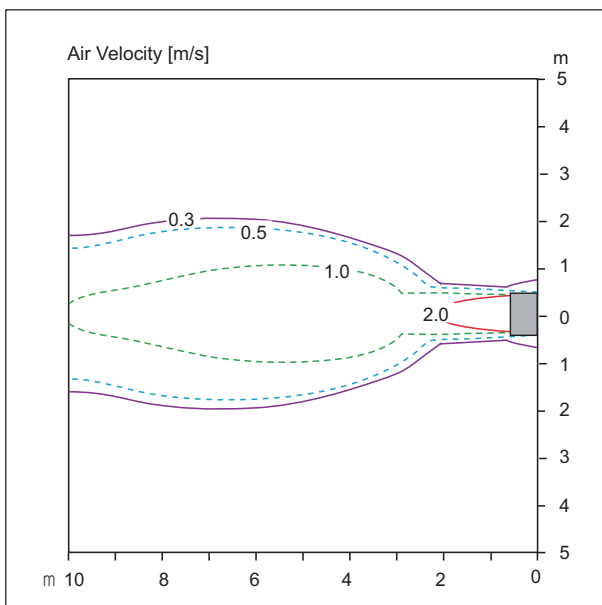
Discharge angle: 45°



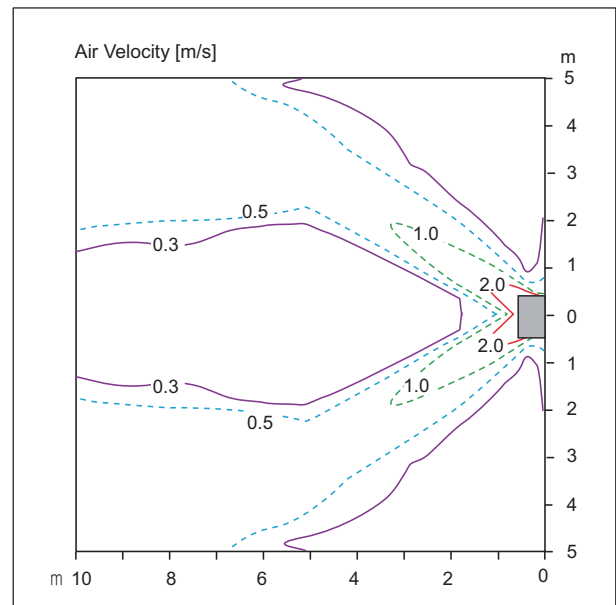
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

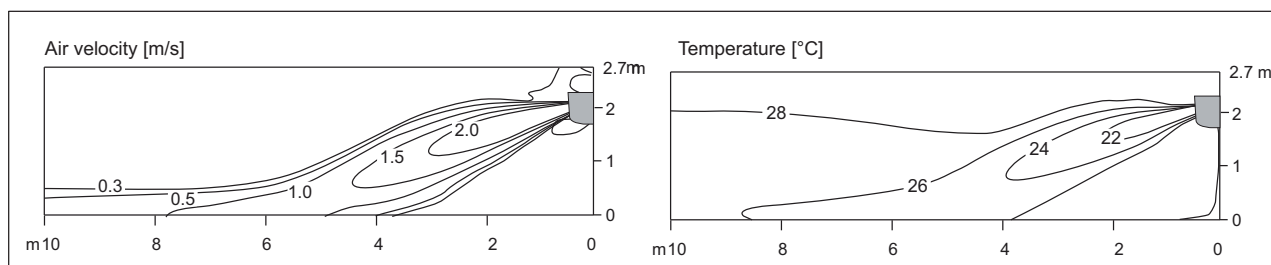
## 6. Air flow and temperature distributions (reference data)

■ Models : ASNW24GK1Z0 [DM24RP NSK], AMNW24GSKA0 [PM24EP NSK]  
ESNW24GK2F0 [PM24SP NSK]

### ◆ Cooling

#### Side View

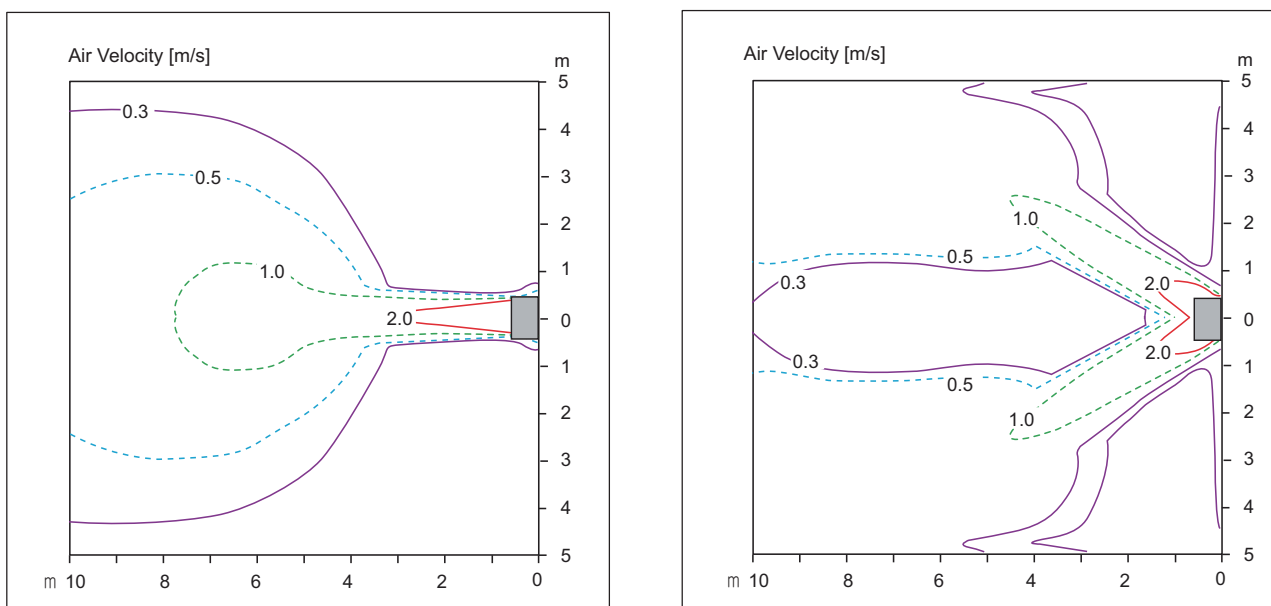
Discharge angle: 25°



- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 15.0m

- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

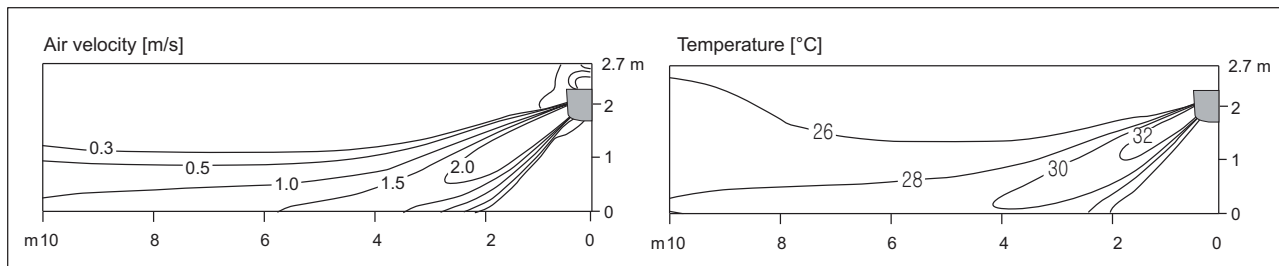
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

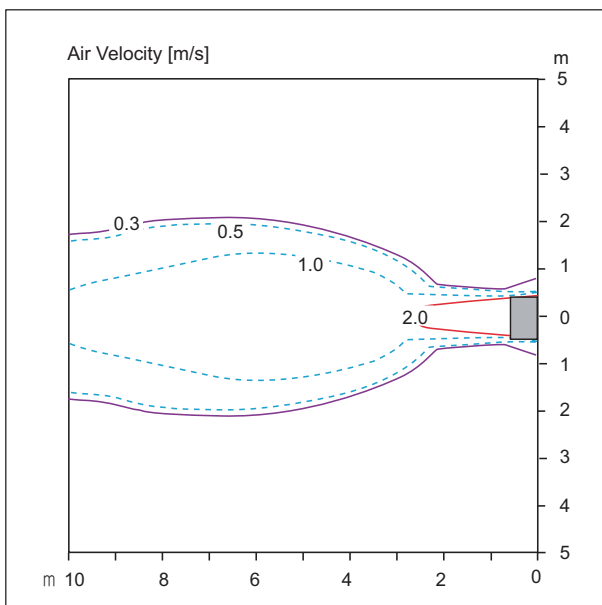
Discharge angle: 45°



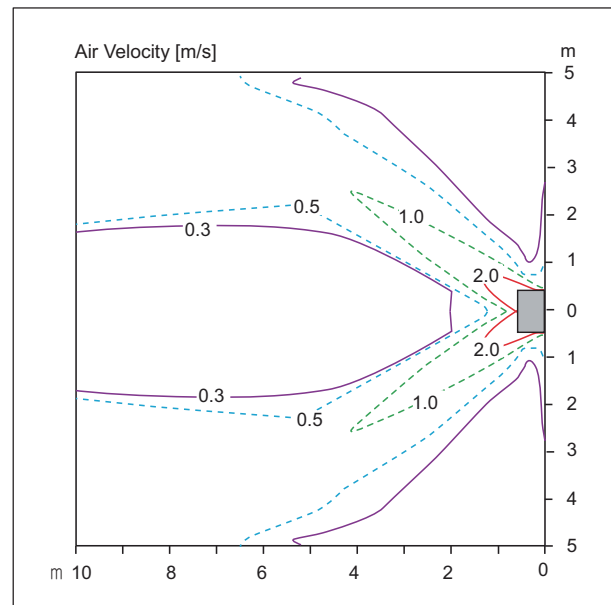
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

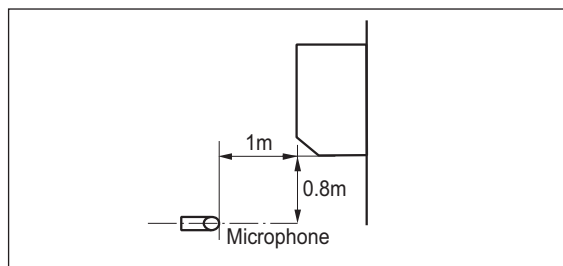
### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### ■ Overall



#### Note

1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

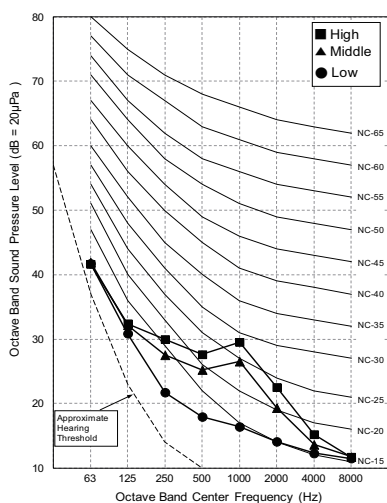
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW07GSJL0 [DM07RP NSJ]	35	31	26
ASNW09GJ1Z0 [DM09RP NSJ]	36	32	27
ASNW12GJ1Z0 [DM12RP NSJ]	38	34	29
ASNW18GK1Z0 [DM18RP NSK]	44	38	34
ASNW24GK1Z0 [DM24RP NSK]	47	41	36

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW05GSJB0 [PM05SP NSJ]	34	31	27
AMNW07GSJB0 [PM07SP NSJ]	35	32	27
ESNW09GJ2F0 [PM09SP NSJ]	36	33	27
ESNW12GJ2F0 [PM12SP NSJ]	40	35	27
AMNW15GSJB0 [PM15SP NSJ]	41	36	29
ESNW18GK2F0 [PM18SP NSK]	44	38	35
ESNW24GK2F0 [PM24SP NSK]	46	41	36

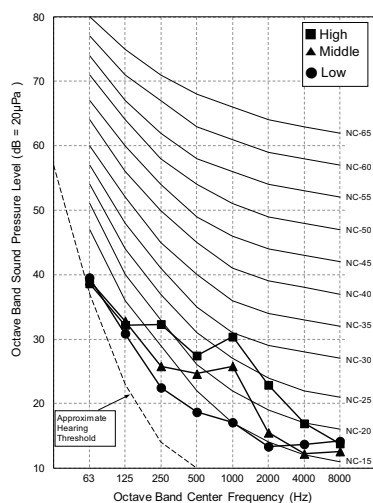
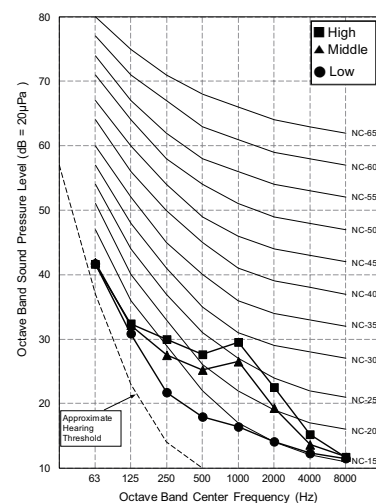
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW07GSJA0 [PM07EP NSJ]	35	32	27
ESNW09GJ3A0 [PM09EP NSJ]	36	33	27
ESNW12GJ3A0 [PM12EP NSJ]	40	35	27
ESNW18GK3A0 [PM18EP NSK]	44	38	35
AMNW24GSKA0 [PM24EP NSK]	46	41	36

## 7. Sound levels

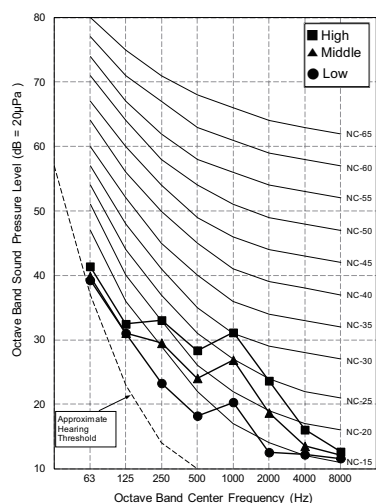
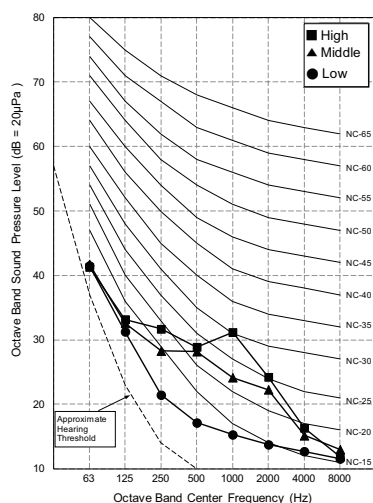
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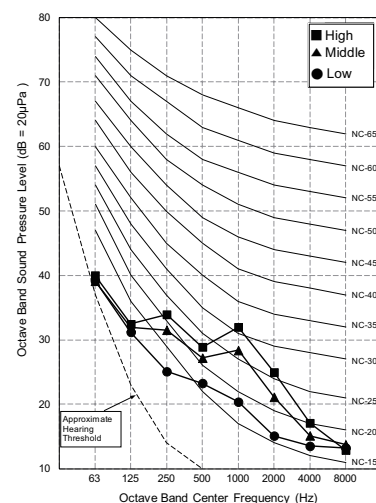
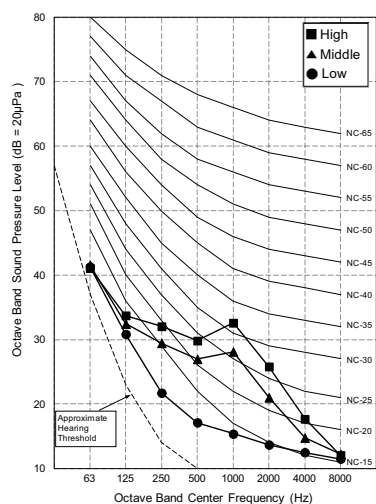
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AMNW07GSJB0 [PM07SP NSJ]  
AMNW07GSJA0 [PM07EP NSJ]

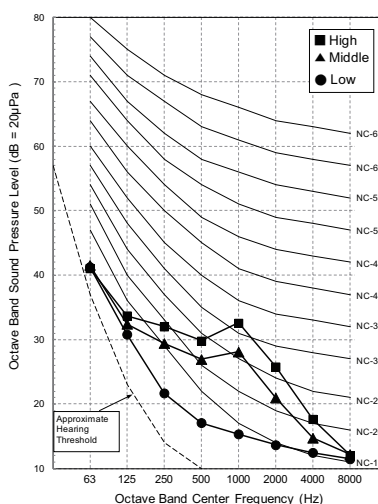
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ESNW09GJ2F0 [PM09SP NSJ]  
ESNW09GJ3A0 [PM09EP NSJ]

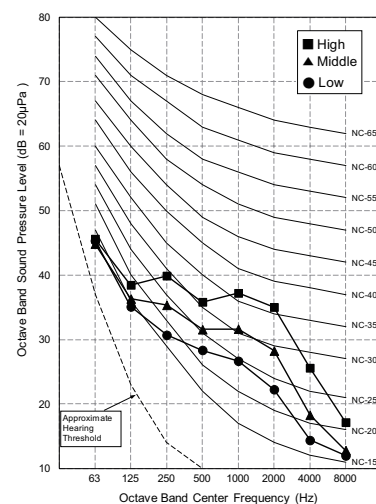
ASNW12GJ1Z0 [DM12RP NSJ]

ESNW12GJ2F0 [PM12SP NSJ]  
ESNW12GJ3A0 [PM12EP NSJ]

AMNW15GSJB0 [PM15SP NSJ]

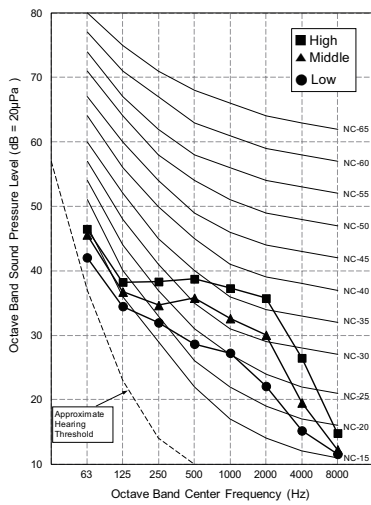


ASNW18GK1Z0 [DM18RP NSK]

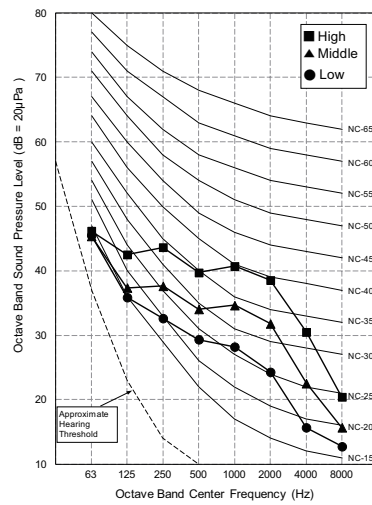


## 7. Sound levels

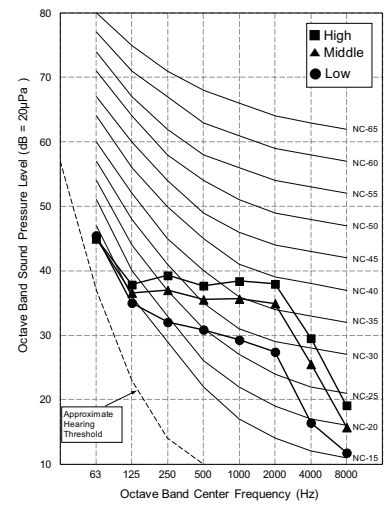
**ESNW18GK2F0 [PM18SP NSK]  
ESNW18GK3A0 [PM18EP NSK]**



**ASNW24GK1Z0 [DM24RP NSK]**



**ESNW24GK2F0 [PM24SP NSK]  
AMNW24GSKA0 [PM24EP NSK]**



## 7. Sound levels

### 7.2 Sound power level

#### Note

- Operating condition
  - Power source : 220-240V 50 Hz / 220V 60 Hz
  - Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
  - Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
  - External static pressure is according to "Standard mode" value. Refer to the specifications.
- Data is valid at diffuse field condition.
- Data is valid at nominal operating condition
- Sound level can be increased in static pressure mode or used air guide.
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).
- Reference acoustic intensity 0dB =  $10E-6\mu W/m^2$
- Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard.  
Therefore, these values can be increased owing to ambient conditions during operation.

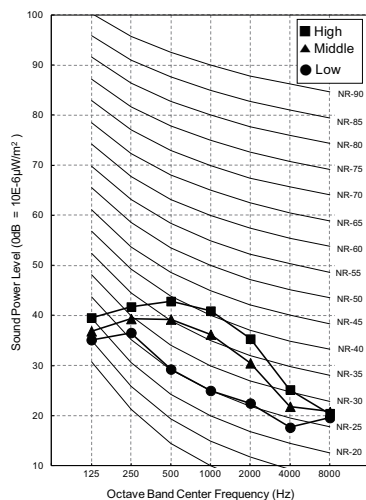
Model	Sound power Levels [dB(A)]
AMNW07GSJL0 [DM07RP NSJ]	56
ASNW09GJ1Z0 [DM09RP NSJ]	56
ASNW12GJ1Z0 [DM12RP NSJ]	56
ASNW18GK1Z0 [DM18RP NSK]	60
ASNW24GK1Z0 [DM24RP NSK]	64

Model	Sound power Levels [dB(A)]
AMNW05GSJB0 [PM05SP NSJ]	57
AMNW07GSJB0 [PM07SP NSJ]	57
ESNW09GJ2F0 [PM09SP NSJ]	57
ESNW12GJ2F0 [PM12SP NSJ]	57
AMNW15GSJB0 [PM15SP NSJ]	57
ESNW18GK2F0 [PM18SP NSK]	59
ESNW24GK2F0 [PM24SP NSK]	65

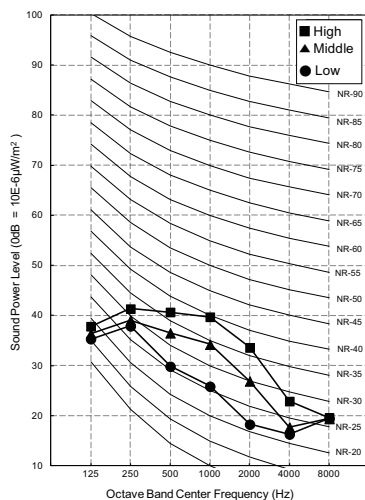
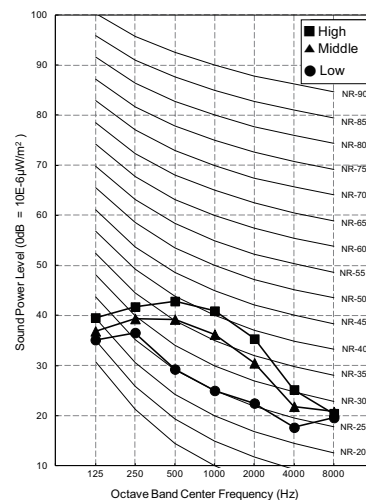
Model	Sound power Levels [dB(A)]
AMNW07GSJA0 [PM07EP NSJ]	57
ESNW09GJ3A0 [PM09EP NSJ]	57
ESNW12GJ3A0 [PM12EP NSJ]	57
ESNW18GK3A0 [PM18EP NSK]	59
AMNW24GSKA0 [PM24EP NSK]	65

# 7. Sound levels

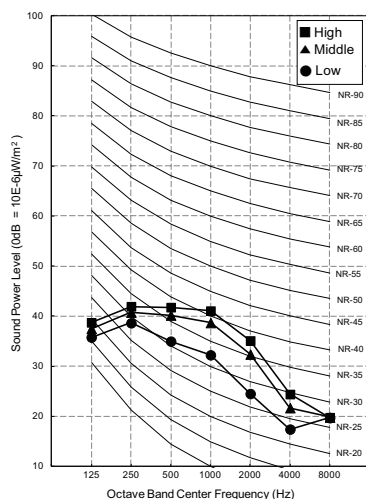
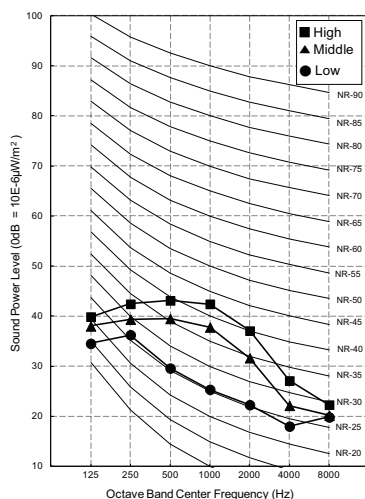
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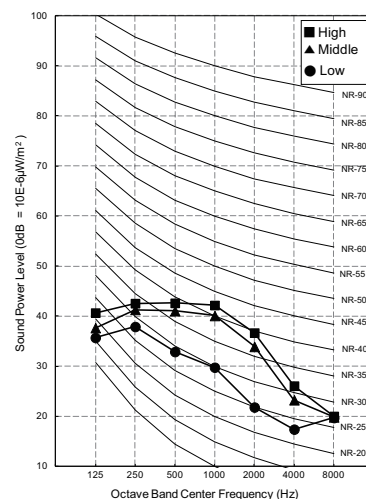
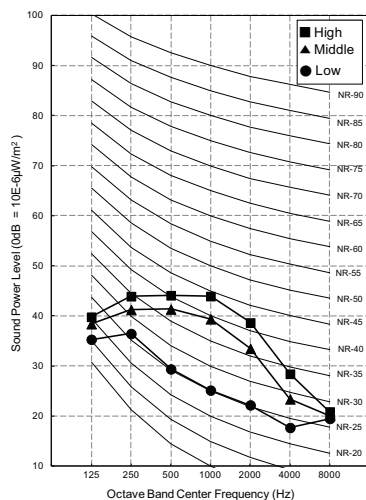
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AMNW07GSJB0 [PM07SP NSJ]  
AMNW07GSJA0 [PM07EP NSJ]

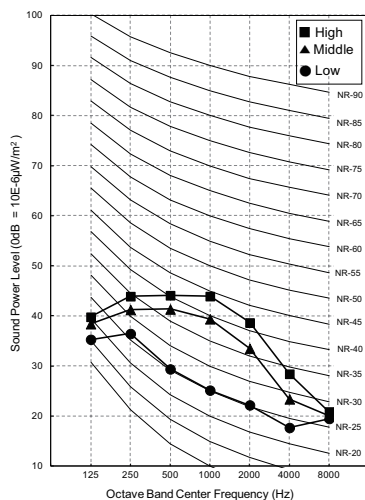
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ESNW09GJ2F0 [PM09SP NSJ]  
ESNW09GJ3A0 [PM09EP NSJ]

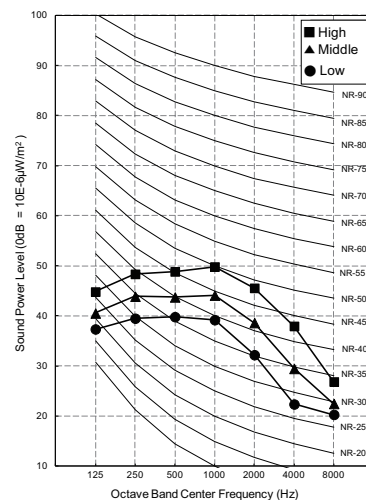
ASNW12GJ1Z0 [DM12RP NSJ]

ESNW12GJ2F0 [PM12SP NSJ]  
ESNW12GJ3A0 [PM12EP NSJ]

AMNW15GSJB0 [PM15SP NSJ]



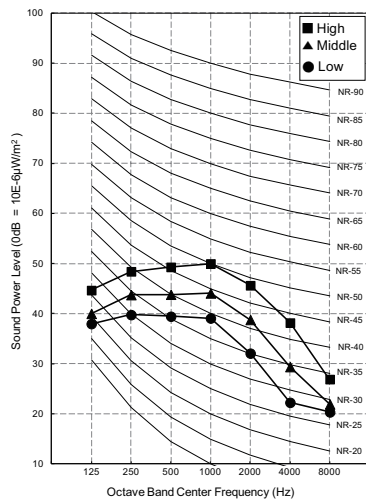
ASNW18GK1Z0 [DM18RP NSK]



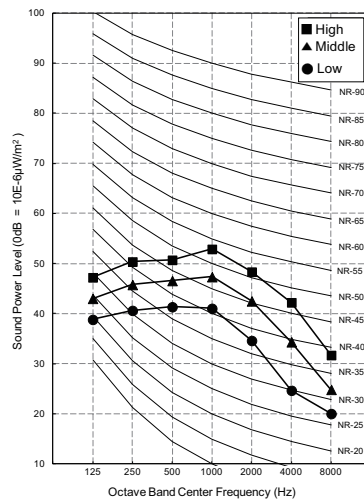


## 7. Sound levels

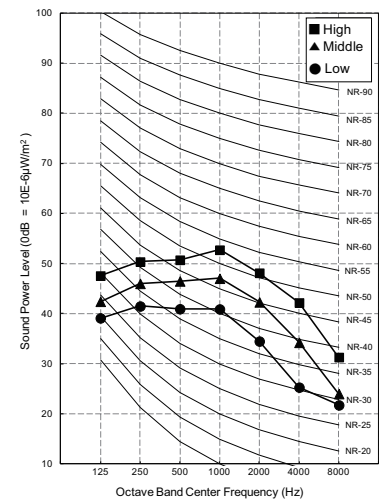
ESNW18GK2F0 [PM18SP NSK]  
ESNW18GK3A0 [PM18EP NSK]



ASNW24GK1Z0 [DM24RP NSK]



ESNW24GK2F0 [PM24SP NSK]  
AMNW24GSKA0 [PM24EP NSK]

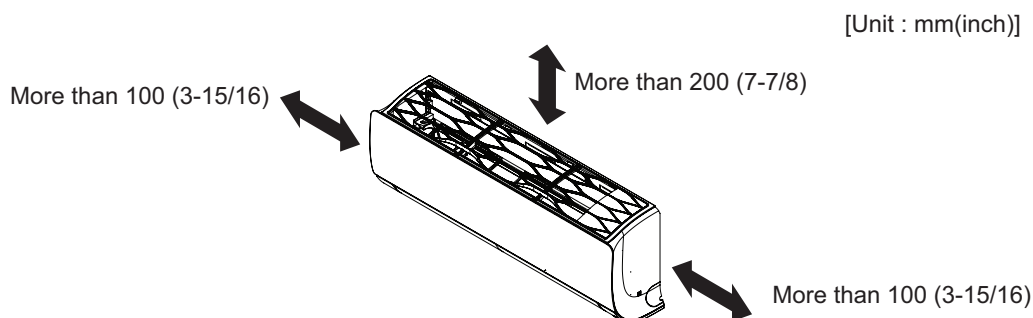


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.

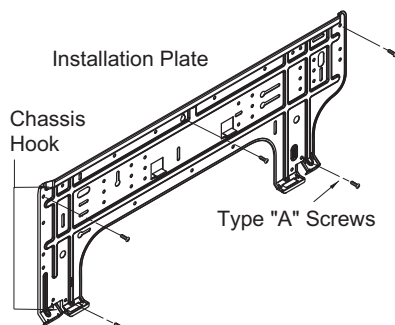


## 8. Installation

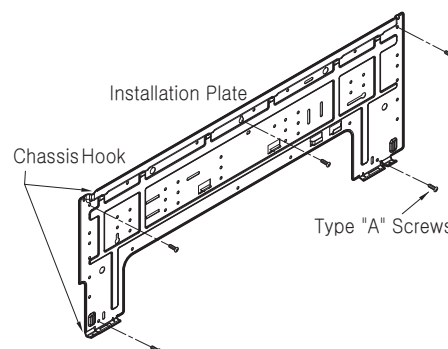
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
  - Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
    - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
  - Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

**SJ Chassis**

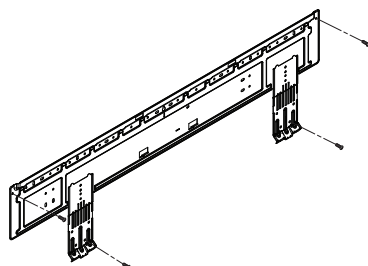


**SK Chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

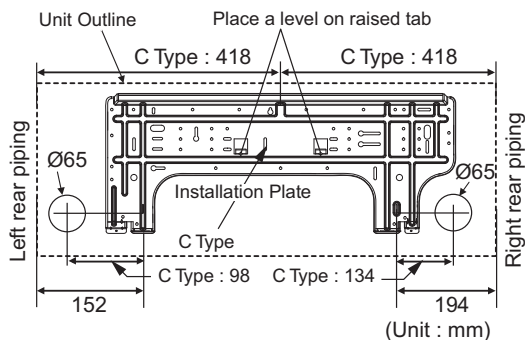
**SR Chassis**



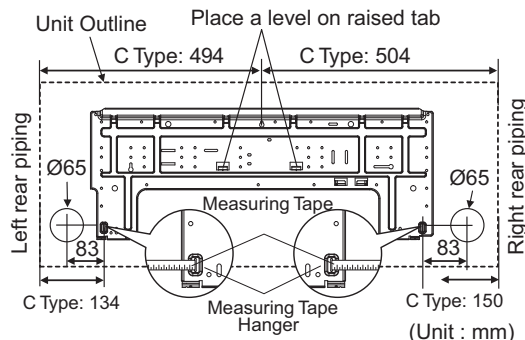
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

**SJ chassis**



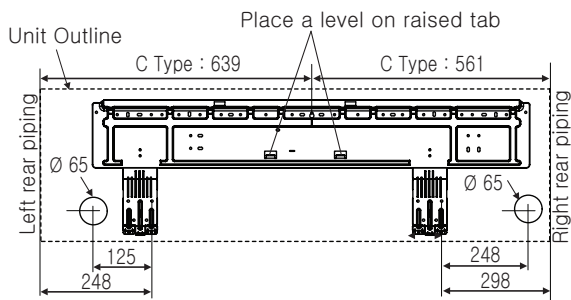
**SK chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

### SR chassis



(Unit : mm)

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### **! CAUTION**

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

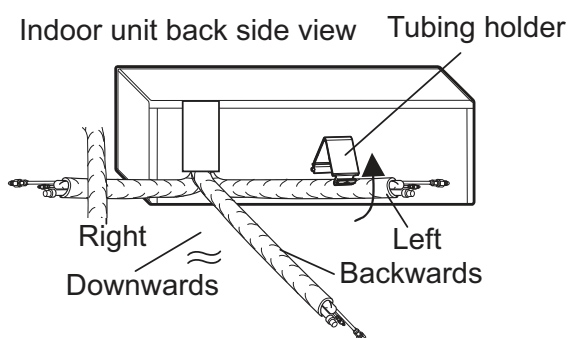
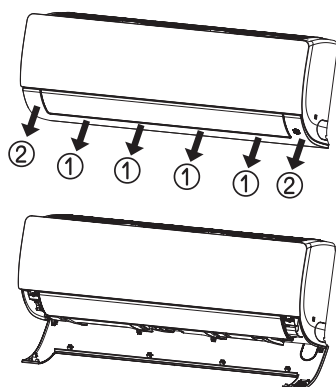
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK/SR chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.

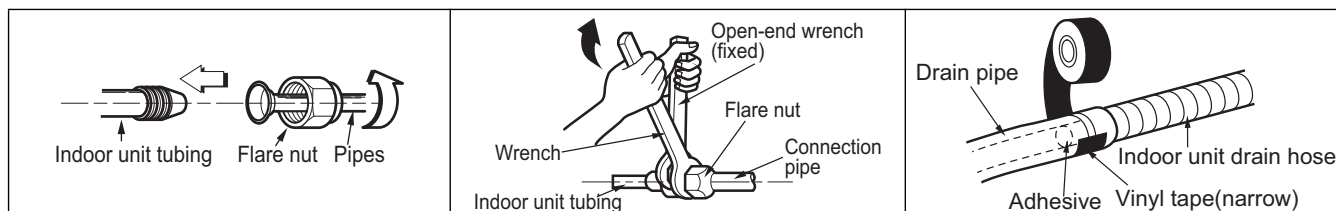


※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ Connecting the installation pipe and drain hose

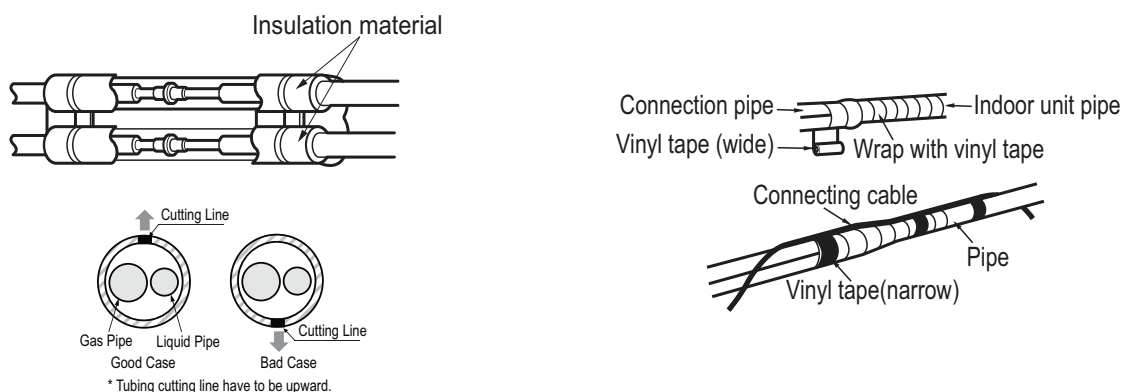


1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

##### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.

## 8. Installation



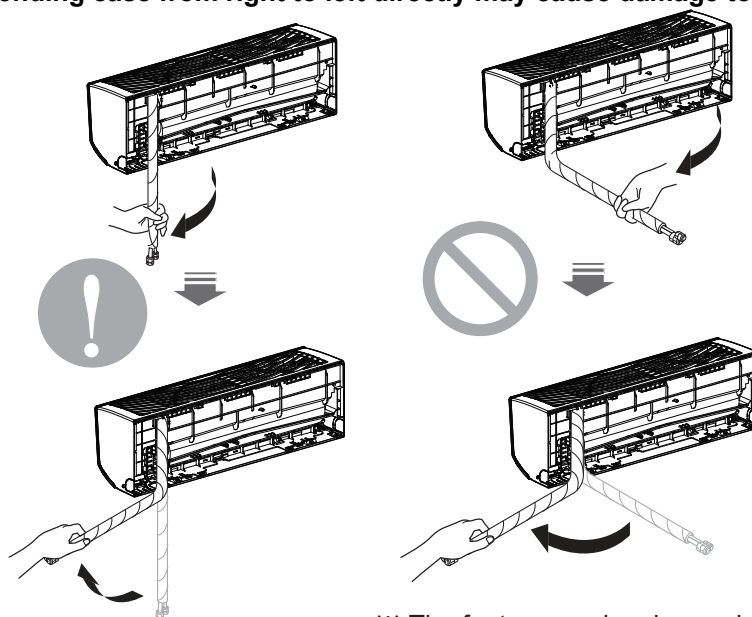
### ! CAUTION

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

### ! CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



※ The feature can be changed according to type

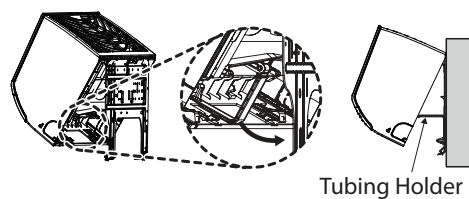
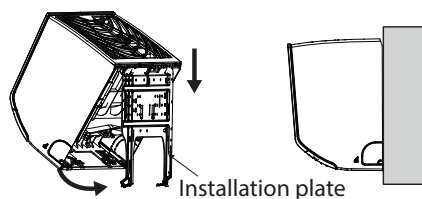
- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.

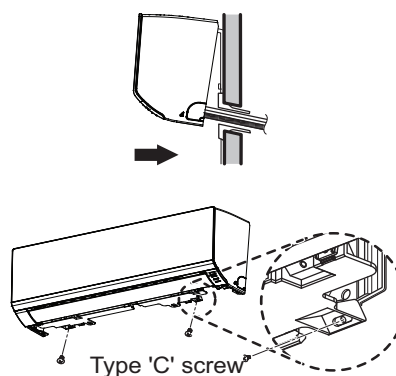
## 8. Installation



\* The feature can be changed according to type of model.

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

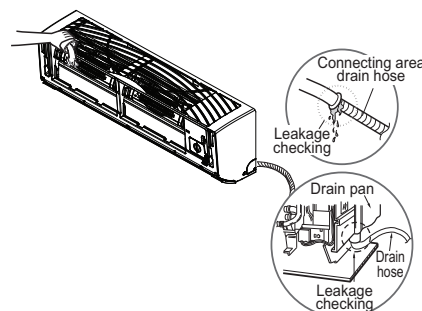
### ⚠ CAUTION

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

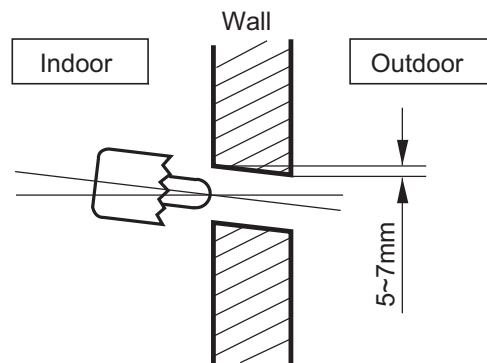


\* The feature can be changed according to type of model.

## 8. Installation

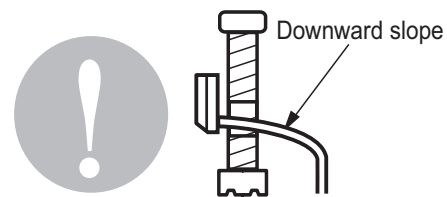
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing 70\text{mm}$  hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

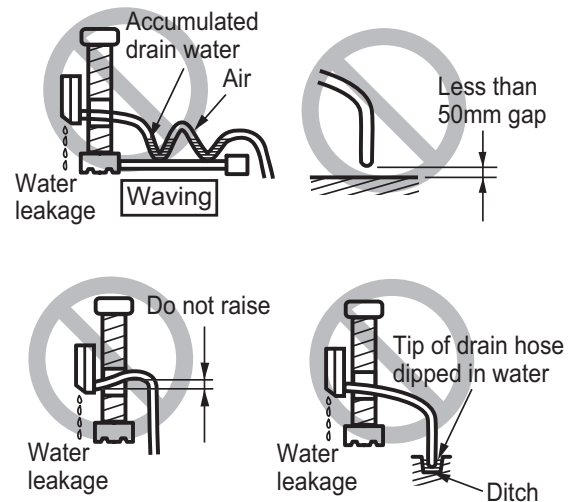


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.



## 8. Installation

---

### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

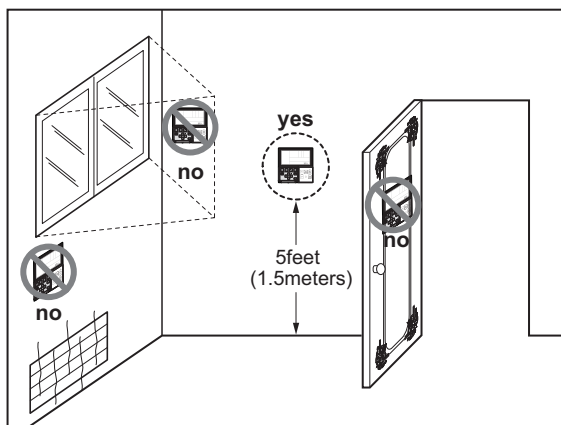
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **Wall Mounted Unit (2)**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ■ Deluxe

### ◆ List of function

Category	Functions	S3NM09JL1ZA [DC09RQ NSJ], S3NM12JL1ZA [DC12RQ NSJ] S3NM18KL1ZA [DC18RQ NSK], S3NM24K21ZA [DC24RQ NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
Special Functions	Auto Elevation Grille	X
	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	S3NM09JL1ZA [DC09RQ NSJ] S3NM12JL1ZA [DC12RQ NSJ] S3NM18KL1ZA [DC18RQ NSK] S3NM24K21ZA [DC24RQ NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
		PDRYCB400	2 Points Dry Contact (For Setback)	O
	Communication type	PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, -: Not applicable, Embedded: Included with product.
2. \*: Some advanced functions controlled by individual controller cannot be operated.
3. \*\*: It could not be operated some functions.
4. \*\*\*: Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

# 1. List of functions

## ■ Standard plus

### ◆ List of function

Category	Functions	S3NM09JA2FA [PC09SQ NSJ], S3NM12JA2FA [PC12SQ NSJ] S3NM18KL2FA [PC18SQ NSK], S3NM24K22FA [PC24SQ NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
Special Functions	Auto Elevation Grille	X
	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

#### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	S3NM09JA2FA [PC09SQ NSJ] S3NM12JA2FA [PC12SQ NSJ] S3NM18KL2FA [PC18SQ NSK] S3NM24K22FA [PC24SQ NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
		PDRYCB400	2 Points Dry Contact (For Setback)	O
	Communication type	PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

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3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

# 1. List of functions

## ■ Standard

### ◆ List of function

Category	Functions	S3NM09JA3BA [SC09EQ NSJ], S3NM12JA3BA [SC12EQ NSJ] S3NM18KL3BA [SC18EQ NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	X
	Two thermistor control*	X
Special Functions	Auto Elevation Grille	X
	Wi-Fi	X
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		X
Network Solution(LGAP)		X

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.



# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	S3NM09JA3BA [SC09EQ NSJ] S3NM12JA3BA [SC12EQ NSJ] S3NM18KL3BA [SC18EQ NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	X
		PQRCHCA0Q(W)	for Hotel	X
	Standard	PREMTB001	Standard II (White)	X
		PREMTBB01	Standard II (Black)	X
		PREMTB100**	Standard III (White)	X
		PREMTBB10**	Standard III (Black)	X
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	X
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	X
		PDRYCB300	For 3rd Party Thermostat	X
		PDRYCB500	For Modbus	X
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	X
	Wi-Fi Controller*	PWFMDD200	-	X
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

### ■ Deluxe

Model Name				S3NM09JL1ZA [DC09RQ NSJ]	S3NM12JL1ZA [DC12RQ NSJ]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling		kW	2.5	3.5
	Heating		kW	3.2	4.0
Power Input	Min./Nom./Max.		W	9 / 18 / 30	9 / 19 / 30
Running Current	Min./Nom./Max.		A	0.12 / 0.16 / 0.20	0.12 / 0.17 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	892 x 381 x 249	892 x 381 x 249
		W x H x D	inch	35-1/8 x 15 x 9-13/16	35-1/8 x 15 x 9-13/16
Weight	Body		kg (lbs)	8.3 (18.3)	8.3 (18.3)
	Shipping		kg (lbs)	11.6 (25.6)	11.6 (25.6)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 23 x 22) x 1	(2 x 23 x 22) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.20 (2.15)	0.20 (2.15)
	Corrosion Protection		-	PCM	PCM
	Fin Type		-	Slit	Slit
	Material, Tube / Fin		-	Cu / Al	Cu / Al
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	10.1 / 7.7 / 6.4 / 5.0	10.1 / 8.1 / 6.7 / 5.3
		SH / H / M / L	ft <sup>3</sup> /min	357 / 272 / 226 / 177	357 / 286 / 237 / 187
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level	SH / H / M / L / SL		dB(A)	44 / 36 / 32 / 27 / 19	44 / 38 / 34 / 29 / 19
Sound Power Level	Rated		dB(A)	56	56
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Preotector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
<b>Note</b> 1. Due to our policy of innovation some specifications may be changed without notification. 2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that. 3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741). 4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity. <ul style="list-style-type: none"> <li>Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB</li> <li>Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB</li> <li>Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.</li> </ul>					

## 2. Specifications

Model Name				S3NM18KL1ZA [DC18RQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5.0
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,063 x 420 x 274
		W x H x D	inch	41-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)		12.0 (26.5)
	Shipping	kg (lbs)		15.8 (34.8)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 16 x 20) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
	Corrosion Protection	-		PCM
	Fin Type	-		Slit
	Material, Tube / Fin	-		Cu / Al
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	18.5 / 14.2 / 11.3 / 9.9
		SH / H / M / L	ft <sup>3</sup> /min	653 / 501 / 399 / 350
Fan Motor	Type	-		BLDC
	Output	W x No.		60 x 1
Sound Pressure Level		SH / H / M / L / SL	dB(A)	48 / 44 / 38 / 35 / 31
Sound Power Level		Rated	dB(A)	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Preotector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)
<b>Note</b> 1. Due to our policy of innovation some specifications may be changed without notification. 2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that. 3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741). 4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity. <ul style="list-style-type: none"> <li>Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB</li> <li>Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB</li> <li>Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.</li> </ul>				

## 2. Specifications

Model Name				S3NM24K21ZA [DC24RQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,063 x 420 x 274
		W x H x D	inch	41-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)		12.7 (28.0)
	Shipping	kg (lbs)		16.0 (35.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 16 x 20) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	18.3 / 16.1 / 13.1 / 10.5
			ft <sup>3</sup> /min	646 / 569 / 463 / 371
		(Heating) SH / H / M / L	m <sup>3</sup> /min	19.8 / 17.6 / 14.3 / 11.0
			ft <sup>3</sup> /min	699 / 622 / 505 / 388
Fan Motor	Type		-	BLDC
	Output		W x No.	58 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	49 / 47 / 42 / 34 / 31
		(Heating) SH / H / M / L / SL	dB(A)	50 / 47 / 42 / 34 / -
Sound Power Level		Rated	dB(A)	65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 15.88 (5/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

### ■ Standard plus

Model Name				S3NM09JA2FA [PC09SQ NSJ]	S3NM12JA2FA [PC12SQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		2.5	3.5
	Heating	kW		3.3	4.0
Power Input	Min./Nom./Max.	W		11 / 18 / 30	11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20	0.10 / 0.17 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	909 x 383 x 256	909 x 383 x 256
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	35-25/32 x 15-3/32 x 10-3/32
Weight	Body	kg (lbs)		8.7 (19.2)	8.7 (19.2)
	Shipping	kg (lbs)		11.6 (25.6)	11.6 (25.6)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 15 x 21) x 1	(2 x 15 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)	0.19 (2.05)
	Corrosion Protection		-	PCM	PCM
	Fin Type		-	Slit	Slit
	Material, Tube / Fin		-	Cu / Al	Cu / Al
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	12.2 / 9.2 / 7.4 / 5.6	12.2 / 9.6 / 8.1 / 5.6
		SH / H / M / L	ft <sup>3</sup> /min	431 / 325 / 261 / 198	431 / 339 / 286 / 198
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		SH / H / M / L / SL	dB(A)	44 / 36 / 33 / 27 / 19	44 / 40 / 35 / 27 / 19
Sound Power Level		Rated	dB(A)	57	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation (Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				S3NM18KL2FA [PC18SQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5.0
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,080 x 422 x 281
		W x H x D	inch	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		12.0 (26.5)
	Shipping	kg (lbs)		15.4 (34.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 16 x 20) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
	Corrosion Protection	-		PCM
	Fin Type	-		Slit
	Material, Tube / Fin	-		Cu / Al
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	18.5 / 14.2 / 11.3 / 9.9
		SH / H / M / L	ft <sup>3</sup> /min	653 / 501 / 399 / 350
Fan Motor	Type	-		BLDC
	Output	W x No.		60 x 1
Sound Pressure Level		SH / H / M / L / SL	dB(A)	48 / 44 / 38 / 35 / 31
Sound Power Level		Rated	dB(A)	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)
<b>Note</b> 1. Due to our policy of innovation some specifications may be changed without notification. 2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that. 3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741). 4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity. <ul style="list-style-type: none"> <li>Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB</li> <li>Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB</li> <li>Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.</li> </ul>				

## 2. Specifications

Model Name				S3NM24K22FA [PC24SQ NSK]
Power Supply		V, Ø, Hz	220-240, 1, 50	
			220, 1, 60	
Capacity	Cooling	kW	6.6	
	Heating	kW	7.5	
Power Input	Min./Nom./Max.	W	27 / 45 / 60	
Running Current	Min./Nom./Max.	A	0.24 / 0.33 / 0.40	
Casing Color		-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,063 x 420 x 274
		W x H x D	inch	41-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)	12.7 (28.0)	
	Shipping	kg (lbs)	16.0 (35.3)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 16 x 20) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	18.3 / 16.1 / 13.1 / 10.5
			ft <sup>3</sup> /min	646 / 569 / 463 / 371
		(Heating) SH / H / M / L	m <sup>3</sup> /min	19.8 / 17.6 / 14.3 / 11.0
			ft <sup>3</sup> /min	699 / 622 / 505 / 388
Fan Motor	Type		-	BLDC
	Output		W x No.	58 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	49 / 47 / 42 / 34 / 31
		(Heating) SH / H / M / L / SL	dB(A)	50 / 47 / 42 / 34 / -
Sound Power Level		Rated	dB(A)	65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 15.88 (5/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)	4C x 1.0	

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

### ■ Standard

Model Name				S3NM09JA3BA [SC09EQ NSJ]	S3NM12JA3BA [SC12EQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		2.5	3.5
	Heating	kW		3.3	4.0
Power Input	Min./Nom./Max.	W x No.		11 / 18 / 30	11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20	0.10 / 0.17 / 0.20
Casing Color				Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	837 × 308 × 189	837 × 308 × 189
		W x H x D	inch	32-15/16 x 12-1/8 x 7-7/16	32-15/16 x 12-1/8 x 7-7/16
	Shipping	W x H x D	mm	909 x 383 x 256	909 x 383 x 256
		W x H x D	inch	35-25/32 x 15-3/32 x 10-3/32	35-25/32 x 15-3/32 x 10-3/32
Weight	Body	kg (lbs)		8.7 (19.2)	8.7 (19.2)
	Shipping	kg (lbs)		11.6 (25.6)	11.6 (25.6)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 15 x 21) x 1	(2 x 15 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)	0.19 (2.05)
	Corrosion Protection		-	PCM	PCM
	Fin Type		-	Slit	Slit
	Material, Tube / Fin		-	Cu / Al	Cu / Al
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	12.2 / 9.2 / 7.4 / 5.6	12.2 / 9.6 / 8.1 / 5.6
		SH / H / M / L	ft <sup>3</sup> /min	431 / 325 / 261 / 198	431 / 339 / 286 / 198
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		SH / H / M / L / SL	dB(A)	44 / 36 / 33 / 27 / 19	44 / 40 / 35 / 27 / 19
Sound Power Level		Rated	dB(A)	57	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

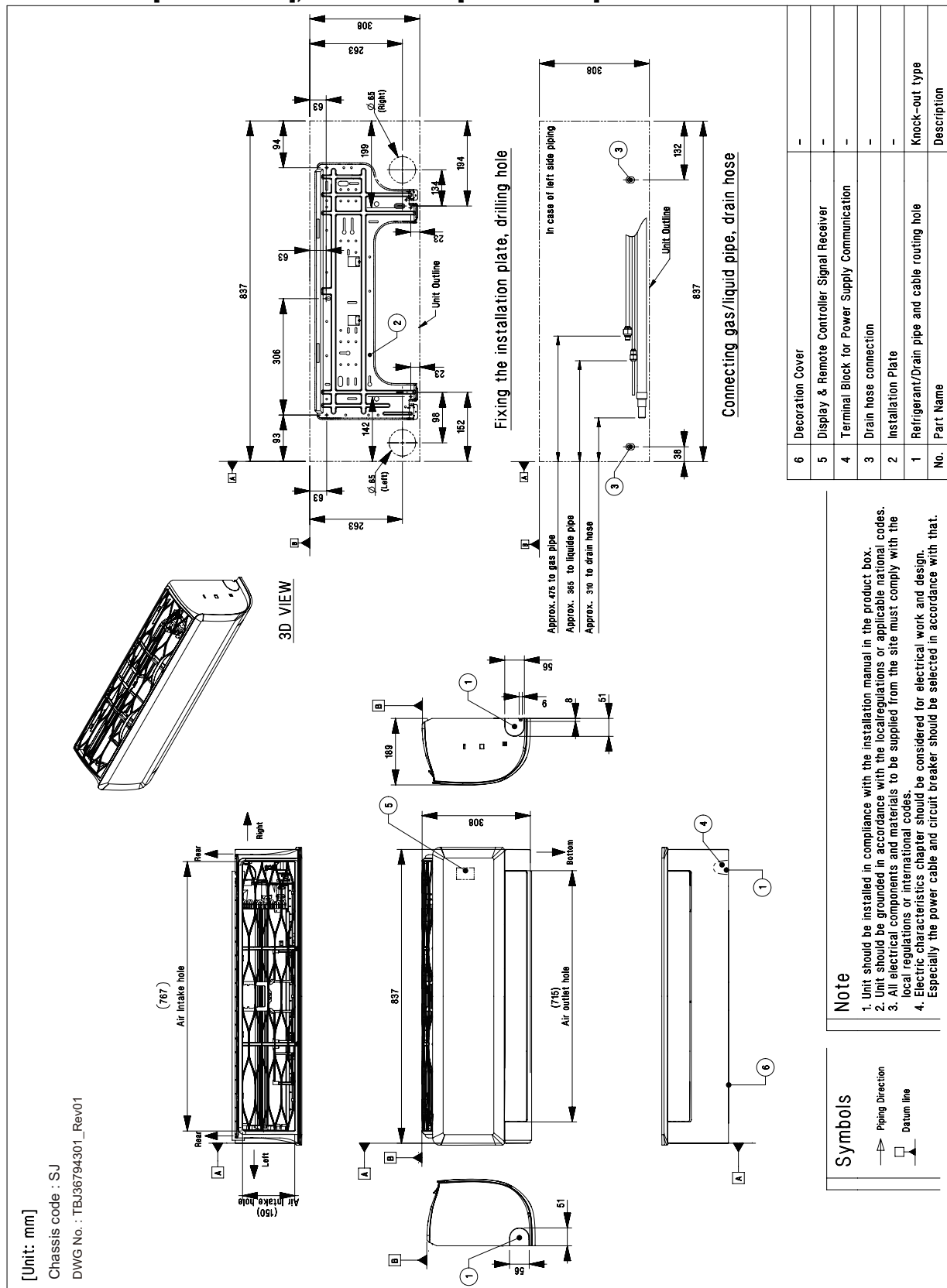


## 2. Specifications

Model Name				S3NM18KL3BA [SC18EQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W x No.		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	998 x 345 x 210
		W x H x D	inch	39-9/32 x 13-19/32 x 8-9/32
	Shipping	W x H x D	mm	1,080 x 422 x 281
		W x H x D	inch	42-17/32 x 16-5/8 x 11-1/16
Weight	Body	kg (lbs)		12.0 (26.5)
	Shipping	kg (lbs)		15.4 (34.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 16 x 20) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
	Corrosion Protection	-		PCM
	Fin Type	-		Slit
	Material, Tube / Fin	-		Cu / Al
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	SH / H / M / L	m <sup>3</sup> /min	18.5 / 14.2 / 11.3 / 9.9
		SH / H / M / L	ft <sup>3</sup> /min	653 / 501 / 399 / 350
Fan Motor	Type	-		BLDC
	Output	W x No.		60 x 1
Sound Pressure Level		SH / H / M / L / SL	dB(A)	48 / 44 / 38 / 35 / 31
Sound Power Level		Rated	dB(A)	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)
<b>Note</b> 1. Due to our policy of innovation some specifications may be changed without notification. 2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that. 3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741). 4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity. <ul style="list-style-type: none"> <li>Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB</li> <li>Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB</li> <li>Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.</li> </ul>				

### ◆ Deluxe (SJ Chassis)

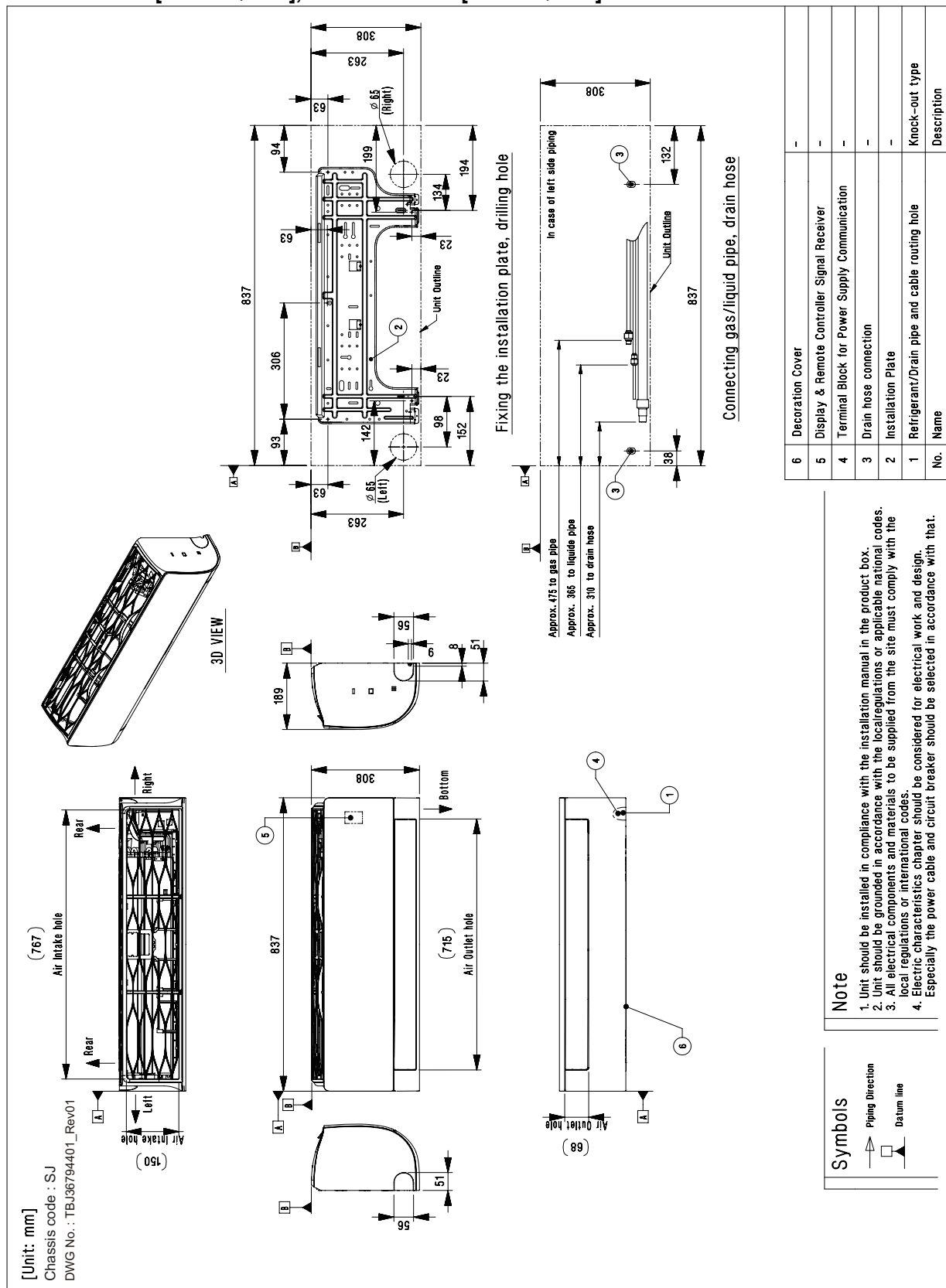
**S3NW09JL1ZA [DC09RQ NSJ], S3NM12JL1ZA [DC12RQ NSJ]**



### ◆ Standard Plus / Standard (SJ Chassis)

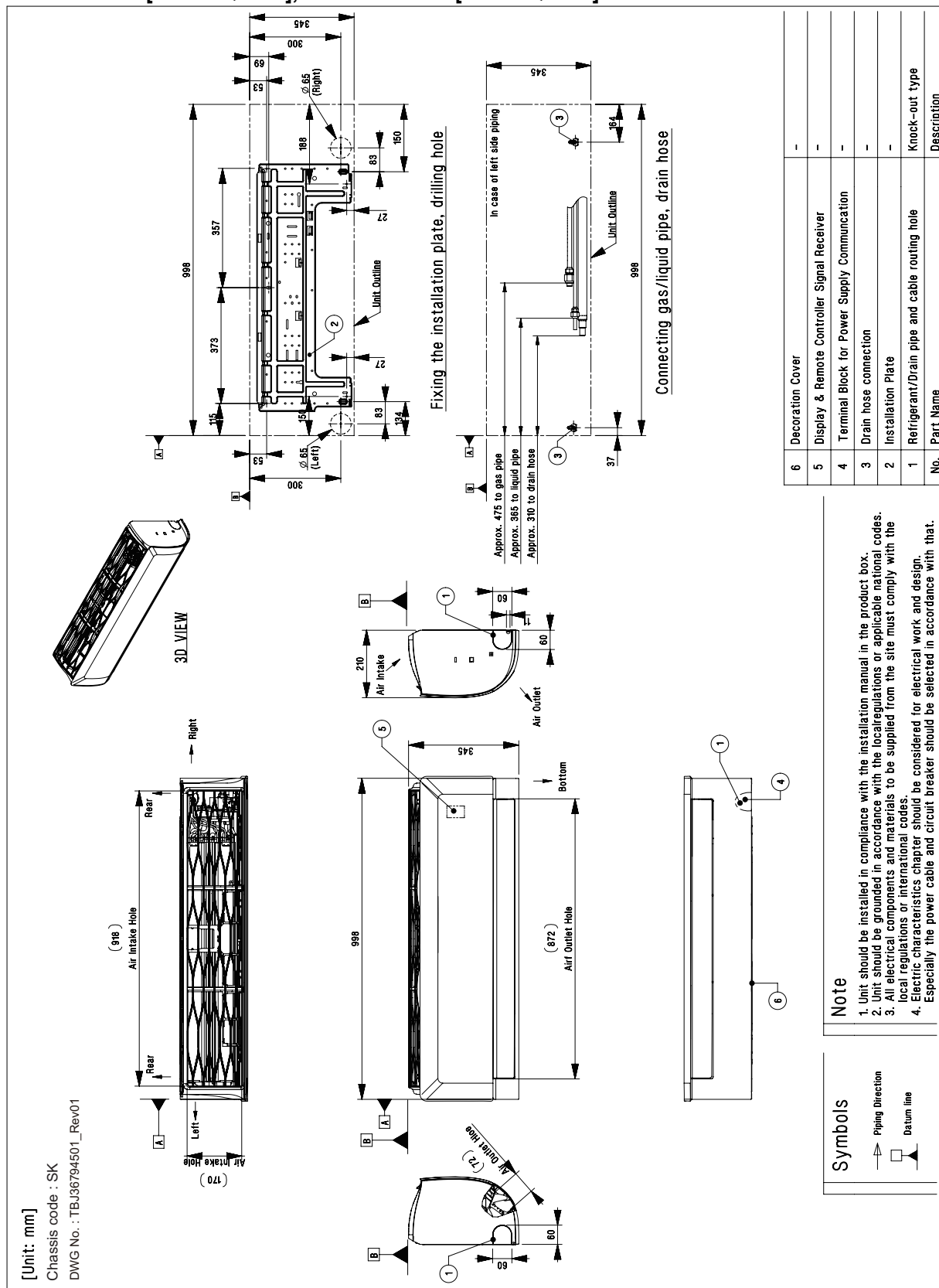
**S3NM09JA2FA [PC09SQ NSJ], S3NM12JA2FA [PC12SQ NSJ]**

**S3NM09JA3BA [SC09EQ NSJ], S3NM12JA3BA [SC12EQ NSJ]**



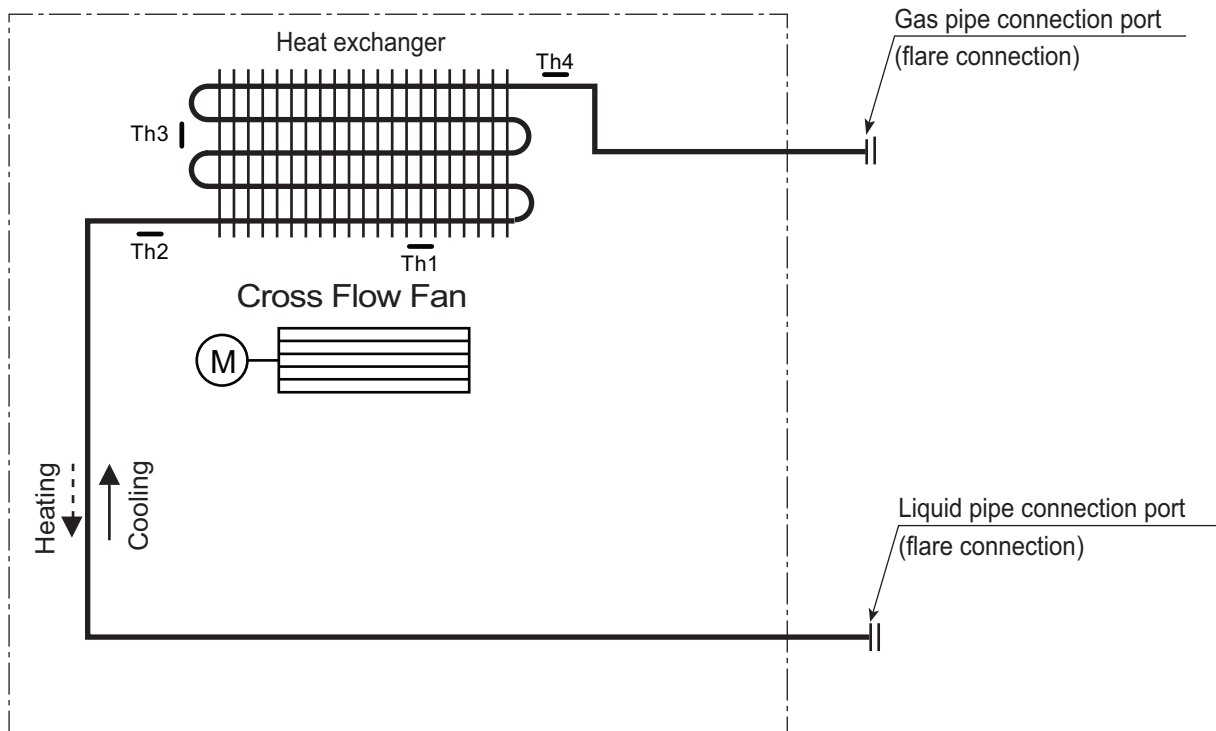
◆ **Deluxe / Standard Plus / Standard (SK Chassis)**

S3NM18KL1ZA [DC18RQ NSK], S3NM18KL2FA [PC18SQ NSK], S3NM18KL3BA [SC18EQ NSK], S3NM24K21ZA [DC24RQ NSK], S3NM24K22FA [PC24SQ NSK]



## 4. Piping diagrams

### ■ Models : Deluxe, Standard Plus, Standard

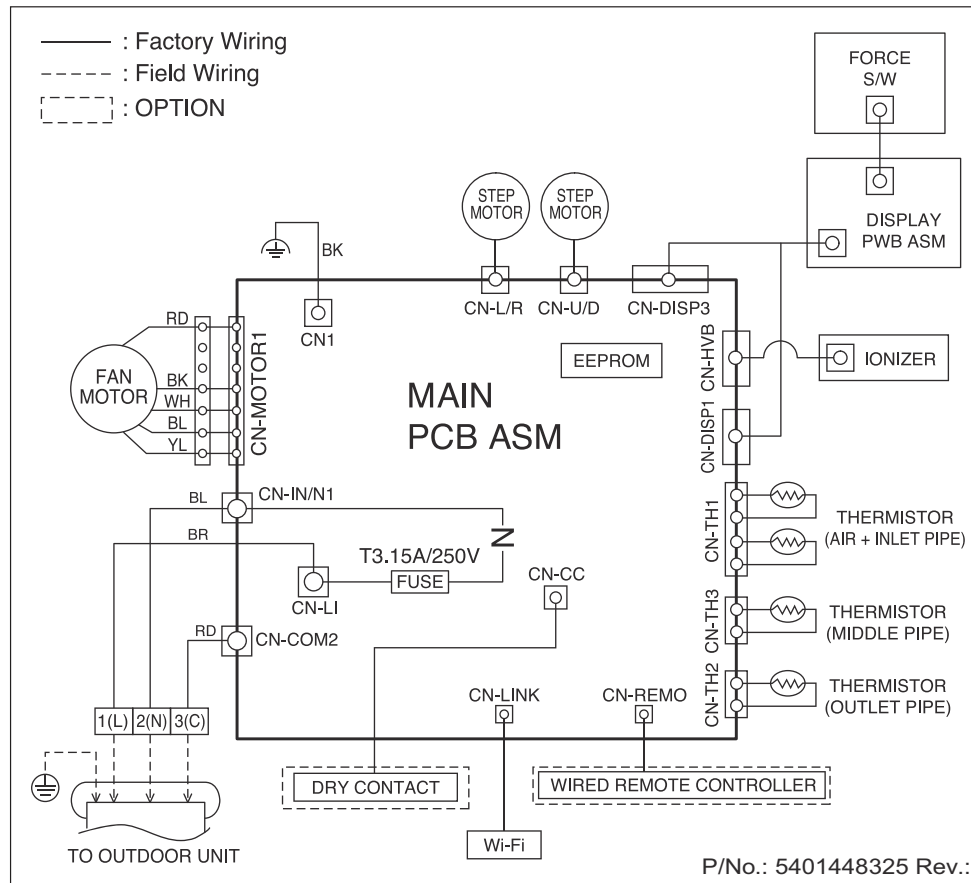


LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1
Th2	Thermistor for evaporator inlet temperature	
Th3	Thermistor for evaporator middle temperature	CN-TH3
Th4	Thermistor for evaporator outlet temperature	CN-TH2

## 5. Wiring Diagrams

### ■ Deluxe

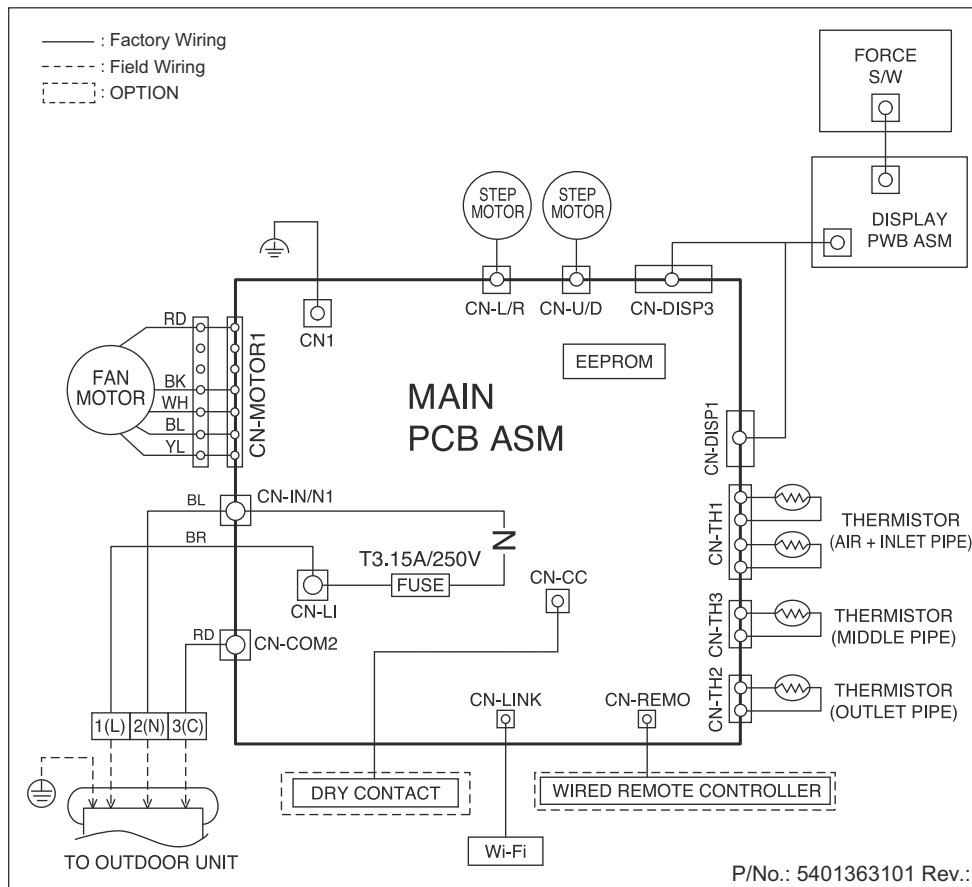
- ◆ Models : S3NM09JL1ZA [DC09RQ NSJ], S3NM12JL1ZA [DC12RQ NSJ],  
S3NM18KL1ZA [DC18RQ NSK], S3NM24K21ZA [DC24RQ NSK]



## 5. Wiring Diagrams

### ■ Standard plus

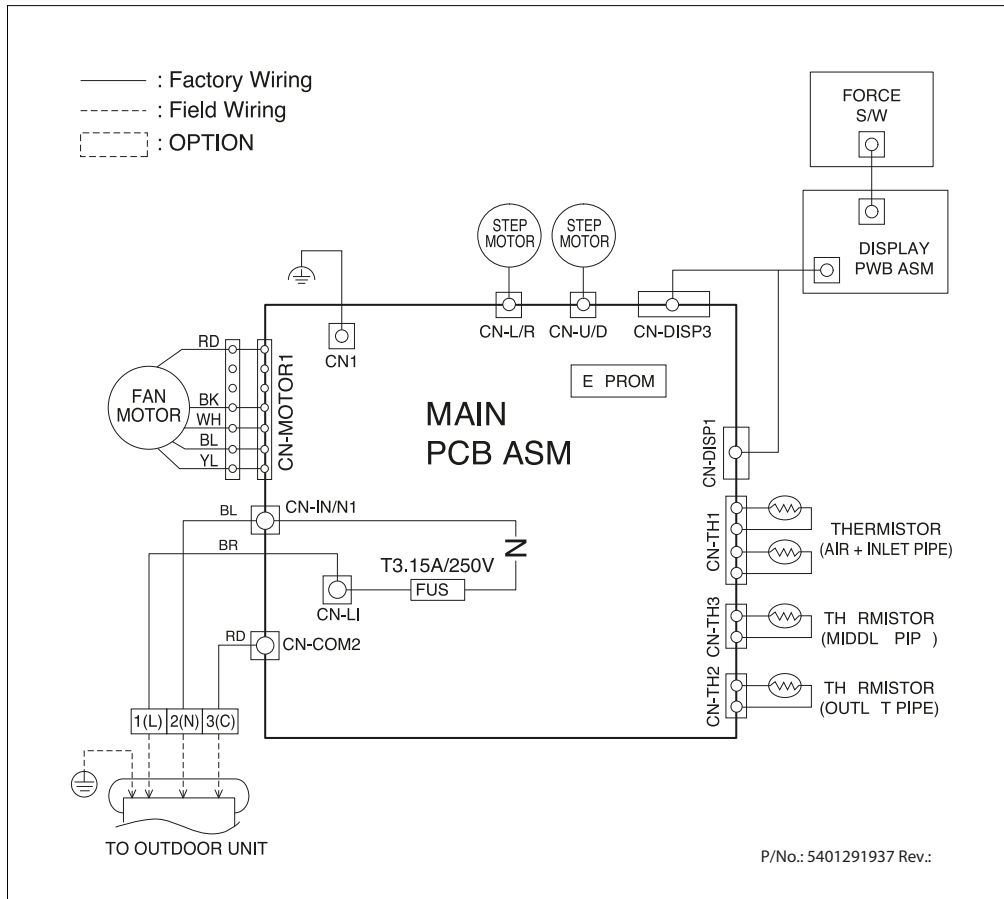
- ◆ Models : S3NM09JA2FA [PC09SQ NSJ], S3NM12JA2FA [PC12SQ NSJ],  
S3NM18KL2FA [PC18SQ NSK], S3NM24K22FA [PC24SQ NSK]



## 5. Wiring Diagrams

### ■ Standard

- ◆ Models : S3NM09JA3BA [SC09EQ NSJ], S3NM12JA3BA [SC12EQ NSJ],  
S3NM18KL3BA [SC18EQ NSK]





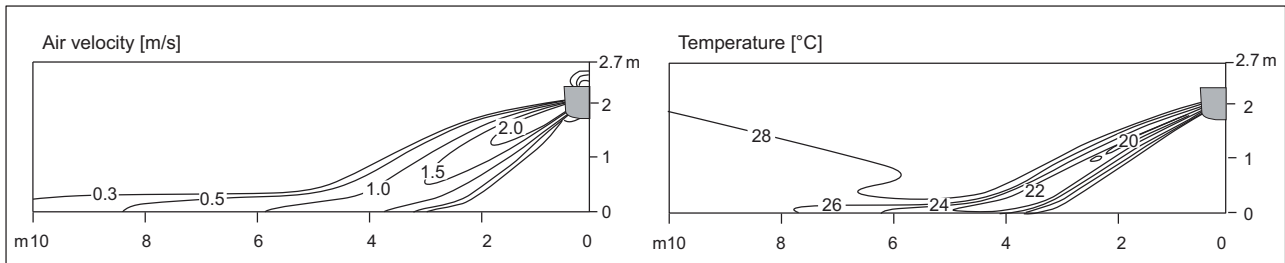
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM09JL1ZA [DC09RQ NSJ], S3NM12JL1ZA [DC12RQ NSJ]

### ◆ Cooling

#### Side View

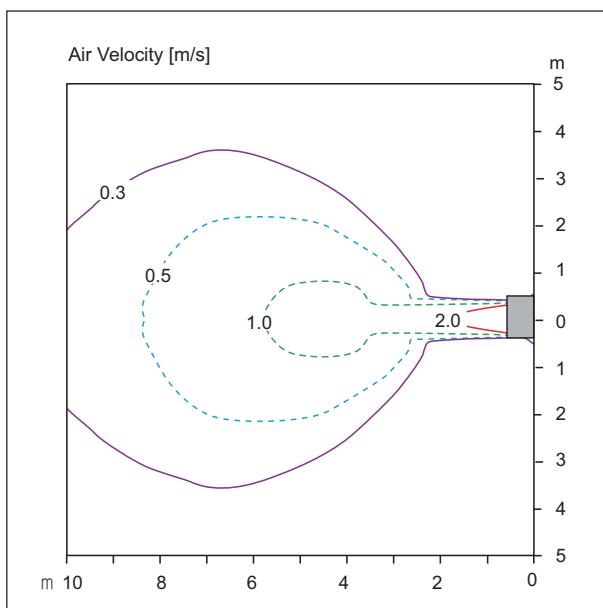
Discharge angle: 35°



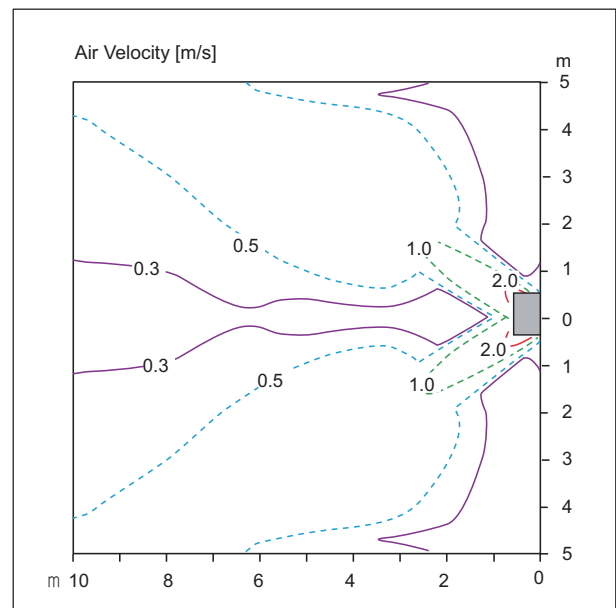
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.0m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

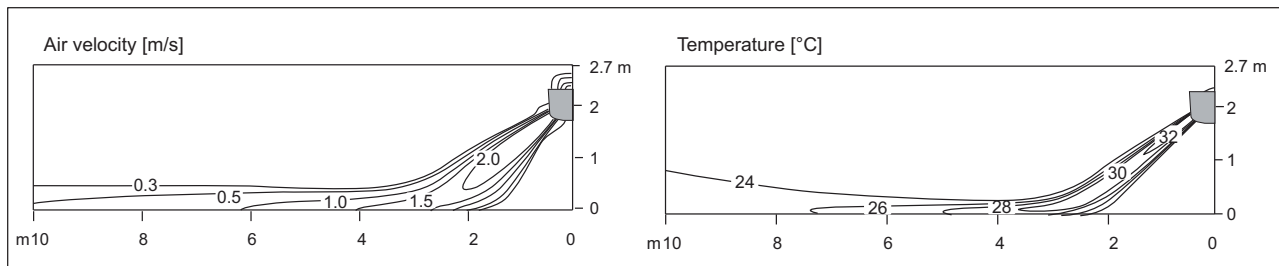
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

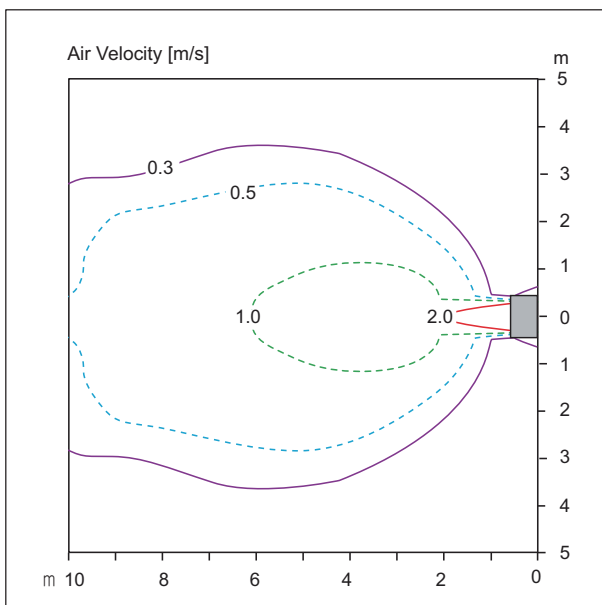
Discharge angle: 55°



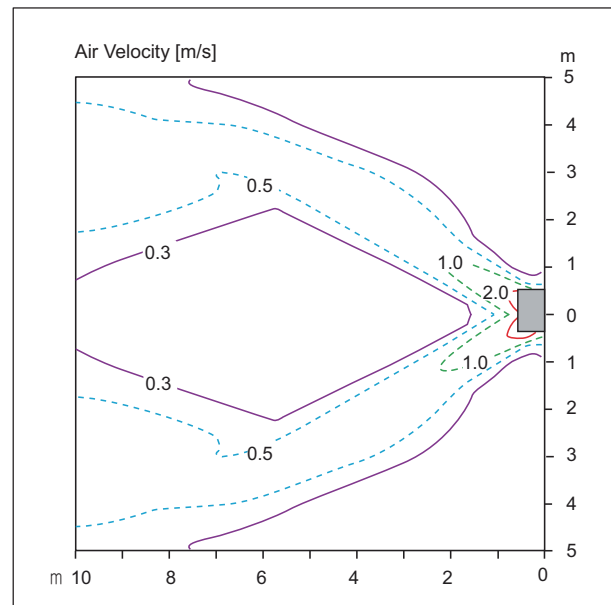
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.2m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

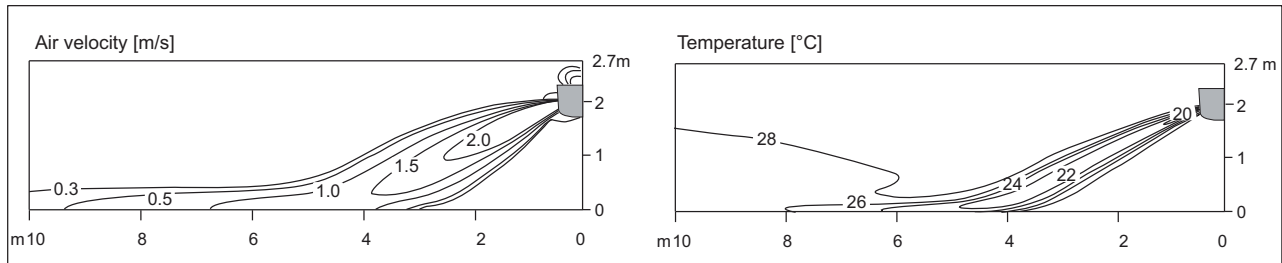
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM09JA2FA [PC09SQ NSJ], S3NM12JA2FA [PC12SQ NSJ]  
S3NM09JA3BA [SC09EQ NSJ], S3NM12JA3BA [SC12EQ NSJ]

### ◆ Cooling

#### Side View

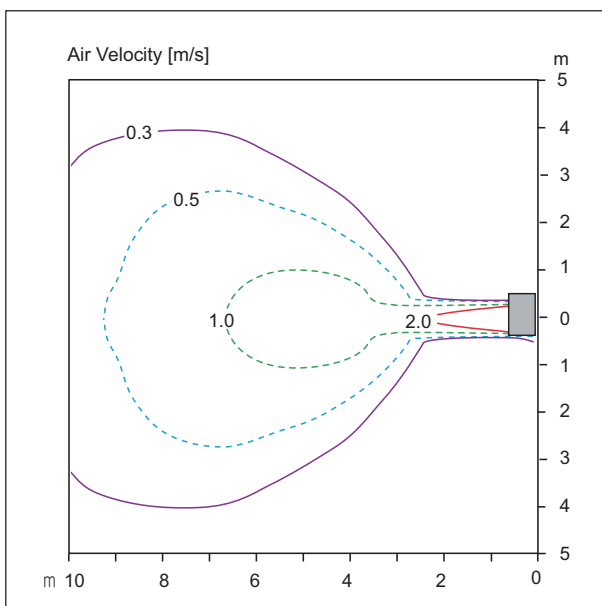
Discharge angle: 35°



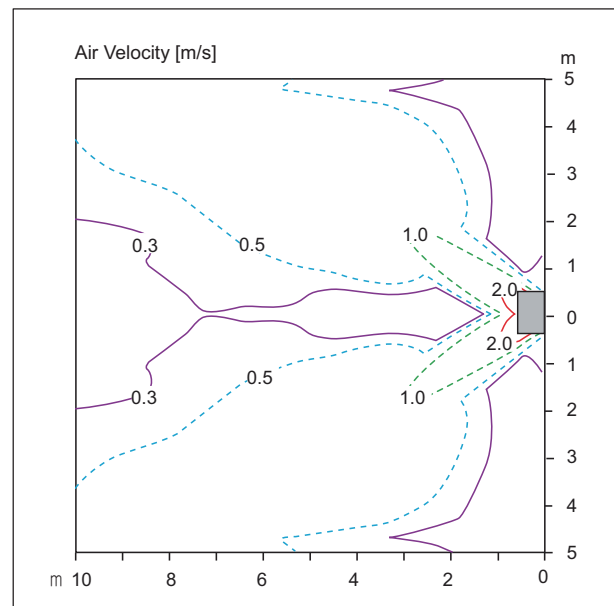
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

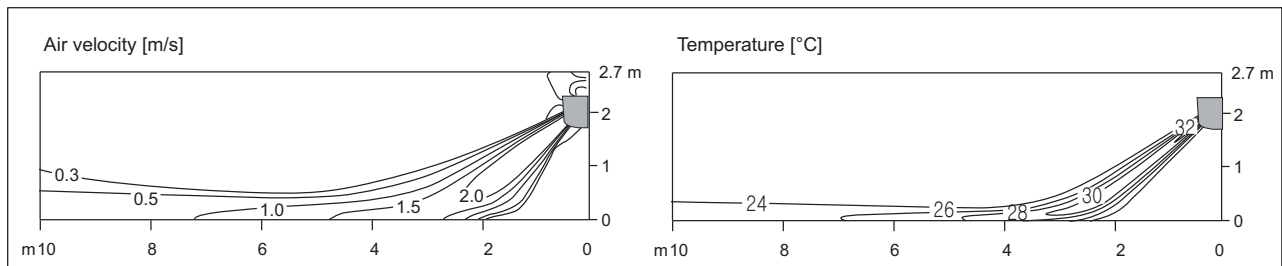
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

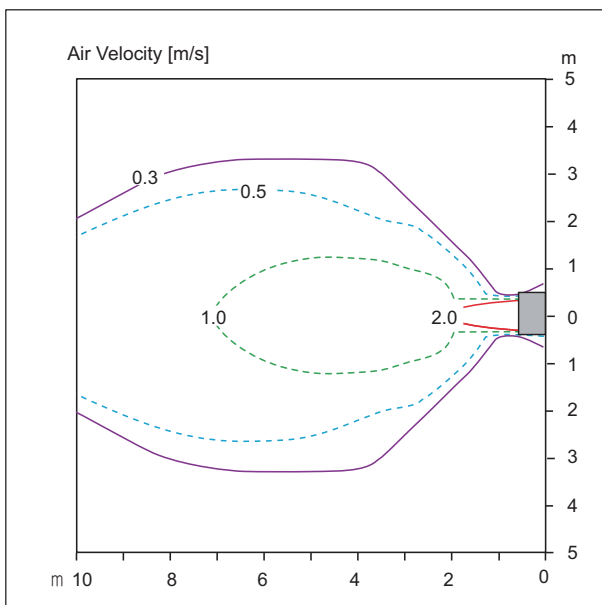
Discharge angle: 55°



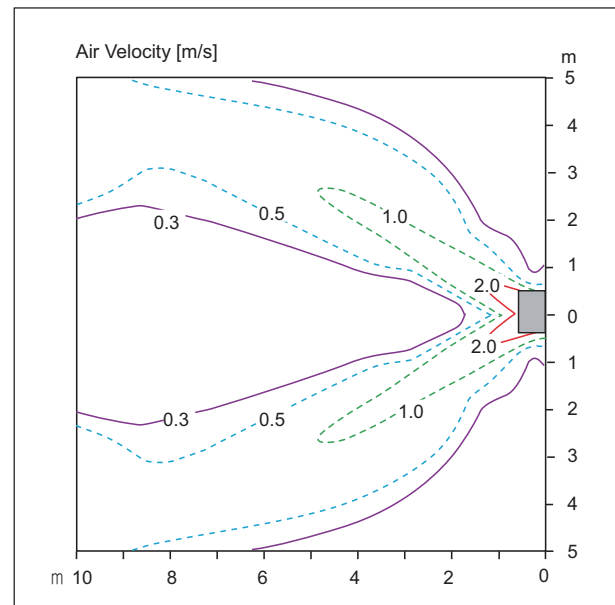
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

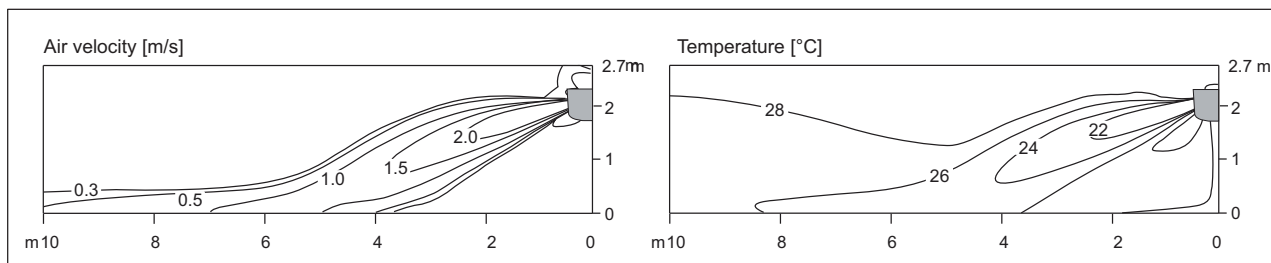
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM18KL1ZA [DC18RQ NSK], S3NM18KL2FA [PC18SQ NSK]  
S3NM18KL3BA [SC18EQ NSK]

### ◆ Cooling

#### Side View

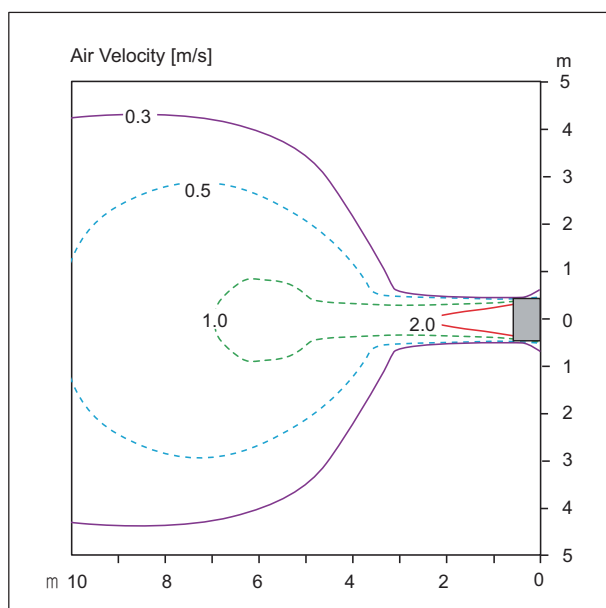
Discharge angle: 25°



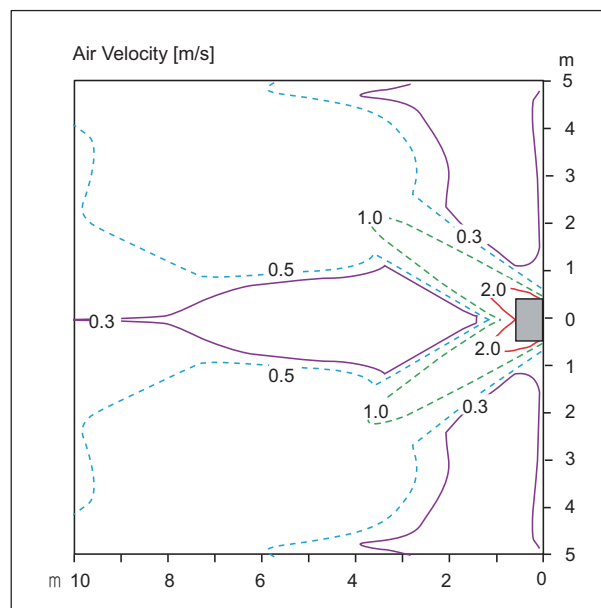
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

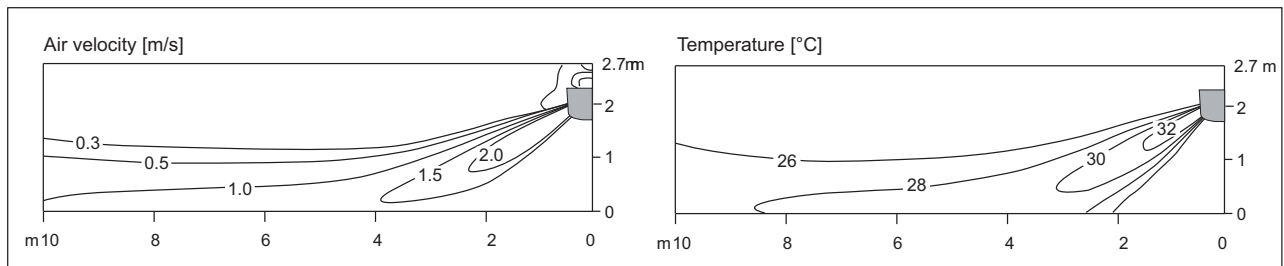
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

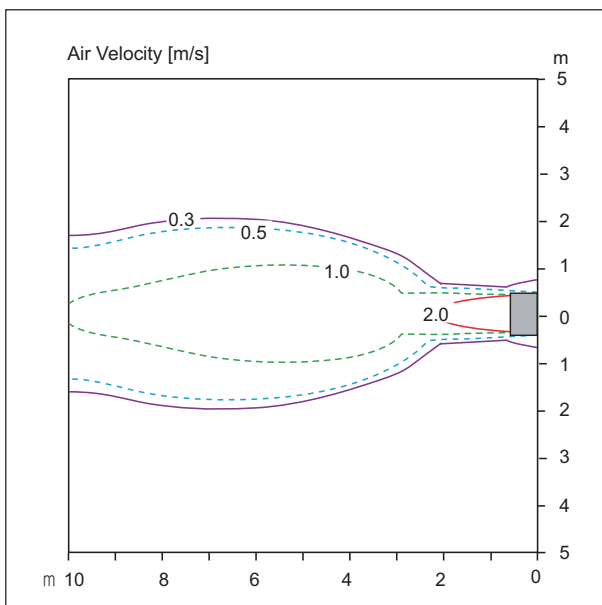
Discharge angle: 45°



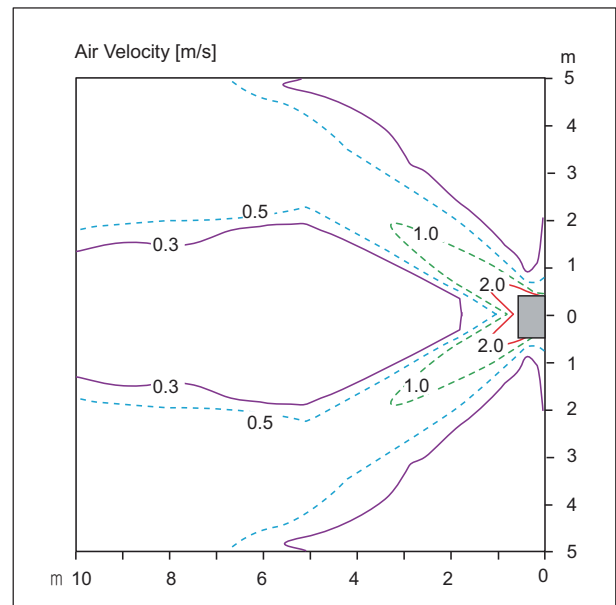
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

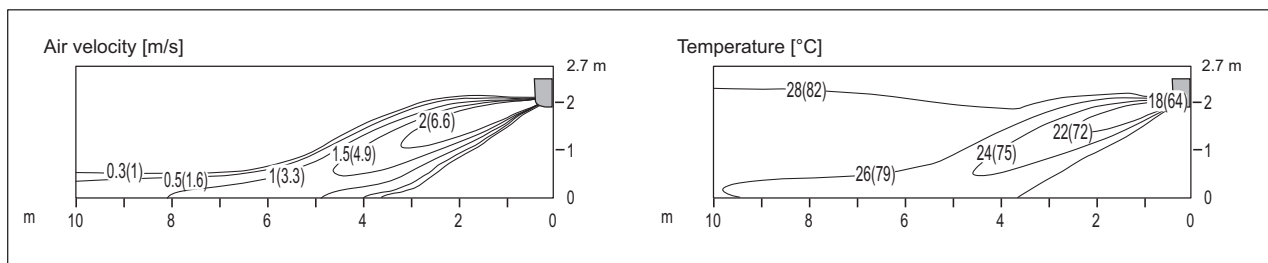
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM24K21ZA [DC24RQ NSK], S3NM24K22FA [PC24SQ NSK]

### ◆ Cooling

Side View

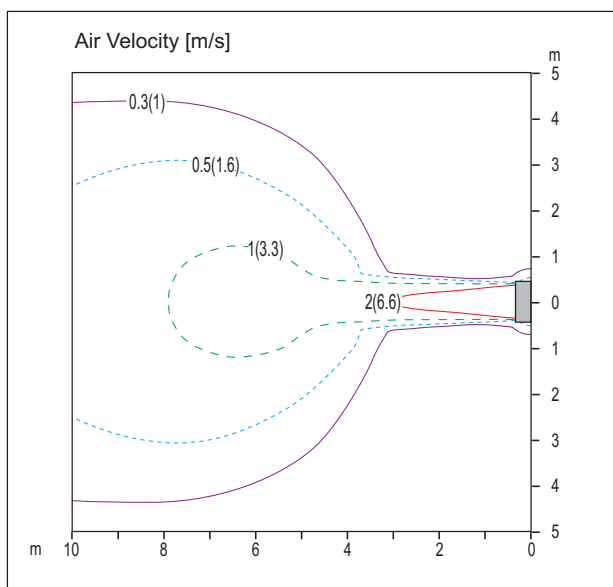
Discharge angle: 25°



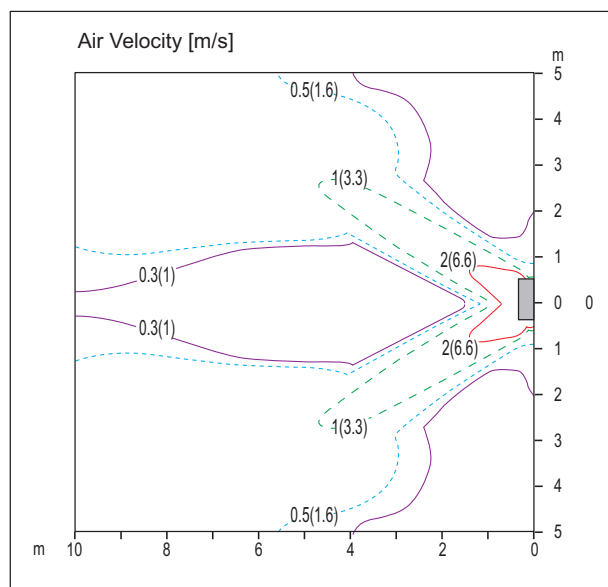
- Vertical Louver : Center
- Fan speed : Super High

Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 15.4m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

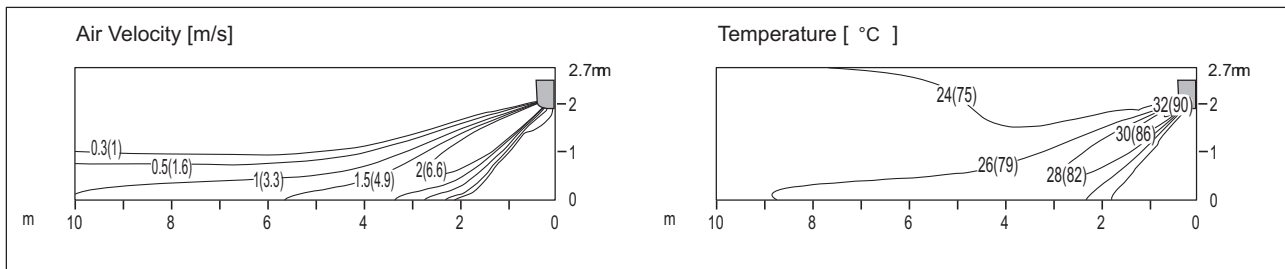
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

Side View

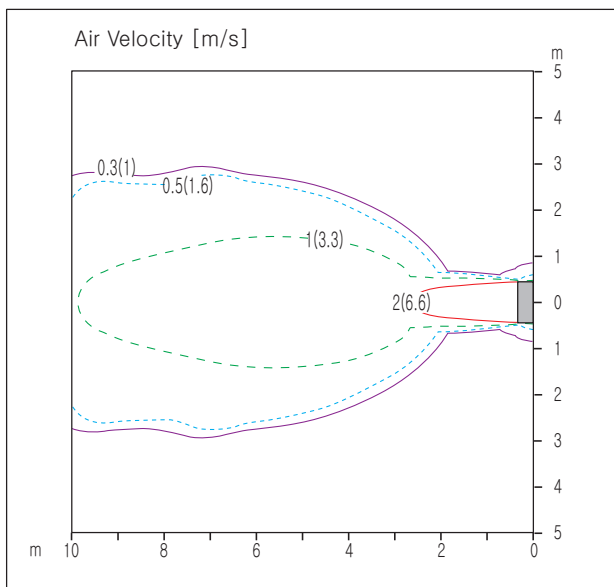
Discharge angle: 45°



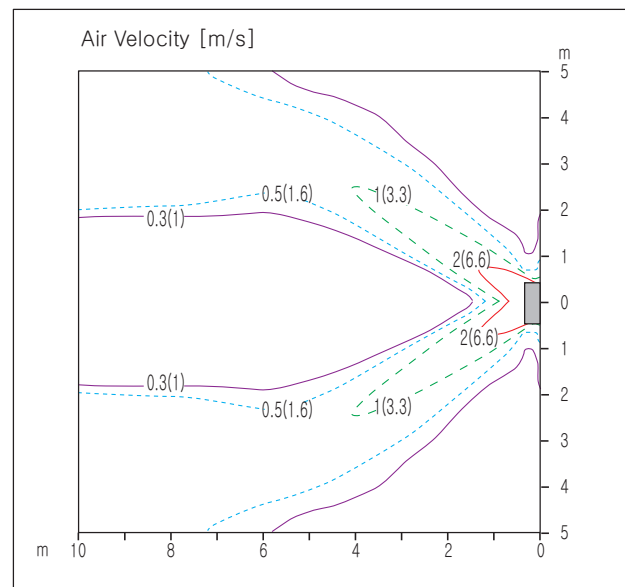
- Vertical Louver : Center
- Fan speed : Super High

### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 19.5m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

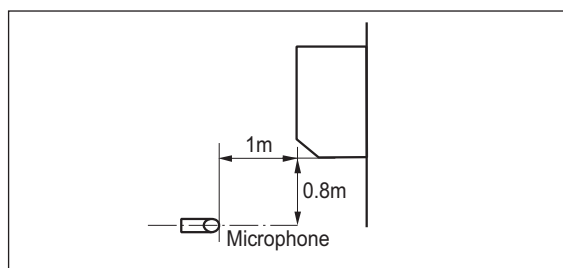
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.



## 7. Sound levels

### 7.1 Sound pressure level

#### ■ Overall



#### Note

1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

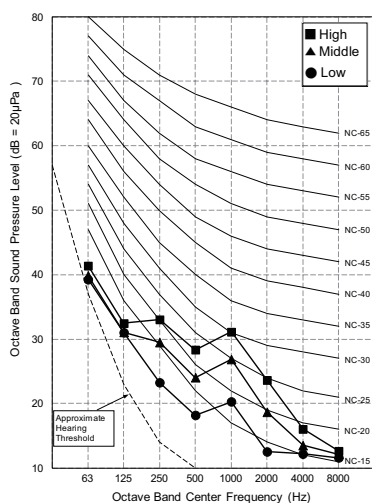
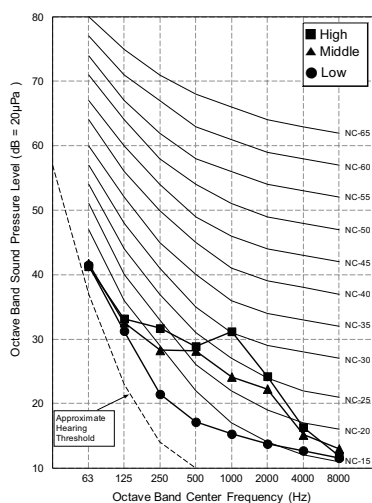
Model (Deluxe)	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
S3NM09JL1ZA [DC09RQ NSJ]	36	32	27
S3NM12JL1ZA [DC12RQ NSJ]	38	34	29
S3NM18KL1ZA [DC18RQ NSK]	44	38	35
S3NM24K21ZA [DC24RQ NSK]	47	42	34

Model (Standard plus)	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
S3NM09JA2FA [PC09SQ NSJ]	36	33	27
S3NM12JA2FA [PC12SQ NSJ]	40	35	27
S3NM18KL2FA [PC18SQ NSK]	44	38	35
S3NM24K22FA [PC24SQ NSK]	47	42	34

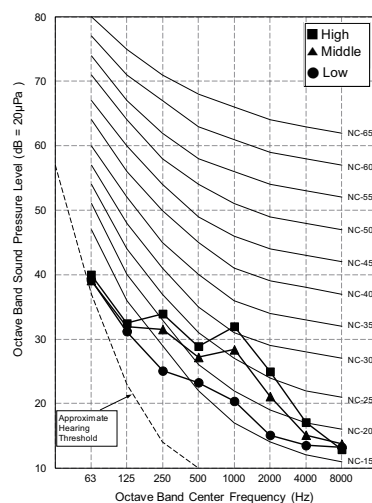
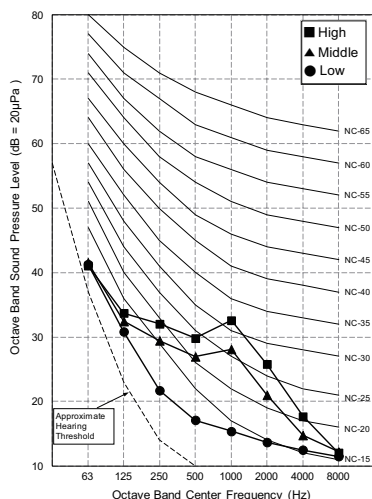
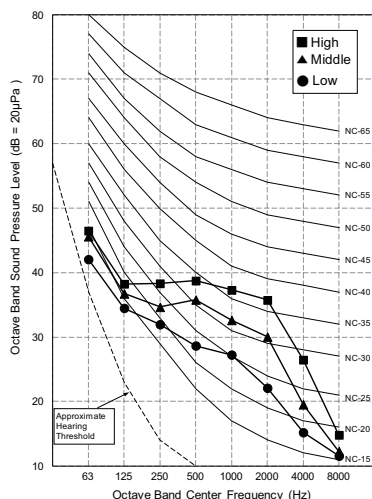
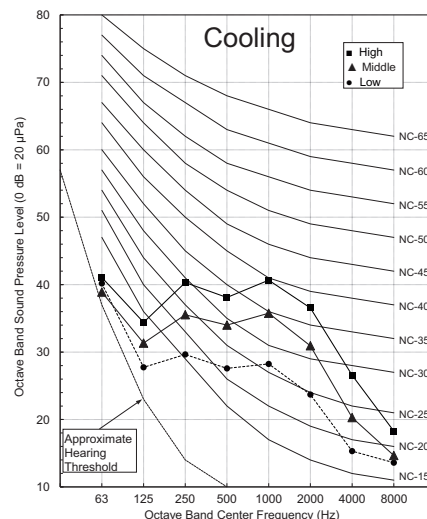
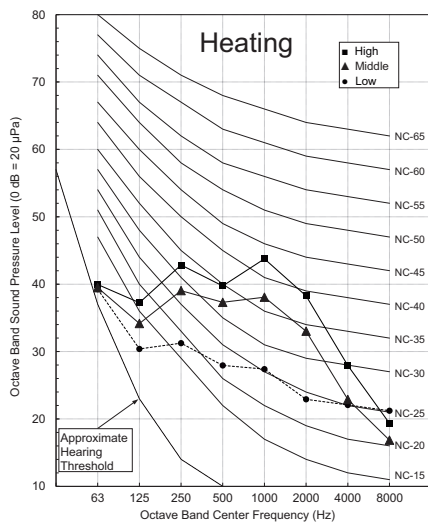
Model (Standard)	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
S3NM09JA3BA [SC09EQ NSJ]	36	33	27
S3NM12JA3BA [SC12EQ NSJ]	40	35	27
S3NM18KL3BA [SC18EQ NSK]	44	38	35

## 7. Sound levels

S3NM09JL1ZA [DC09RQ NSJ]

S3NM09JA2FA [PC09SQ NSJ]  
S3NM09JA3BA [SC09EQ NSJ]

S3NM12JL1ZA [DC12RQ NSJ]

S3NM12JA2FA [PC12SQ NSJ]  
S3NM12JA3BA [SC12EQ NSJ]S3NM18KL1ZA [DC18RQ NSK]  
S3NM18KL2FA [PC18SQ NSK]  
S3NM18KL3BA [SC18EQ NSK]S3NM24K21ZA [DC24RQ NSK]  
S3NM24K22FA [PC24SQ NSK]S3NM24K21ZA [DC24RQ NSK]  
S3NM24K22FA [PC24SQ NSK]

## 7. Sound levels

### 7.2 Sound power level

#### Note

- Operating condition
  - Power source : 220-240V 50 Hz / 220V 60 Hz
  - Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
  - Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
  - External static pressure is according to "Standard mode" value. Refer to the specifications.
- Data is valid at diffuse field condition.
- Data is valid at nominal operating condition
- Sound level can be increased in static pressure mode or used air guide.
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).
- Reference acoustic intensity 0dB =  $10E-6\mu W/m^2$
- Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard.  
Therefore, these values can be increased owing to ambient conditions during operation.

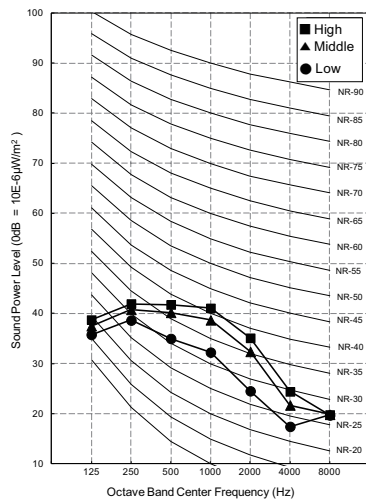
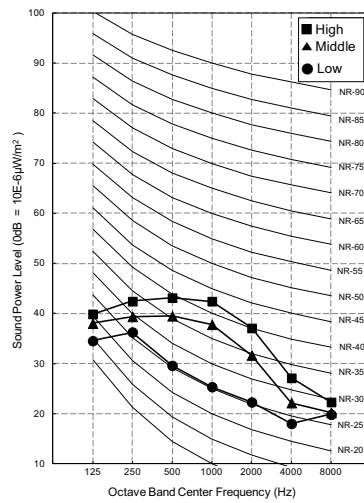
Model (Deluxe)	Sound power Levels [dB(A)]
	H
S3NM09JL1ZA [DC09RQ NSJ]	56
S3NM12JL1ZA [DC12RQ NSJ]	56
S3NM18KL1ZA [DC18RQ NSK]	60
S3NM24K21ZA [DC24RQ NSK]	65

Model (Standard plus)	Sound power Levels [dB(A)]
	H
S3NM09JA2FA [PC09SQ NSJ]	57
S3NM12JA2FA [PC12SQ NSJ]	57
S3NM18KL2FA [PC18SQ NSK]	60
S3NM24K22FA [PC24SQ NSK]	65

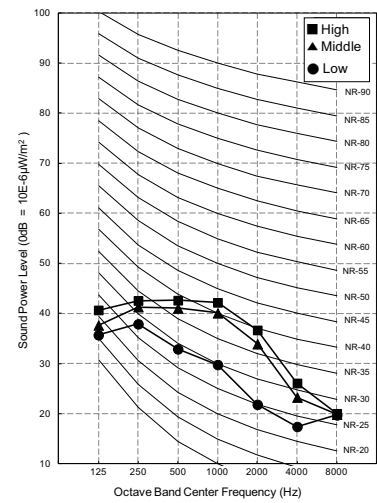
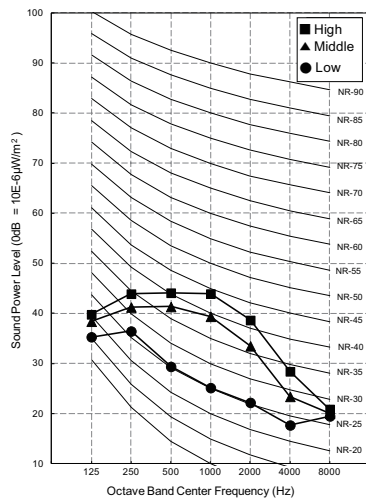
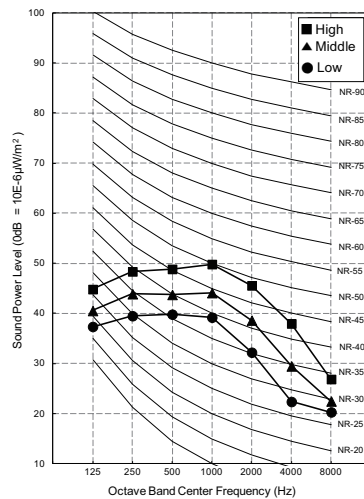
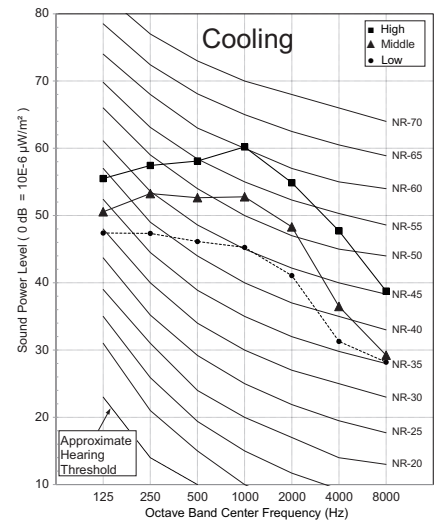
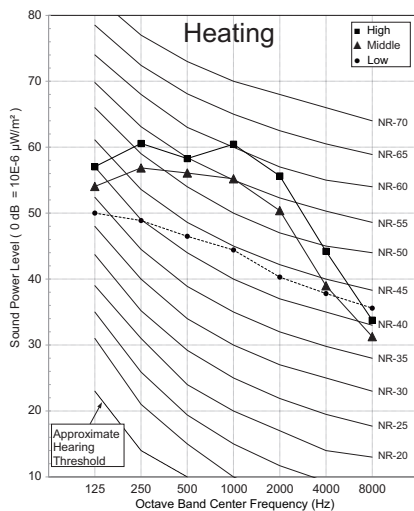
Model (Standard)	Sound power Levels [dB(A)]
	H
S3NM09JA3BA [SC09EQ NSJ]	57
S3NM12JA3BA [SC12EQ NSJ]	57
S3NM18KL3BA [SC18EQ NSK]	60

# 7. Sound levels

S3NM09JL1ZA [DC09RQ NSJ]

S3NM09JA2FA [PC09SQ NSJ]  
S3NM09JA3BA [SC09EQ NSJ]

S3NM12JL1ZA [DC12RQ NSJ]

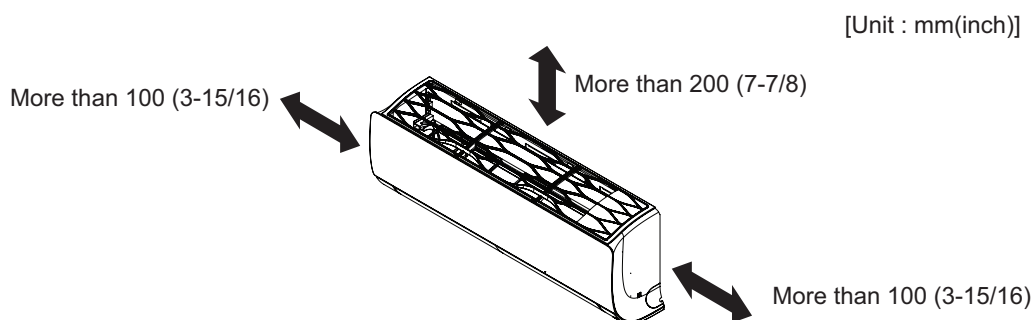
S3NM12JA2FA [PC12SQ NSJ]  
S3NM12JA3BA [SC12EQ NSJ]S3NM18KL1ZA [DC18RQ NSK]  
S3NM18KL2FA [PC18SQ NSK]  
S3NM18KL3BA [SC18EQ NSK]S3NM24K21ZA [DC24RQ NSK]  
S3NM24K22FA [PC24SQ NSK]S3NM24K21ZA [DC24RQ NSK]  
S3NM24K22FA [PC24SQ NSK]

## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.

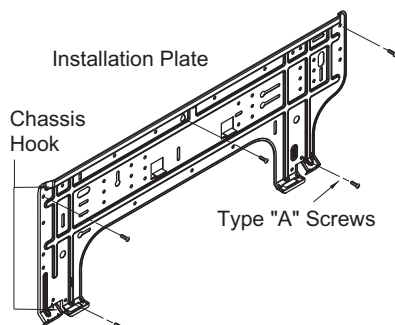


## 8. Installation

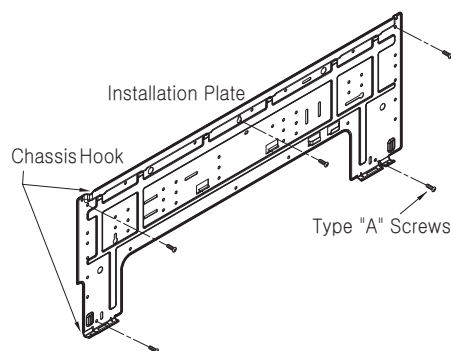
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
  - Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
    - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
  - Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

SJ Chassis

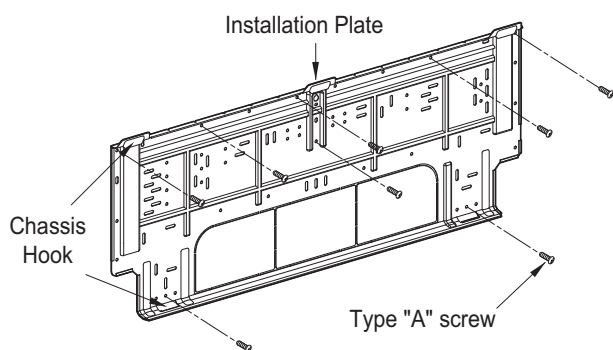


SK Chassis



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

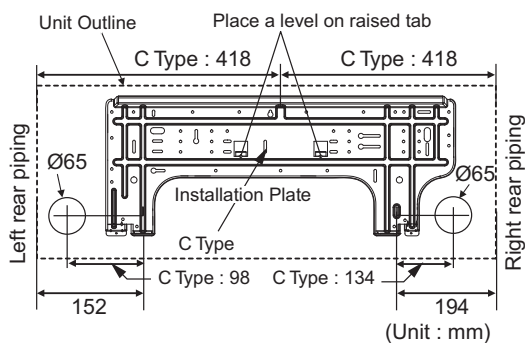
SV Chassis



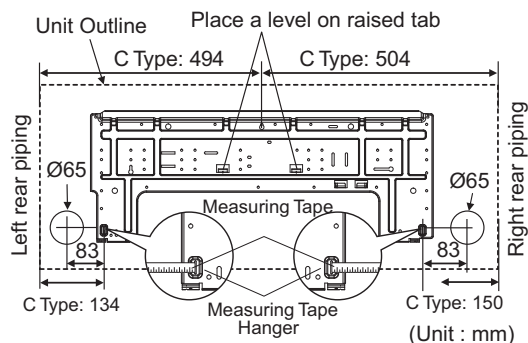
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

SJ chassis



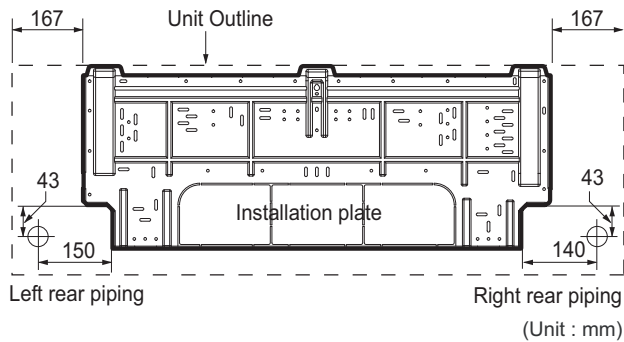
SK chassis



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

**SV chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### **CAUTION**

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

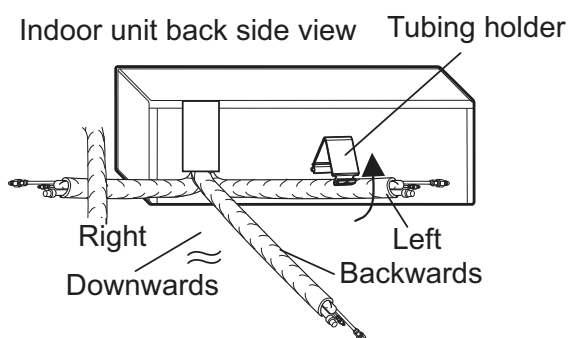
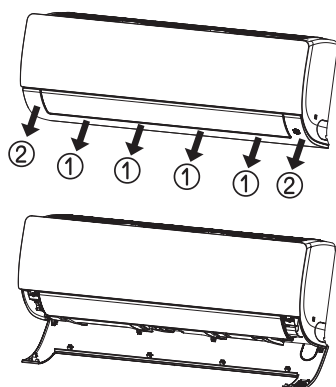
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.



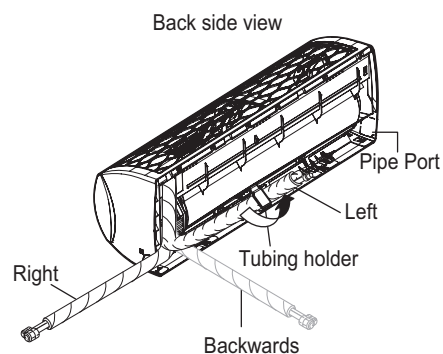
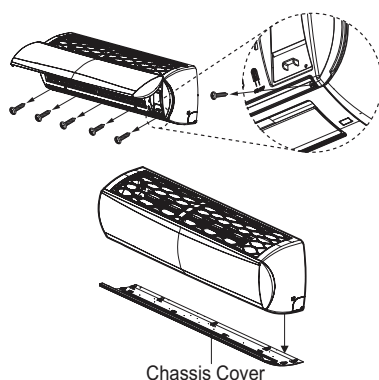
※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ SV chassis

1. Open the panel of the indoor unit.
2. Remove the chassis cover from the unit by loosening 5 screws.
3. Pull back the tubing holder.
4. Remove pipe port cover and position the piping.



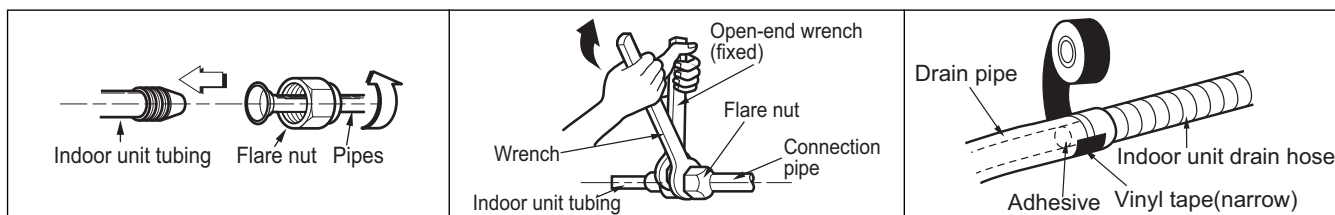
\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



## 8. Installation

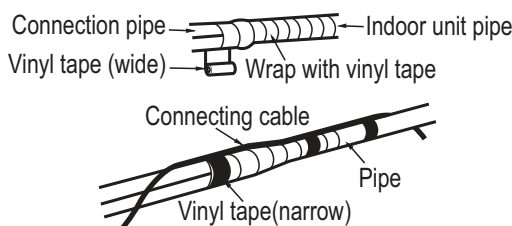
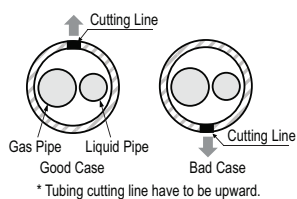
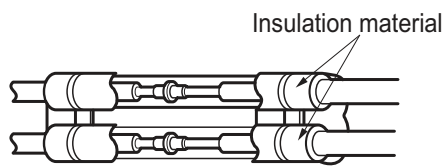
### ■ Connecting the installation pipe and drain hose



1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

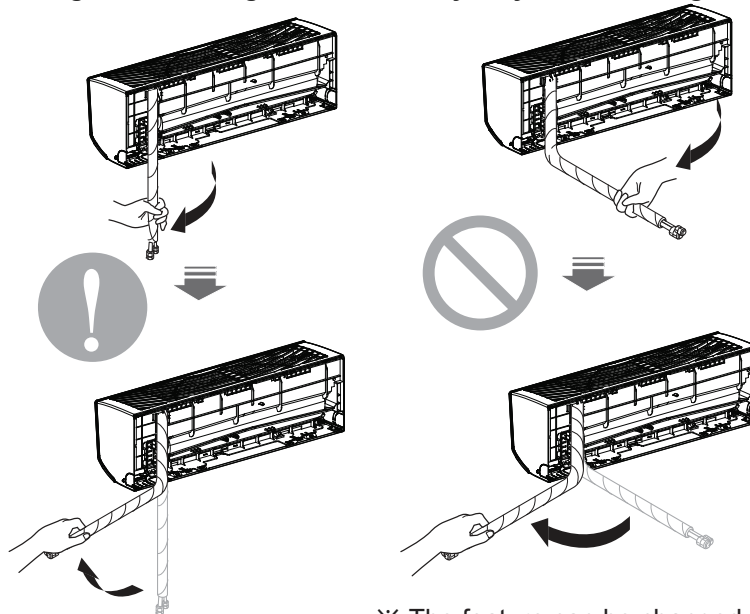
If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

## 8. Installation

### ⚠ CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



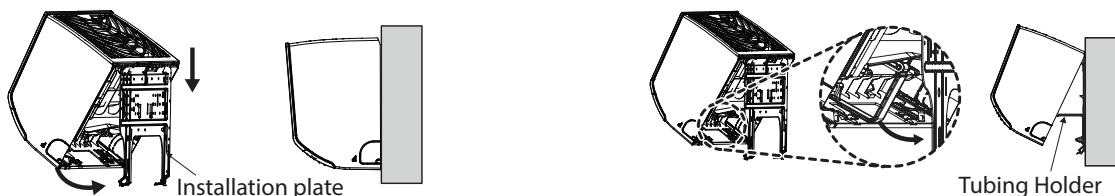
※ The feature can be changed according to type

- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.

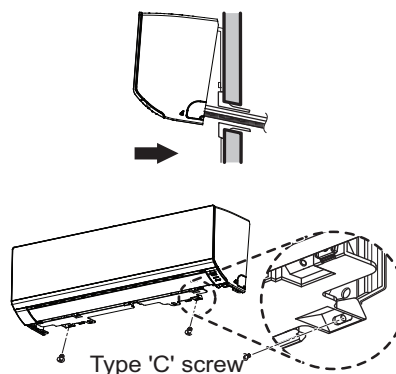


\* The feature can be changed according to type of model.

## 8. Installation

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

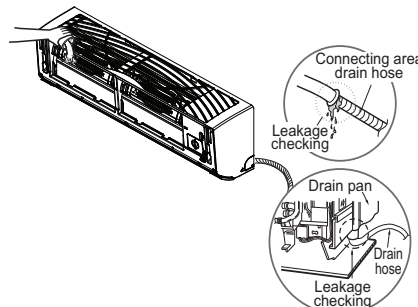
#### **CAUTION**

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

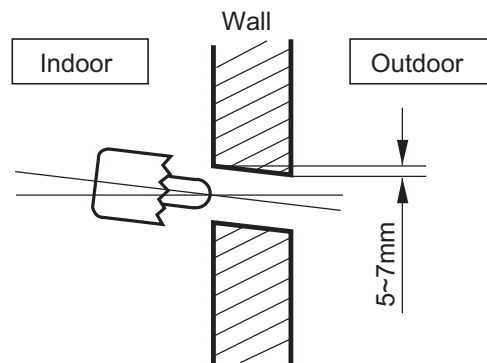


\* The feature can be changed according to type of model.

## 8. Installation

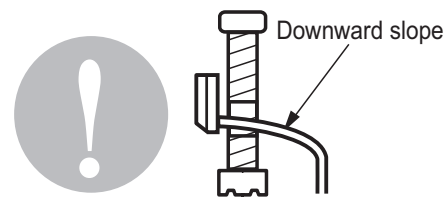
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing$  70mm hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

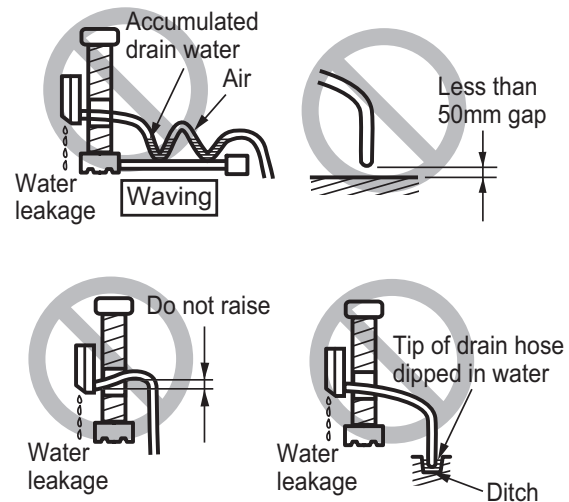


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

## 8. Installation

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### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

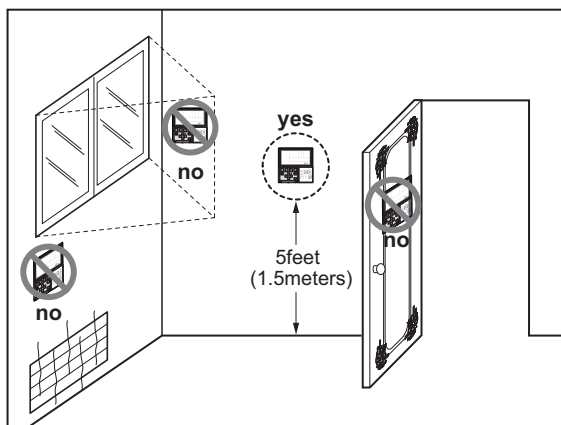
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **Wall Mounted Unit (3)**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ■ Standard plus (S)

### ◆ List of function

Category	Functions	ZMNW05GSJC0 [MJ05PC NSJ], ZMNW07GSJC0 [MJ07PC NSJ] ZMNW09GSJC0 [MJ09PC NSJ], ZMNW12GSJC0 [MJ12PC NSJ] ZMNW15GSJC0 [MJ15PC NSJ], ZMNW18GSKC0 [MJ18PC NSK] ZMNW24GSKC0 [MJ24PC NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Airpurifier (Plasma)	X
	Airpurifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

#### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.



# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZMNW05GSJC0 [MJ05PC NSJ] ZMNW07GSJC0 [MJ07PC NSJ] ZMNW09GSJC0 [MJ09PC NSJ] ZMNW12GSJC0 [MJ12PC NSJ] ZMNW15GSJC0 [MJ15PC NSJ] ZMNW18GSKC0 [MJ18PC NSK] ZMNW24GSKC0 [MJ24PC NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, -: Not applicable, Embedded: Included with product.
2. \*: Some advanced functions controlled by individual controller cannot be operated.
3. \*\*: It could not be operated some functions.
4. \*\*\*: Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

### ■ Standard plus (S)

Model Name				ZMNW05GSJC0 [MJ05PC NSJ]	ZMNW07GSJC0 [MJ07PC NSJ]
Power Supply			V, Ø, Hz	220-240,1, 50	220-240,1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling		kW	1.5	2.1
	Heating		kW	1.6	2.4
Power Input	Min./Nom./Max.		W	11 / 16 / 30	11 / 17 / 30
Running Current	Min./Nom./Max.		A	0.10 / 0.13 / 0.20	0.10 / 0.14 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	818 × 316 × 189	818 × 316 × 189
		W x H x D	inch	32-7/32 x 12-7/16 x 7-7/16	32-7/32 x 12-7/16 x 7-7/16
	Shipping	W x H x D	mm	892 x 381 x 249	892 x 381 x 249
		W x H x D	inch	35-1/8 x 15 x 9-13/16	35-1/8 x 15 x 9-13/16
Weight	Body		kg (lbs)	8.2 (18.1)	8.2 (18.1)
	Shipping		kg (lbs)	10.2 (22.5)	10.2 (22.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 23 x 22) x 1	(2 x 23 x 22) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.20 (2.15)	0.20 (2.15)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	7.1 / 5.7 / 4.6	7.2 / 5.8 / 4.6
		H / M / L	ft <sup>3</sup> /min	251 / 201 / 162	254 / 204 / 148
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	30 x 1	30 x 1
Sound Pressure Level		H / M / L	dB(A)	34 / 31 / 26	35 / 31 / 26
Sound Power Level		Rated	dB(A)	56	56
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

#### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation (Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ZMNW09GSJC0 [MJ09PC NSJ]	ZMNW12GSJC0 [MJ12PC NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		2.6	3.5
	Heating	kW		3.2	4
Power Input	Min./Nom./Max.	W		11 / 18 / 30	11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20	0.10 / 0.17 / 0.20
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	818 x 316 x 189	818 x 316 x 189
		W x H x D	inch	32-7/32 x 12-7/16 x 7-7/16	32-7/32 x 12-7/16 x 7-7/16
	Shipping	W x H x D	mm	892 x 381 x 249	892 x 381 x 249
		W x H x D	inch	35-1/8 x 15 x 9-13/16	35-1/8 x 15 x 9-13/16
Weight	Body	kg (lbs)		8.2 (18.1)	8.2 (18.1)
	Shipping	kg (lbs)		10.2 (22.5)	10.2 (22.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 23 x 22) x 1	(2 x 23 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.20 (2.15)	0.20 (2.15)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	7.6 / 6.2 / 4.8	8.0 / 6.6 / 5.5
		H / M / L	ft <sup>3</sup> /min	268 / 218 / 169	282 / 233 / 177
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	30 x 1
Sound Pressure Level	H / M / L	dB(A)		36 / 32 / 27	38 / 34 / 29
Sound Power Level	Rated	dB(A)		56	56
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ZMNW15GSJC0 [MJ15PC NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		4.2
	Heating	kW		5.4
Power Input	Min./Nom./Max.	W		12 / 21 / 30
Running Current	Min./Nom./Max.	A		0.12 / 0.18 / 0.20
Casing Color		-		Munsell 7.5BG 10/2 (RAL 9016)
Dimensions	Body	W x H x D	mm	818 x 316 x 189
		W x H x D	inch	32-7/32 x 12-7/16 x 7-7/16
	Shipping	W x H x D	mm	892 x 381 x 249
		W x H x D	inch	35-1/8 x 15 x 9-13/16
Weight	Body	kg (lbs)		8.2 (18.1)
	Shipping	kg (lbs)		10.2 (22.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 23 x 22) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.20 (2.15)
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	8.9 / 7.2 / 5.6
		H / M / L	ft <sup>3</sup> /min	314 / 254 / 198
Fan Motor	Type	-		BLDC
	Output	W x No.		30 x 1
Sound Pressure Level	H / M / L	dB(A)		42 / 35 / 30
Sound Power Level	Rated	dB(A)		57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ZMNW18GSKC0 [MJ18PC NSK]	ZMNW24GSKC0 [MJ24PC NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		5.3	7
	Heating	kW		6.3	7.5
Power Input	Min./Nom./Max.	W		26 / 39 / 60	27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40	0.24 / 0.33 / 0.40
Casing Color			-	Munsell 7.5BG 10/2 (RAL 9016)	
Dimensions	Body	W x H x D	mm	975 x 354 x 209	975 x 354 x 209
		W x H x D	inch	38-3/8 x 13-15/16 x 8-7/32	38-3/8 x 13-15/16 x 8-7/32
	Shipping	W x H x D	mm	1,063 x 420 x 274	1,063 x 420 x 274
		W x H x D	inch	41-27/32 x 16-17/32 x 10-25/32	41-27/32 x 16-17/32 x 10-25/32
Weight	Body	kg (lbs)		10.9 (24.0)	11.5 (25.4)
	Shipping	kg (lbs)		13.9 (30.6)	14.5 (32.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.	-		(2 x 16 x 20) x 1	(2 x 16 x 20) x 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.24 (2.58)	0.24 (2.58)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	15.8 / 12.4 / 10.0	16.9 / 12.8 / 10.4
		H / M / L	ft <sup>3</sup> /min	558 / 438 / 353	597 / 452 / 367
Fan Motor	Type	-		BLDC	BLDC
	Output	W x No.		30 x 1	60 x 1
Sound Pressure Level	H / M / L	dB(A)		44 / 38 / 34	46 / 41 / 36
Sound Power Level	Rated	dB(A)		59	65
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 12.7 (1/2)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

### Note

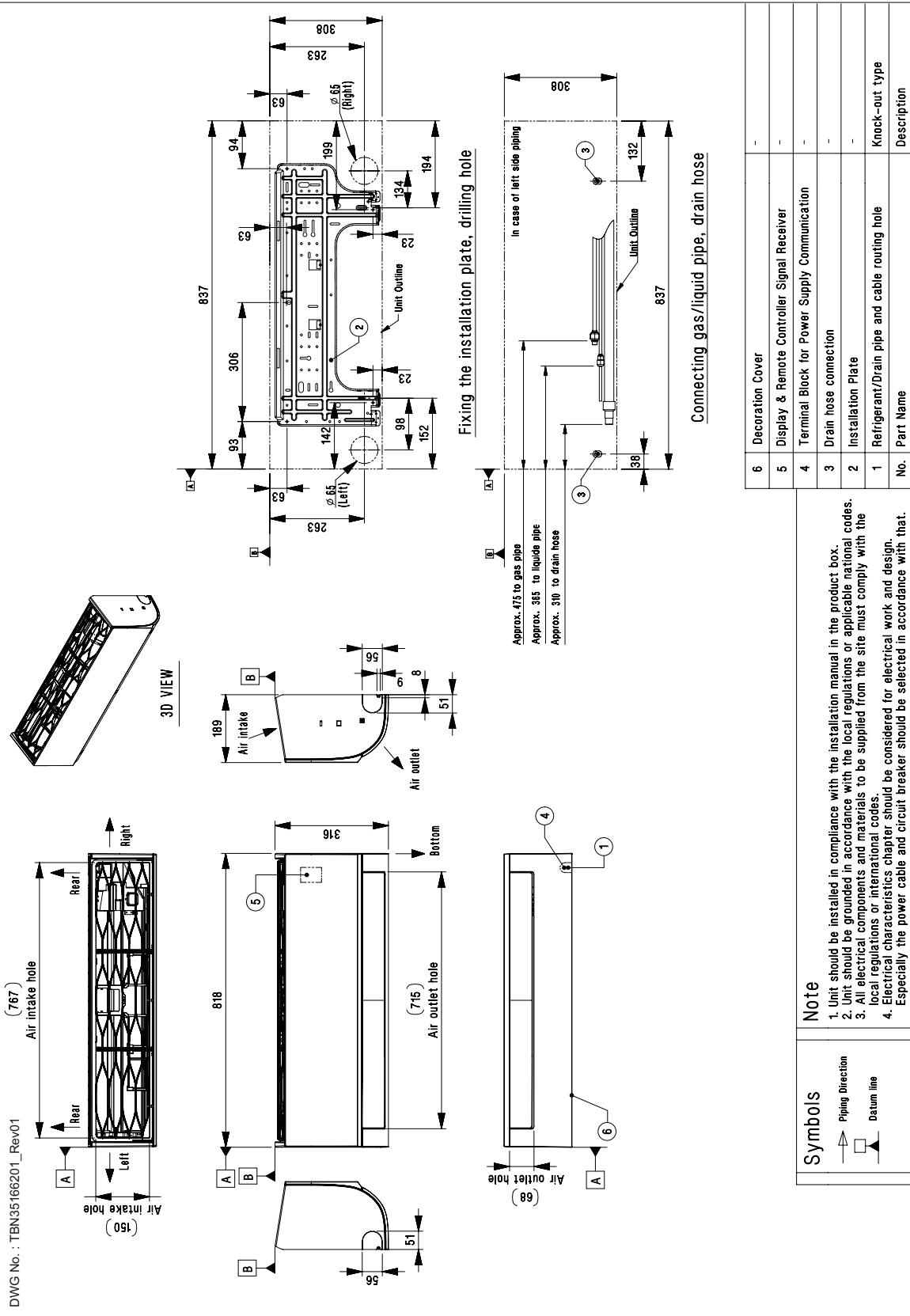
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## ◆ SJ Chassis

[Unit: mm]

Chassis code : SJ

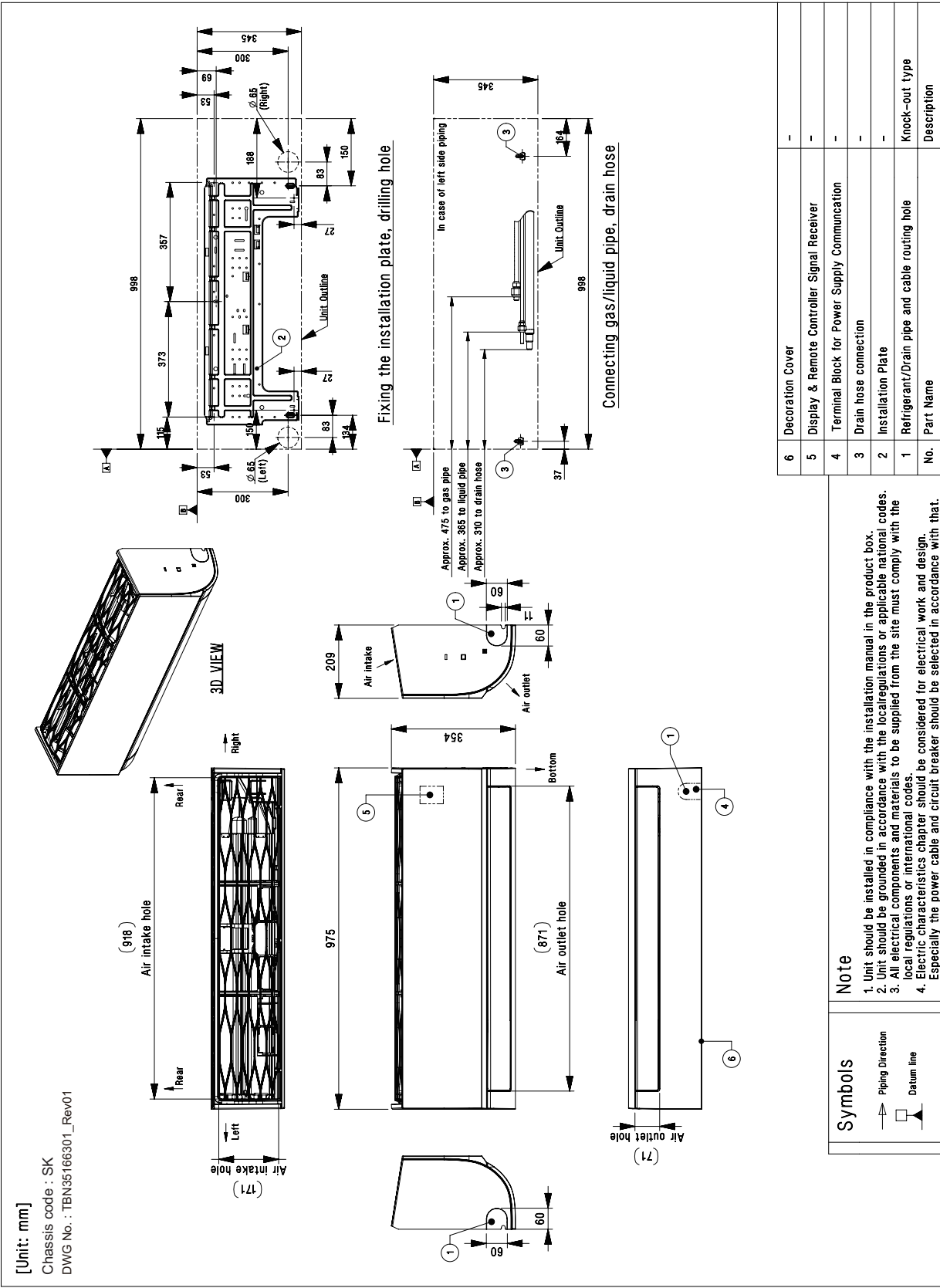
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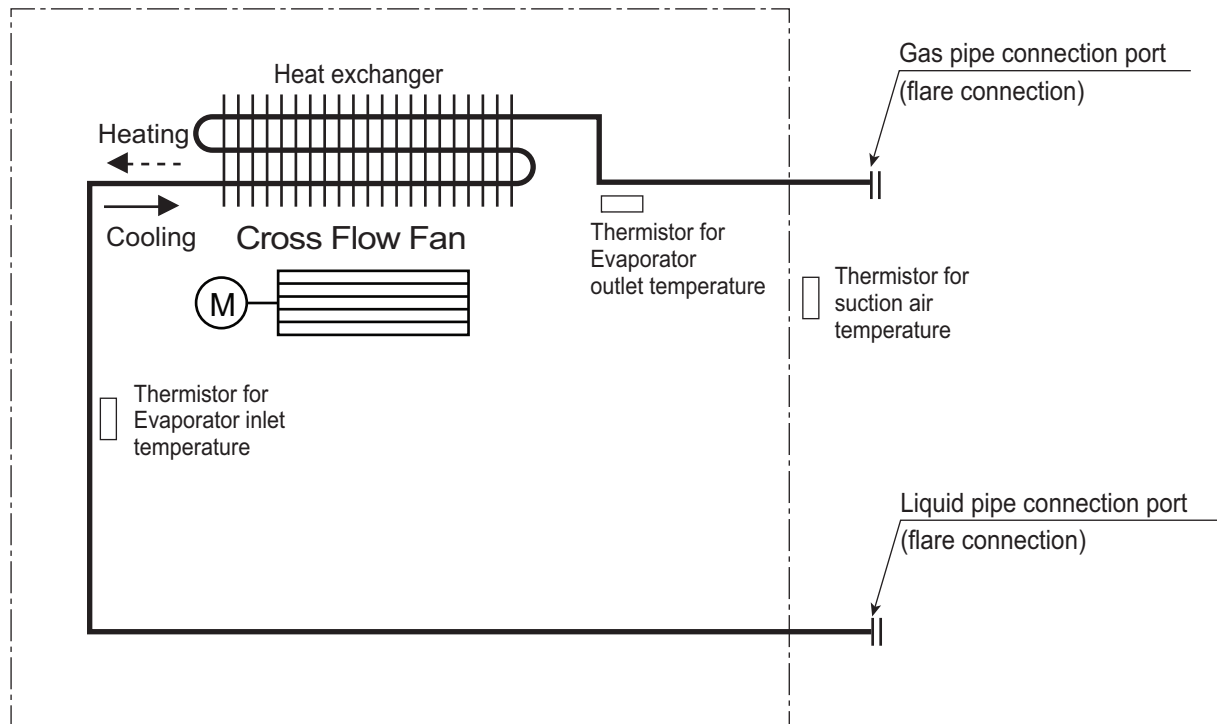
3. Dimensions

◆ SK Chassis

ZMNW18GSKC0 [MJ18PC NSK], ZMNW24GSKC0 [MJ24PC NSK]



## 4. Piping diagrams

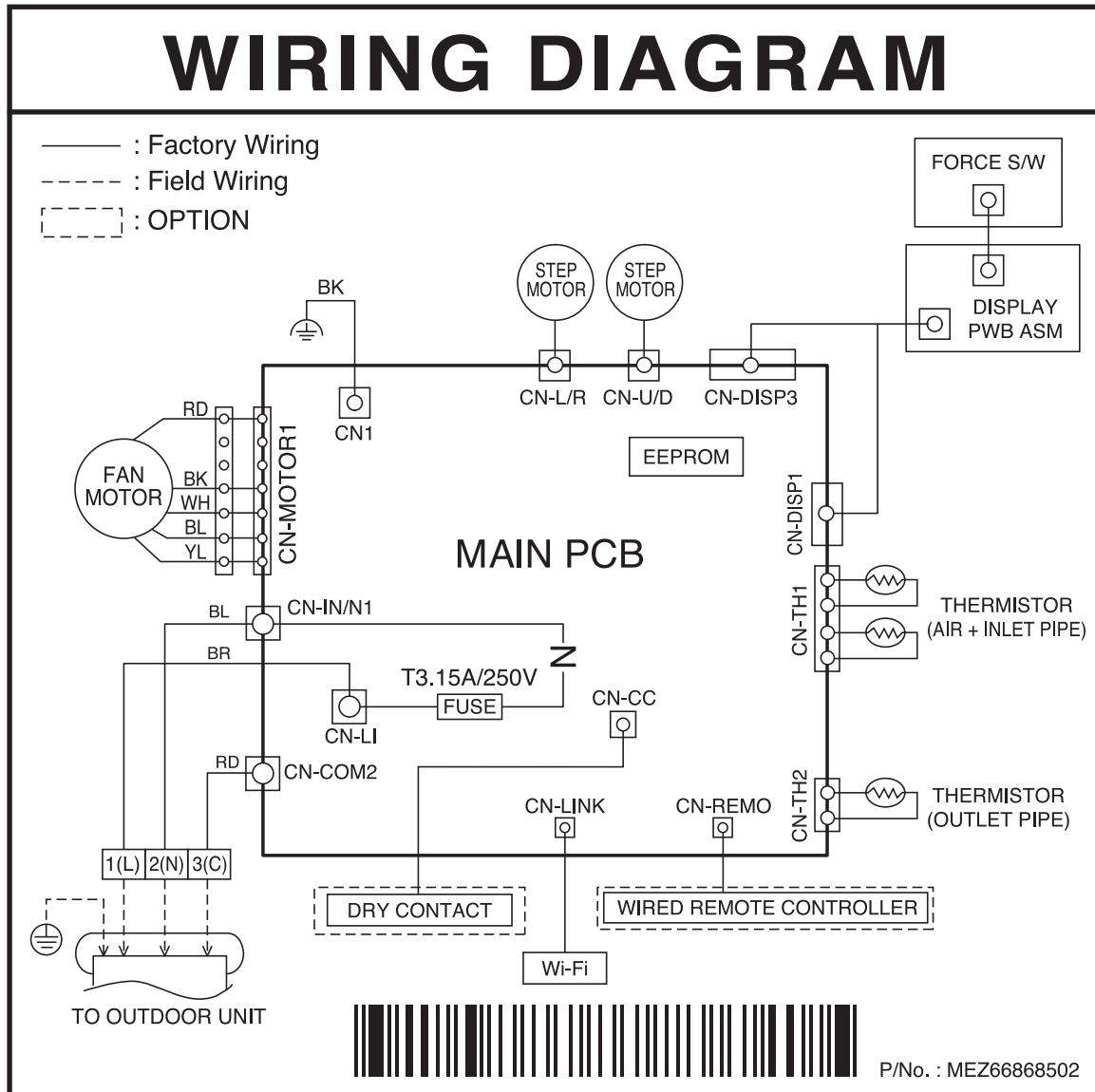


Description	PCB Connector
Thermistor for suction air temperature	CN-TH1
Thermistor for evaporator inlet temperature	
Thermistor for evaporator outlet temperature	CN-TH2



## 5. Wiring Diagrams

- ◆ Models : ZMNW05GSJC0 [MJ05PC NSJ], ZMNW07GSJC0 [MJ07PC NSJ],  
ZMNW09GSJC0 [MJ09PC NSJ], ZMNW12GSJC0 [MJ12PC NSJ],  
ZMNW15GSJC0 [MJ15PC NSJ], ZMNW18GSKC0 [MJ18PC NSK],  
ZMNW24GSKC0 [MJ24PC NSK]



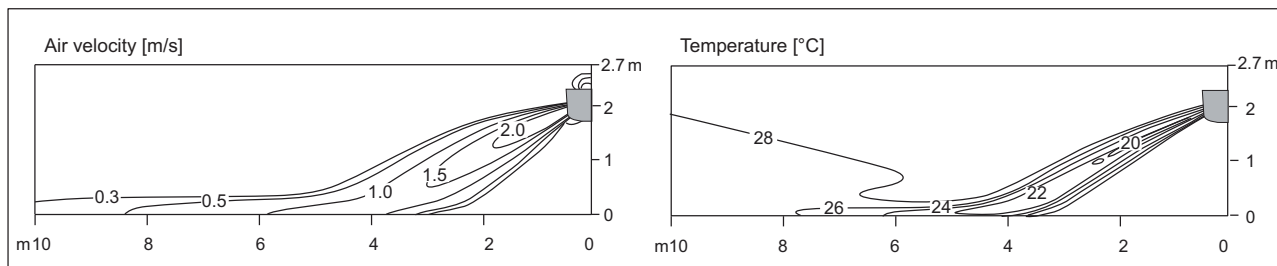
## 6. Air flow and temperature distributions (reference data)

■ **Models :** ZMNW05GSJC0 [MJ05PC NSJ], ZMNW07GSJC0 [MJ07PC NSJ], ZMNW09GSJC0 [MJ09PC NSJ], ZMNW12GSJC0 [MJ12PC NSJ], ZMNW15GSJC0 [MJ15PC NSJ]

### ◆ Cooling

#### Side View

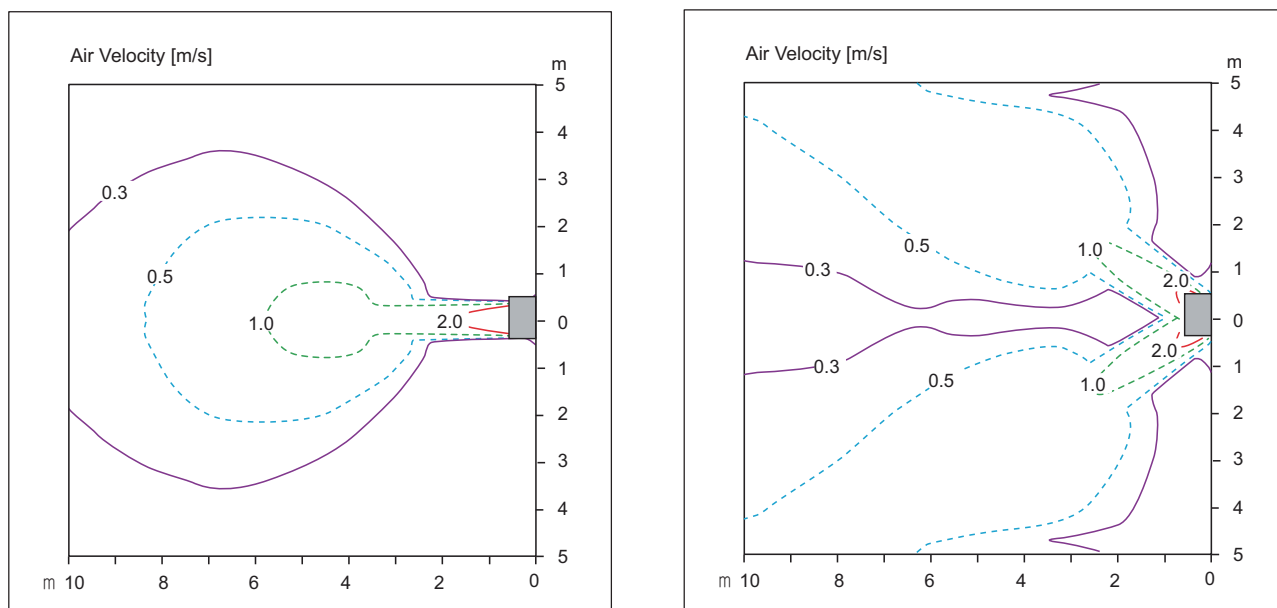
Discharge angle: 35°



- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.0m

- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

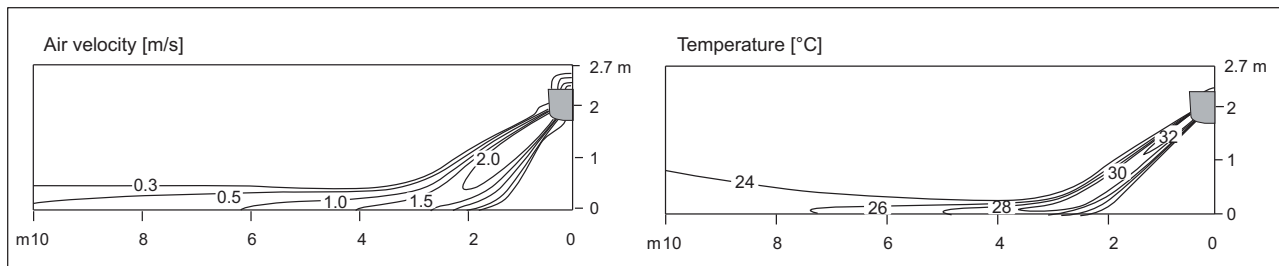
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

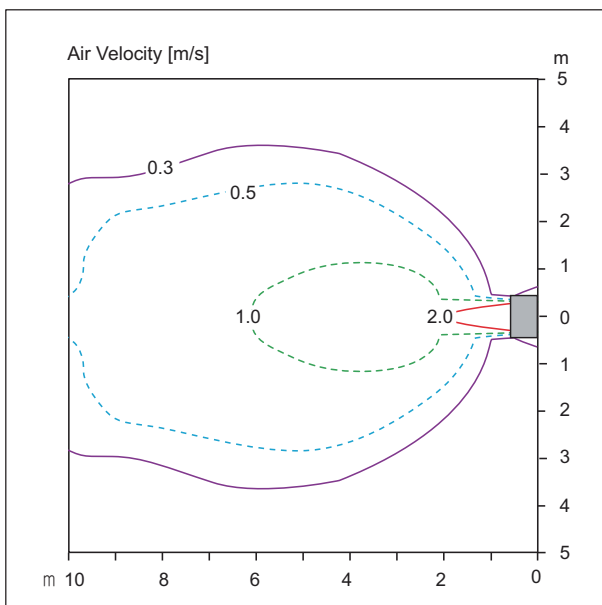
Discharge angle: 55°



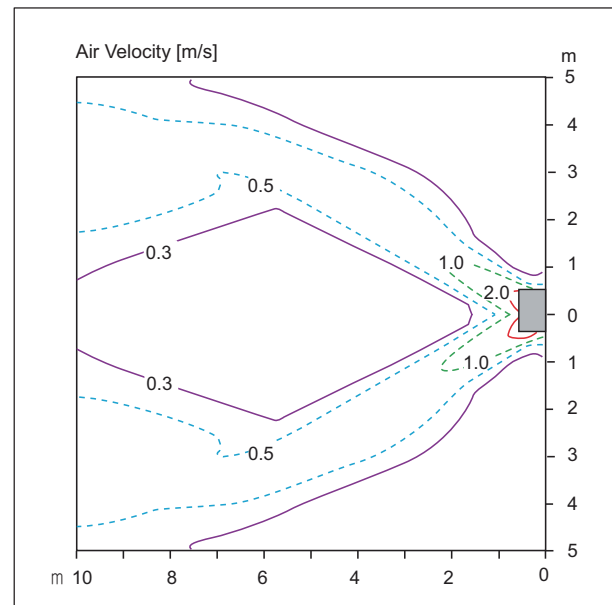
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.2m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

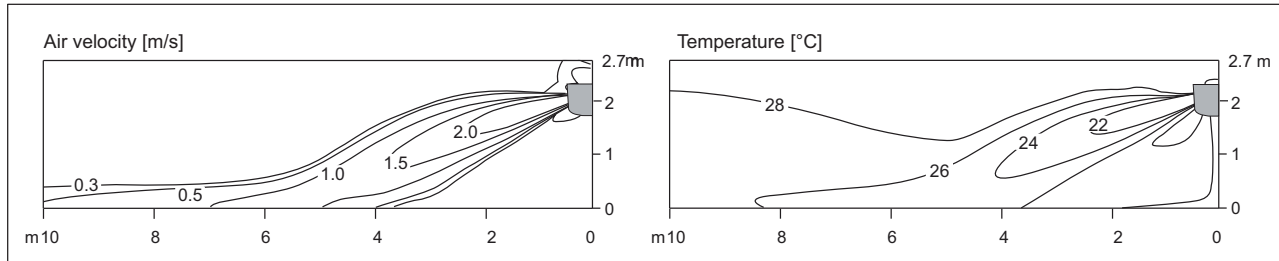
## 6. Air flow and temperature distributions (reference data)

### ■ Models : ZMNW18GSKC0 [MJ18PC NSK]

#### ◆ Cooling

##### Side View

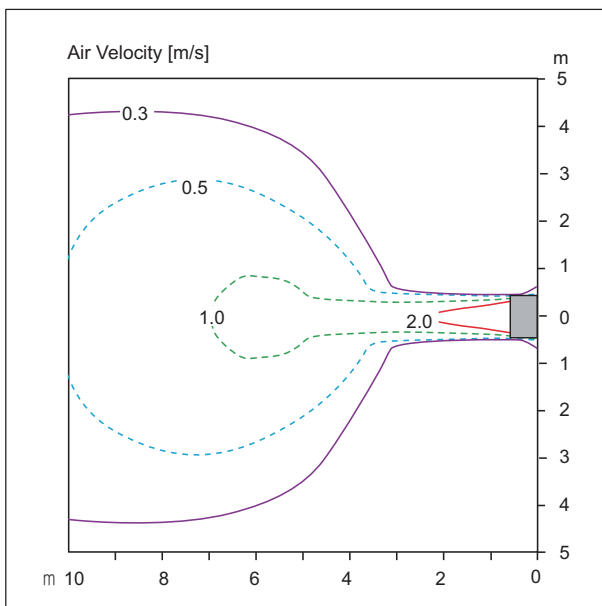
Discharge angle: 25°



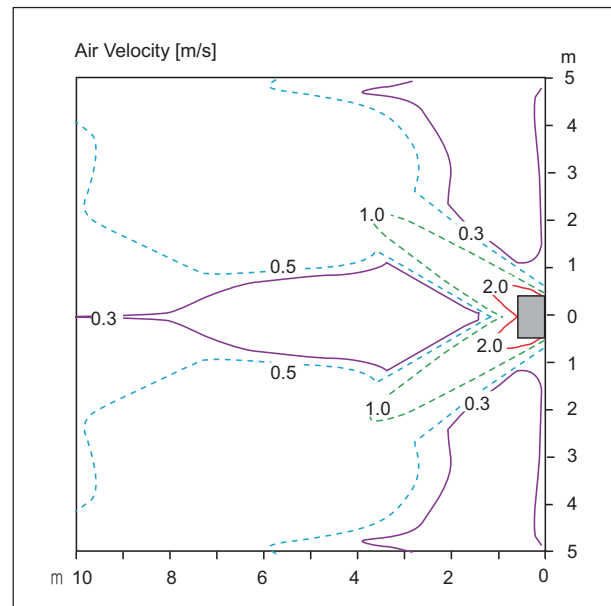
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

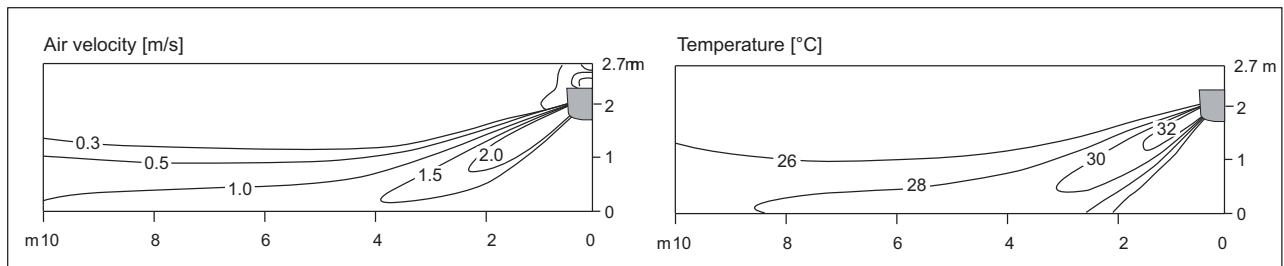
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

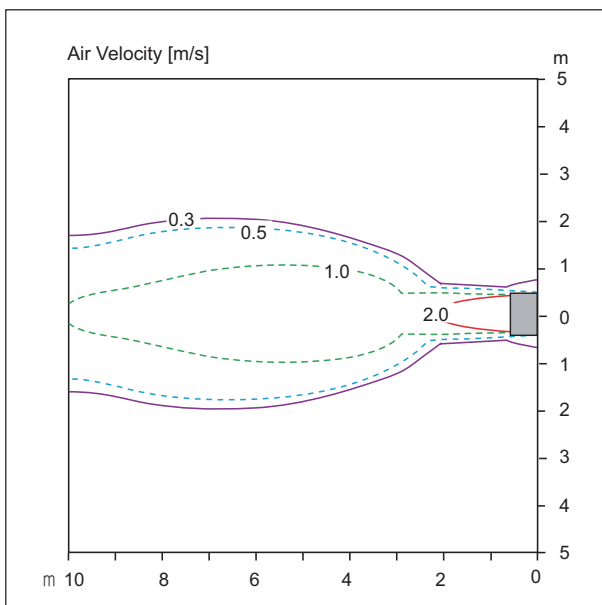
Discharge angle: 45°



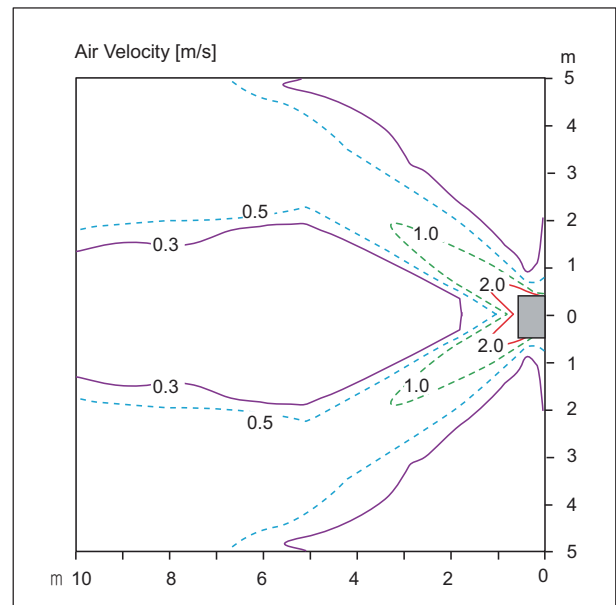
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

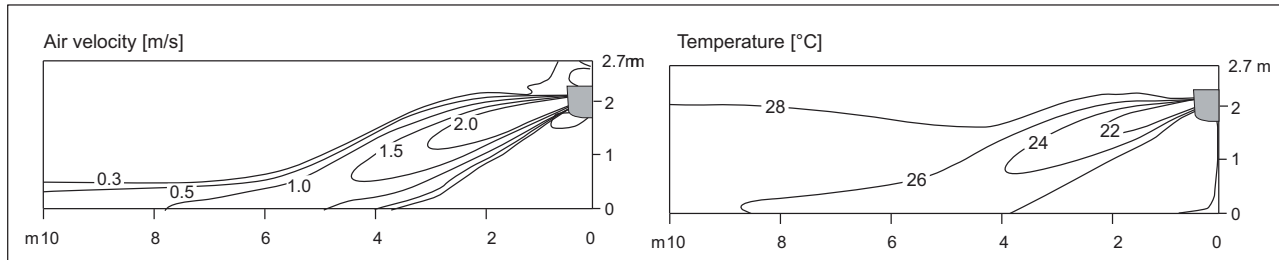
## 6. Air flow and temperature distributions (reference data)

### ■ Models : ZMNW24GSKC0 [MJ24PC NSK]

#### ◆ Cooling

##### Side View

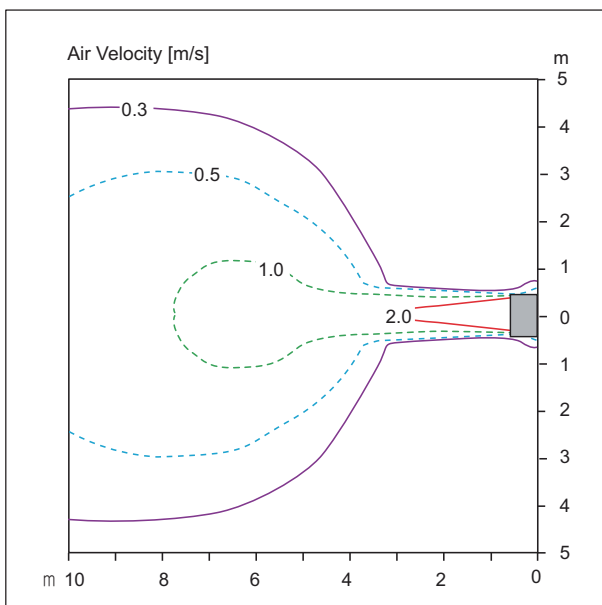
Discharge angle: 25°



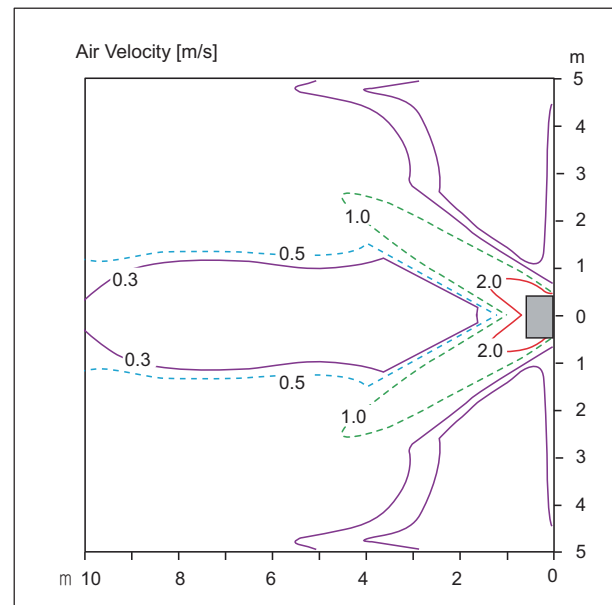
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 15.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

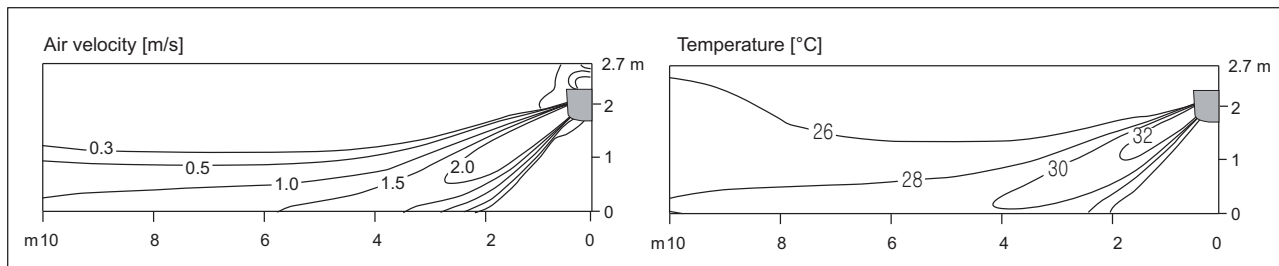
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

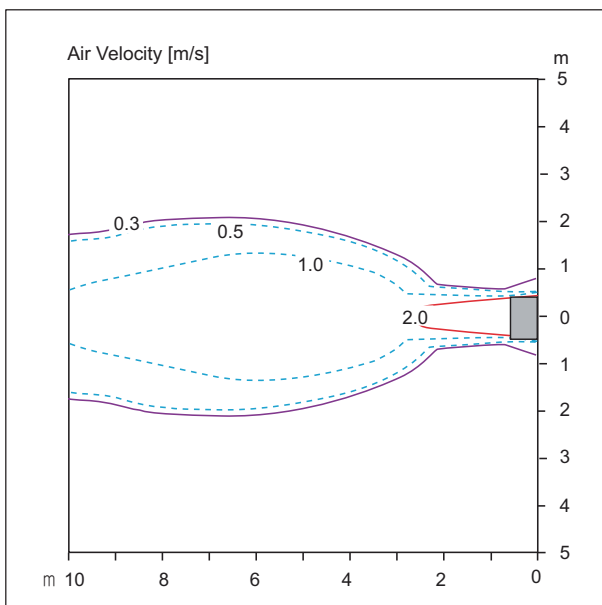
Discharge angle: 45°



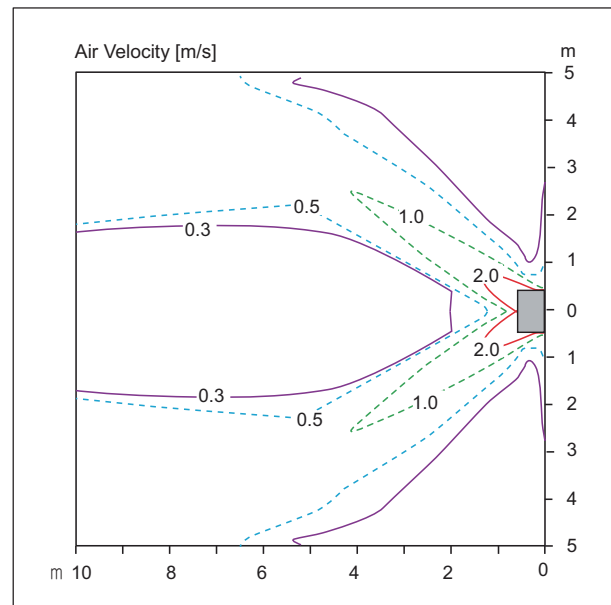
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

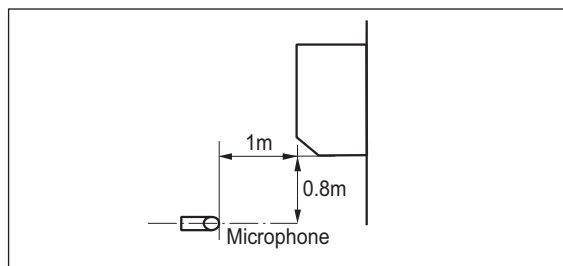
### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### ■ Overall



#### Note

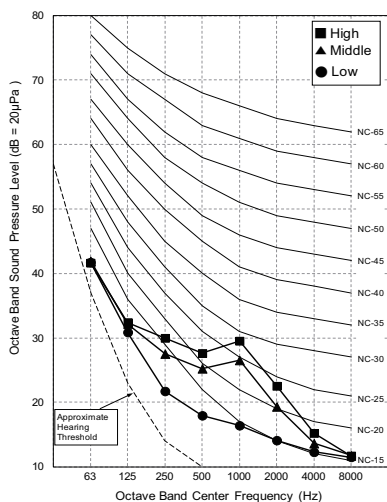
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZMNW05GSJC0 [MJ05PC NSJ]	34	31	26
ZMNW07GSJC0 [MJ07PC NSJ]	35	31	26
ZMNW09GSJC0 [MJ09PC NSJ]	36	32	27
ZMNW12GSJC0 [MJ12PC NSJ]	38	34	29
ZMNW15GSJC0 [MJ15PC NSJ]	42	35	30
ZMNW18GSKC0 [MJ18PC NSK]	44	38	35
ZMNW24GSKC0 [MJ24PC NSK]	46	41	36

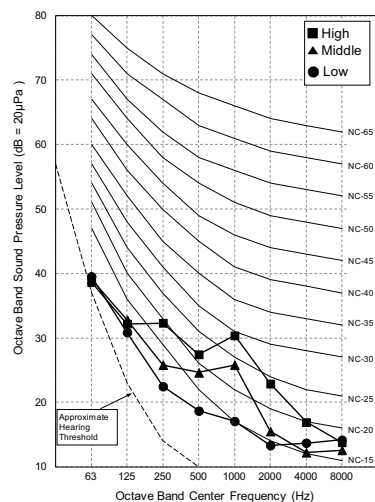


## 7. Sound levels

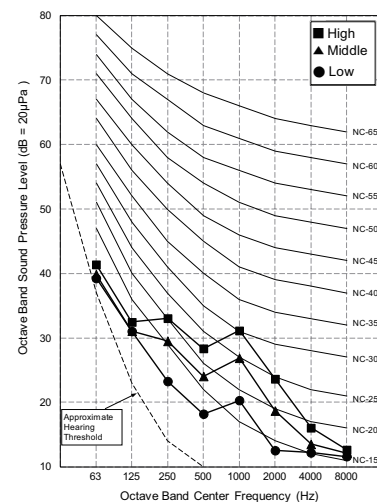
ZMNW05GSJC0 [MJ05PC NSJ]



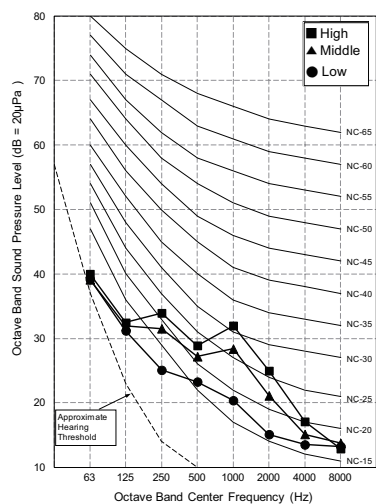
ZMNW07GSJC0 [MJ07PC NSJ]



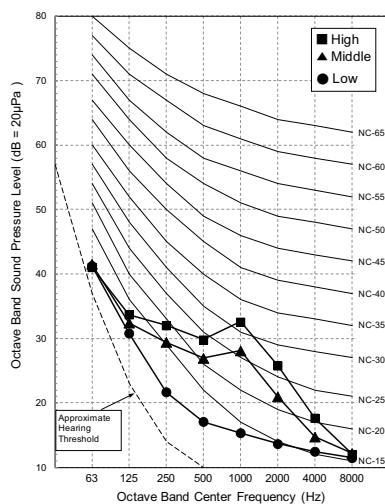
ZMNW09GSJC0 [MJ09PC NSJ]



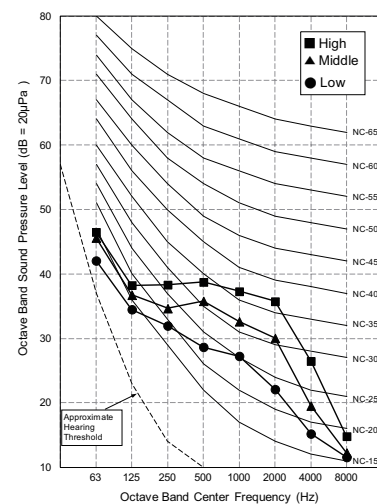
ZMNW12GSJC0 [MJ12PC NSJ]



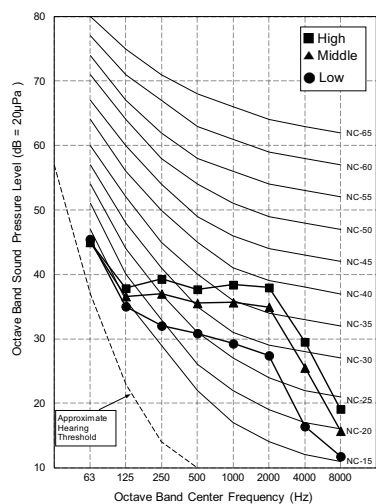
ZMNW15GSJC0 [MJ15PC NSJ]



ZMNW18GSKC0 [MJ18PC NSK]



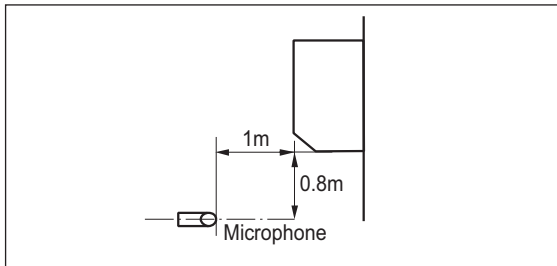
ZMNW24GSKC0 [MJ24PC NSK]



## 7. Sound levels

### 7.2 Sound power level

#### ■ Overall



#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB), Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB), Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to “Standard mode” value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

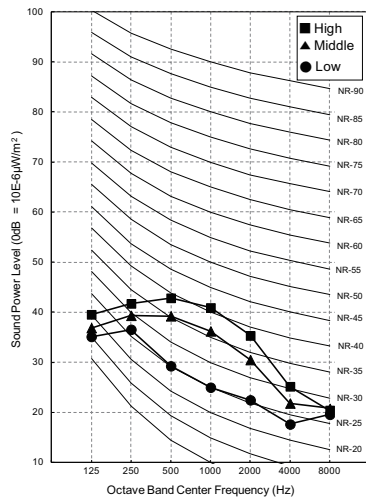
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard.

Therefore, these values can be increased owing to ambient conditions during operation.

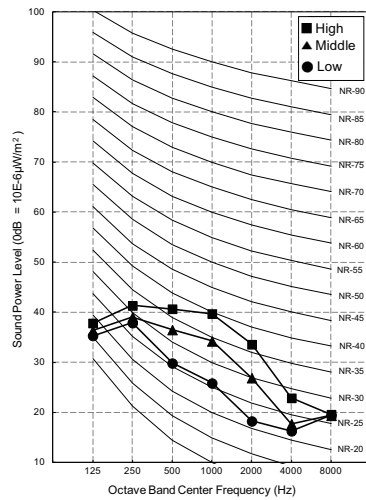
Model	Sound power Levels [dB(A)]
ZMNW05GSJC0 [MJ05PC NSJ]	56
ZMNW07GSJC0 [MJ07PC NSJ]	56
ZMNW09GSJC0 [MJ09PC NSJ]	56
ZMNW12GSJC0 [MJ12PC NSJ]	56
ZMNW15GSJC0 [MJ15PC NSJ]	57
ZMNW18GSKC0 [MJ18PC NSK]	59
ZMNW24GSKC0 [MJ24PC NSK]	65

# 7. Sound levels

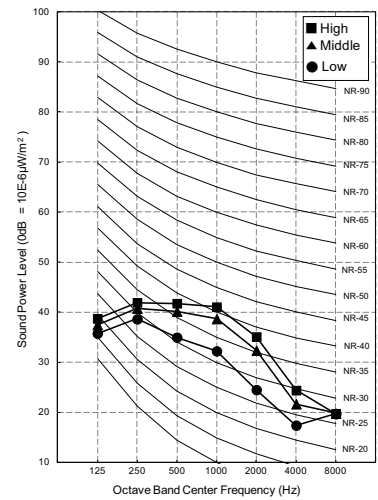
ZMNW05GSJC0 [MJ05PC NSJ]



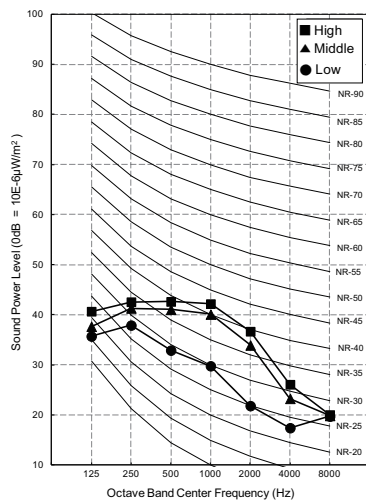
ZMNW07GSJC0 [MJ07PC NSJ]



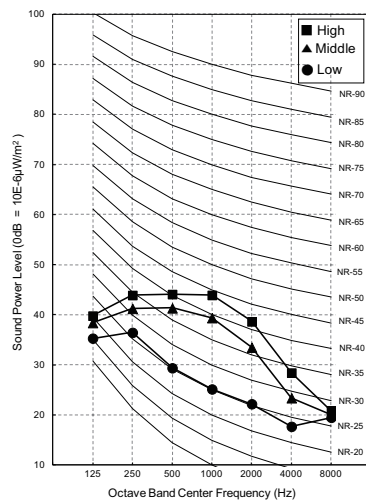
ZMNW09GSJC0 [MJ09PC NSJ]



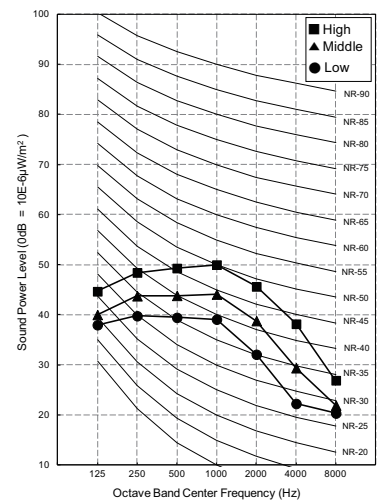
ZMNW12GSJC0 [MJ12PC NSJ]



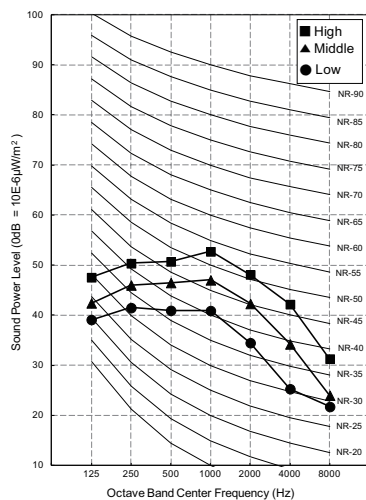
ZMNW15GSJC0 [MJ15PC NSJ]



ZMNW18GSKC0 [MJ18PC NSK]



ZMNW24GSKC0 [MJ24PC NSK]

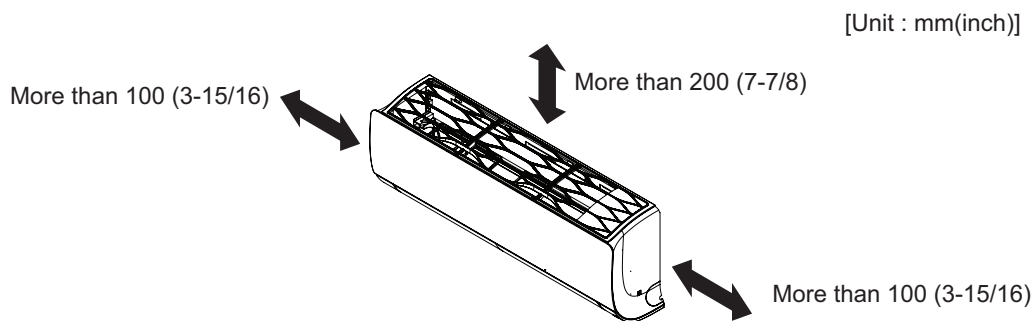


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.

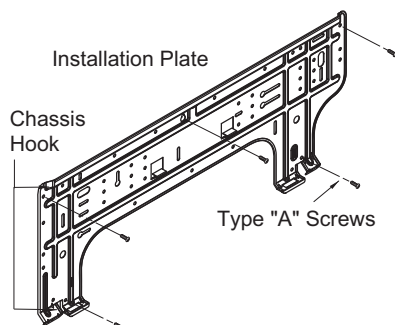


## 8. Installation

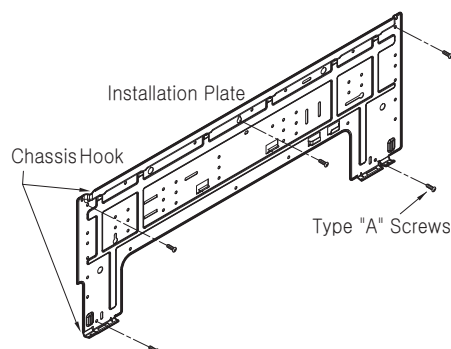
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
- 1. Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
  - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
- 2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

**SJ Chassis**

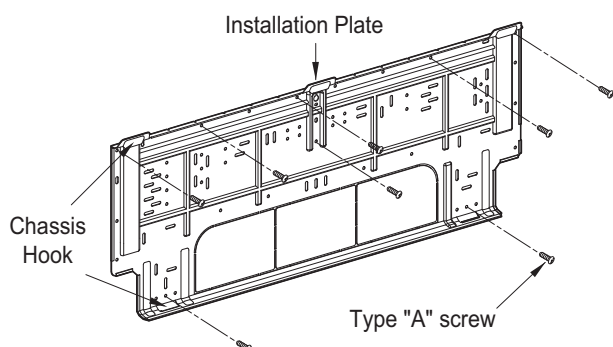


**SK Chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

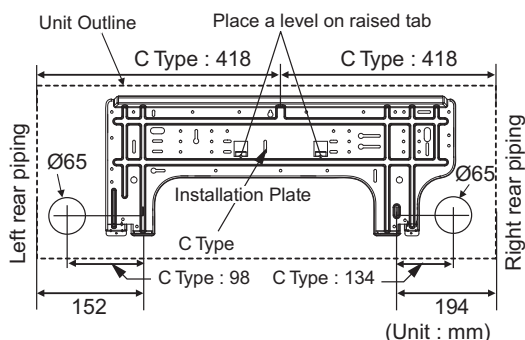
**SV Chassis**



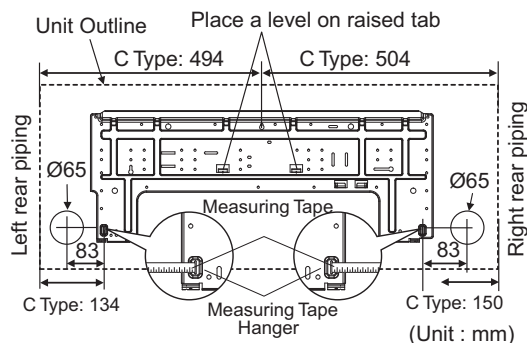
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

**SJ chassis**



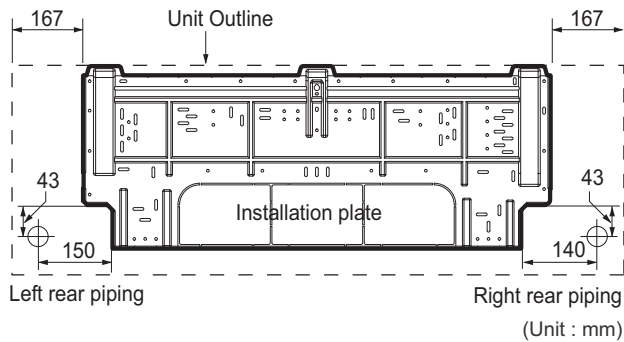
**SK chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

**SV chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### **CAUTION**

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

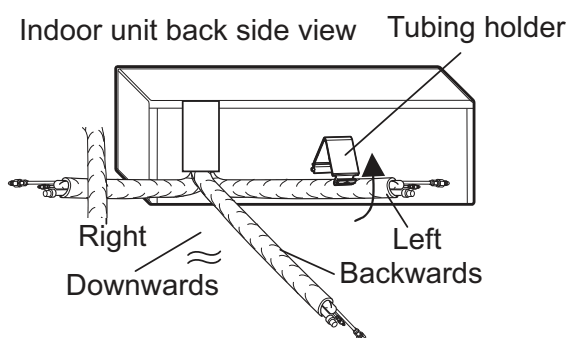
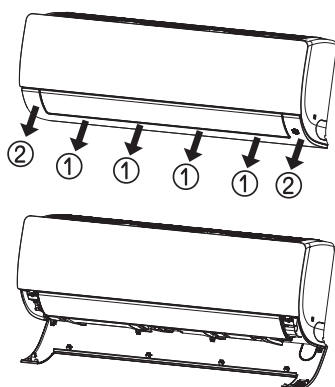
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.



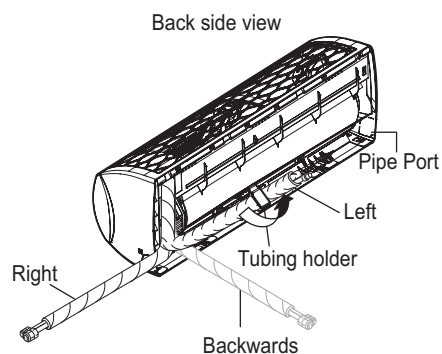
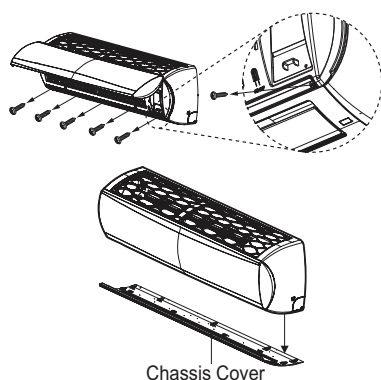
※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ SV chassis

1. Open the panel of the indoor unit.
2. Remove the chassis cover from the unit by loosening 5 screws.
3. Pull back the tubing holder.
4. Remove pipe port cover and position the piping.

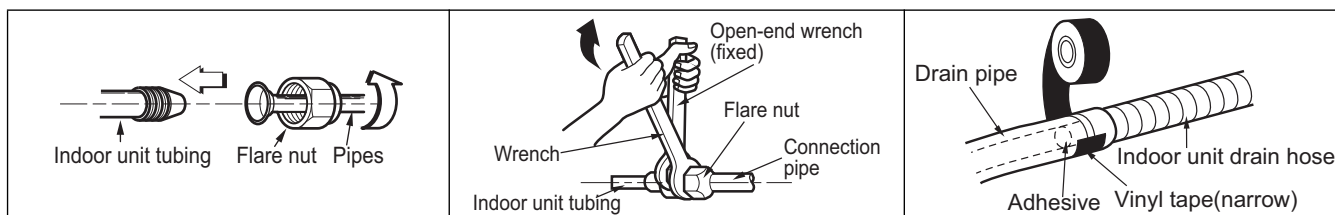


\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

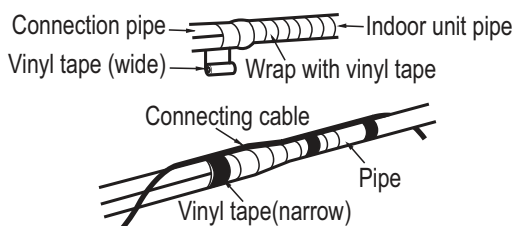
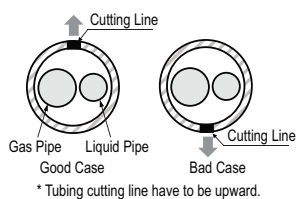
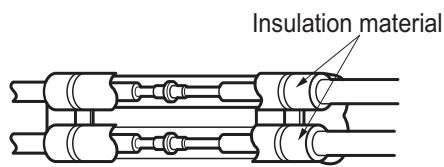
### ■ Connecting the installation pipe and drain hose



1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

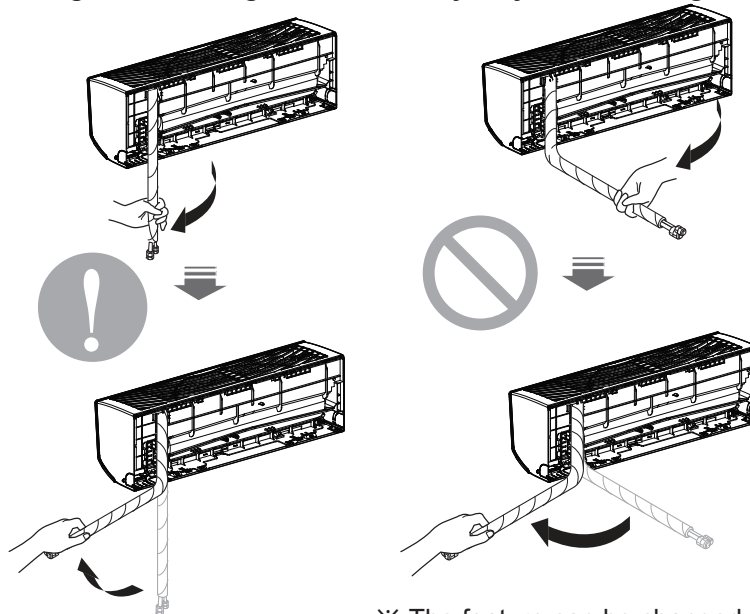
\* Foamed polyethylene or equivalent is recommended.



## 8. Installation

### ⚠ CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



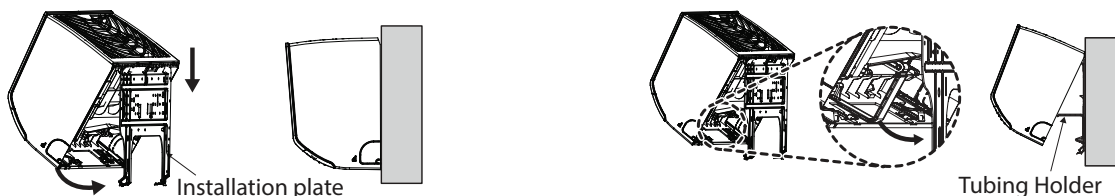
※ The feature can be changed according to type

- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.

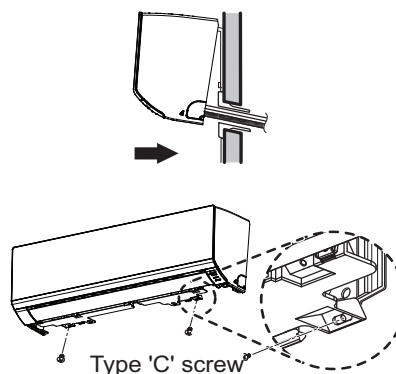


\* The feature can be changed according to type of model.

## 8. Installation

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

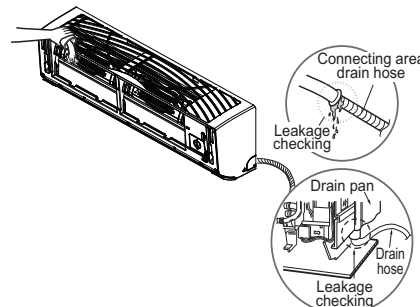
#### **CAUTION**

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

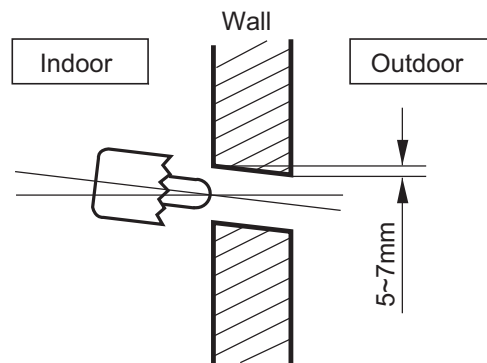


\* The feature can be changed according to type of model.

## 8. Installation

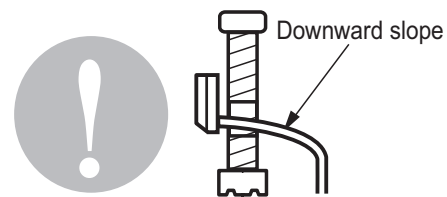
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing 70\text{mm}$  hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

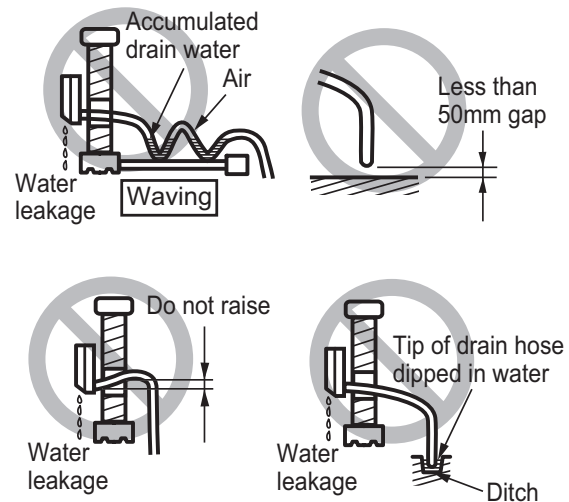


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

## 8. Installation

---

### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

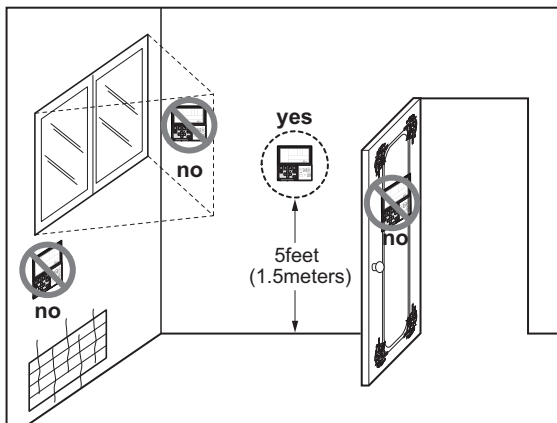
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **Wall Mounted Unit (4)**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZJNW30GRLA1 [US30F NR0] ZJNW36GRLA1 [US36F NR0]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	Auto cleaning	O
	Auto operation(artificial intelligence)	X
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Comfort Cooling (Humidity Control)	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZJNW30GRLA1 [US30F NR0] ZJNW36GRLA1 [US36F NR0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))



## 2. Specifications

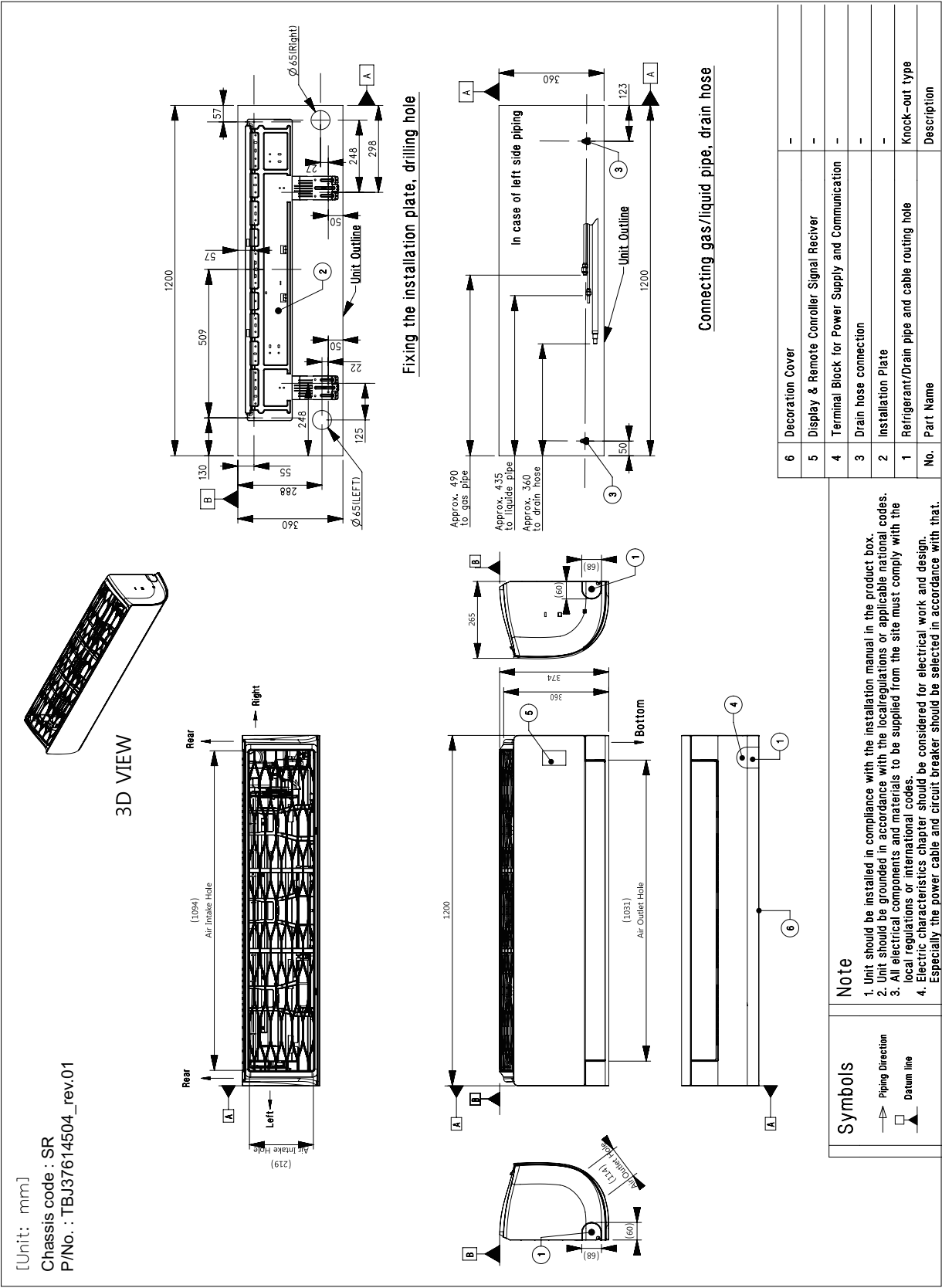
Model Name			ZJNW30GRLA1 [US30F NR0]	ZJNW36GRLA1 [US36F NR0]
Power Supply		V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Power Input		W	47 / 42 / 36	65 / 47 / 42
Running Current	H / M / L	A	0.32 / 0.28 / 0.25	0.43 / 0.32 / 0.28
	Max.	A	0.90	0.90
Casing Color(RAL)		-	Magic White(9016)	Magic White(9016)
Dimensions	Body	W x H x D	mm	1,200 x 360 x 265
		W x H x D	inch	47-1/4 x 14-3/16 x 10-7/16
	Shipping	W x H x D	mm	1,280 x 360 x 455
		W x H x D	inch	50-13/32 x 14-3/16 x 17-29/32
Weight	Body		kg (lbs)	18.3
	Shipping		kg (lbs)	22.9
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 18 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.35
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	21.0 / 17.0 / 13.0
		H / M / L	ft <sup>3</sup> /min	742 / 600 / 459
Fan Motor	Type		-	BLDC
	Output		W x No.	113 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	46 / 42 / 38
	Heating	H / M / L	dB(A)	46 / 42 / 38
Sound Power Level	Cooling	Rated	dB(A)	62
	Heating	Rated	dB(A)	-
Piping Connections	Liquid		mm(inch)	Φ9.52 (3/8)
	Gas		mm(inch)	Φ15.88 (5/8)
	Drain	O.D. / I.D.	mm	Φ 16.5 / 14.5
Safety Devices			-	Fuse
			-	Thermal Protector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

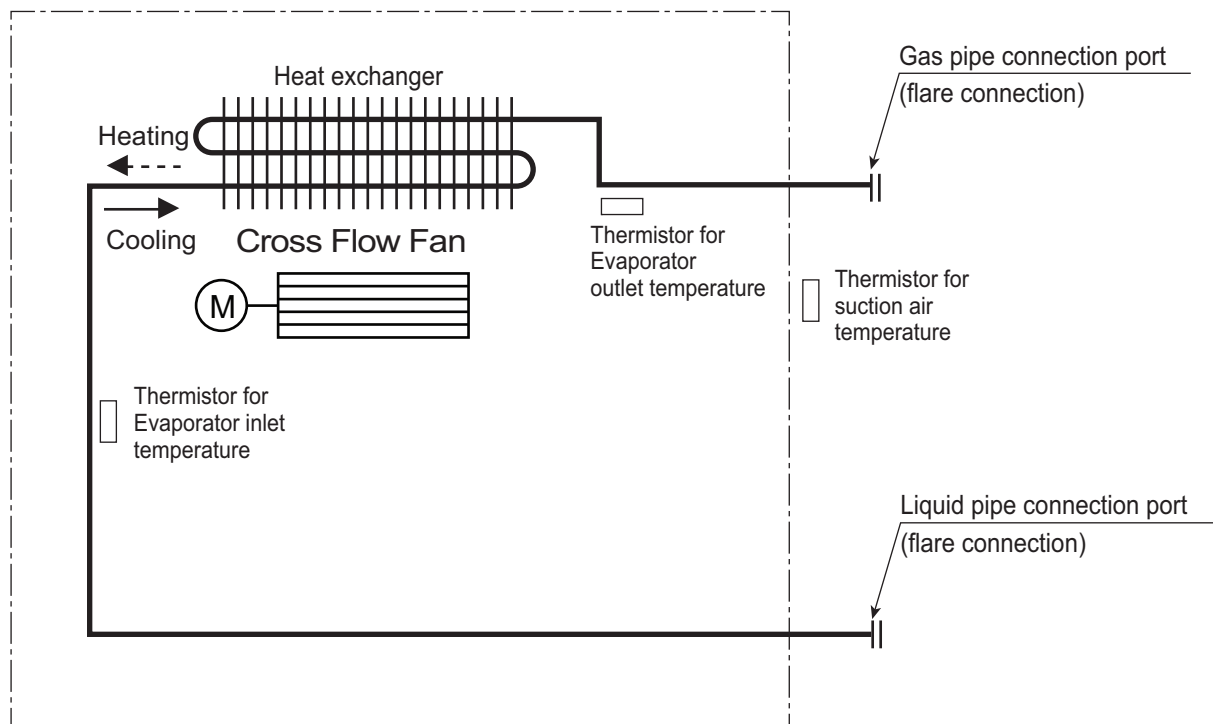
3. Dimensions

■ ZJNW30GRLA1 [US30F NR0] / ZJNW36GRLA1 [US36F NR0]



## 4. Piping Diagrams

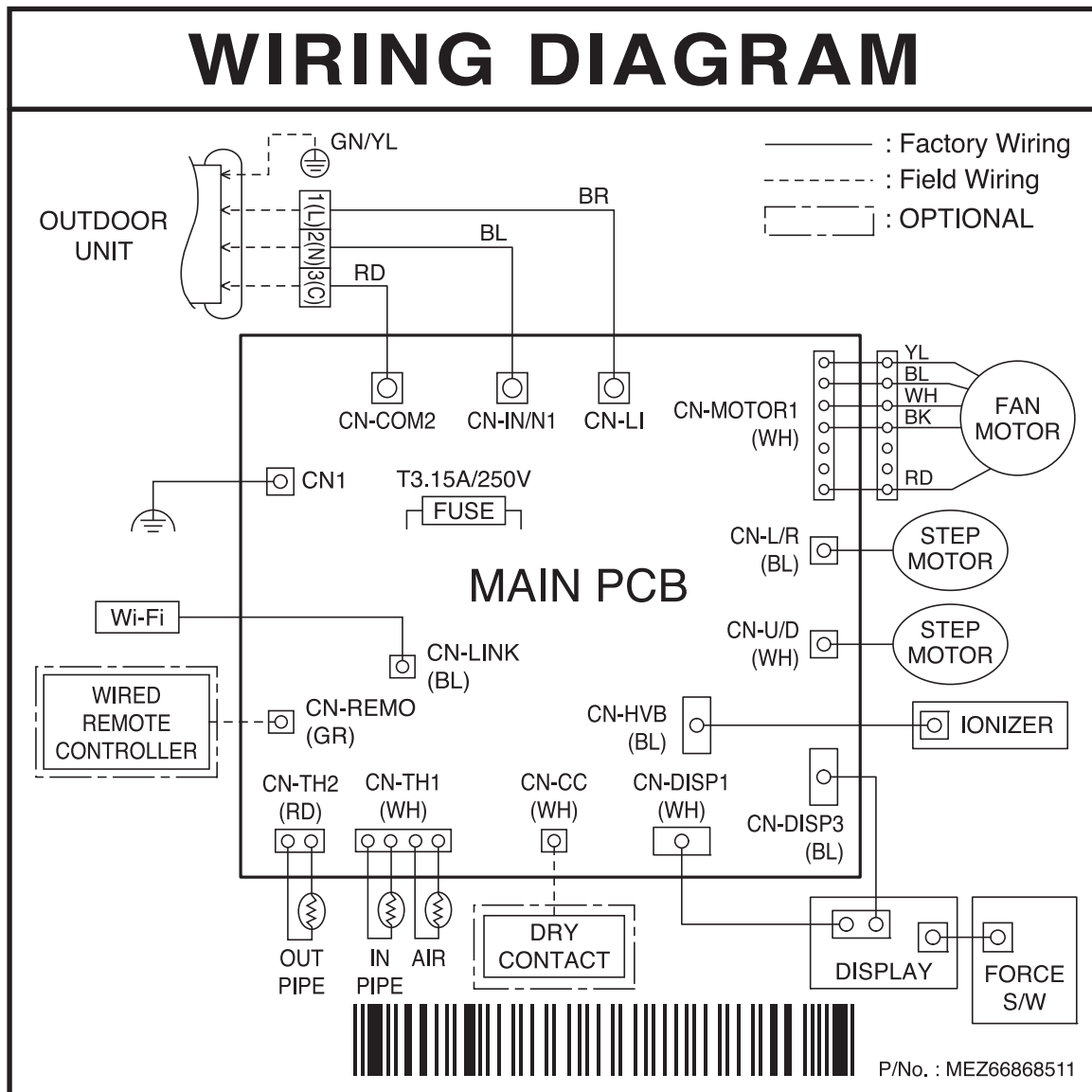
### ■ ZJNW30GRLA1 [US30F NR0] / ZJNW36GRLA1 [US36F NR0]



Description	PCB Connector
Thermistor for suction air temperature	CN-TH1
Thermistor for evaporator inlet temperature	
Thermistor for evaporator outlet temperature	CN-TH2

## 5. Wiring Diagrams

### ■ ZJNW30GRLA1 [US30F NR0], ZJNW36GRLA1 [US36F NR0]

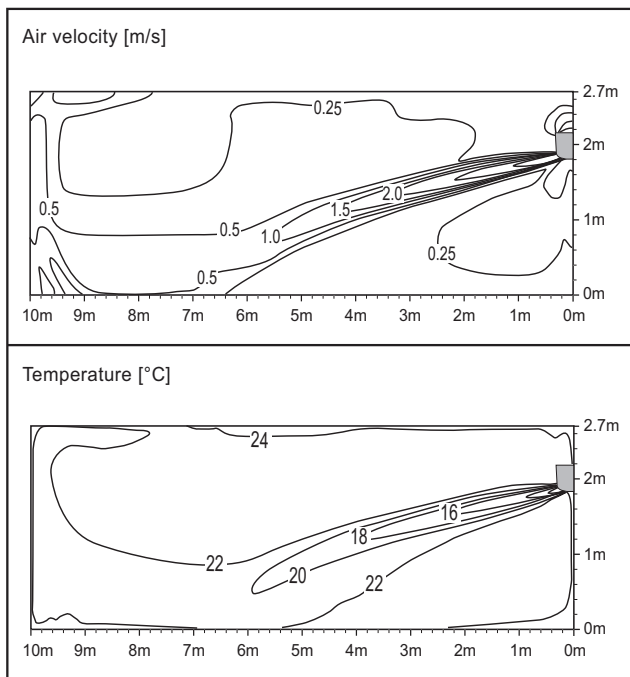


## 6. Air flow and temperature distributions (reference data)

### ■ ZJNW30GRLA1 [US30F NR0]

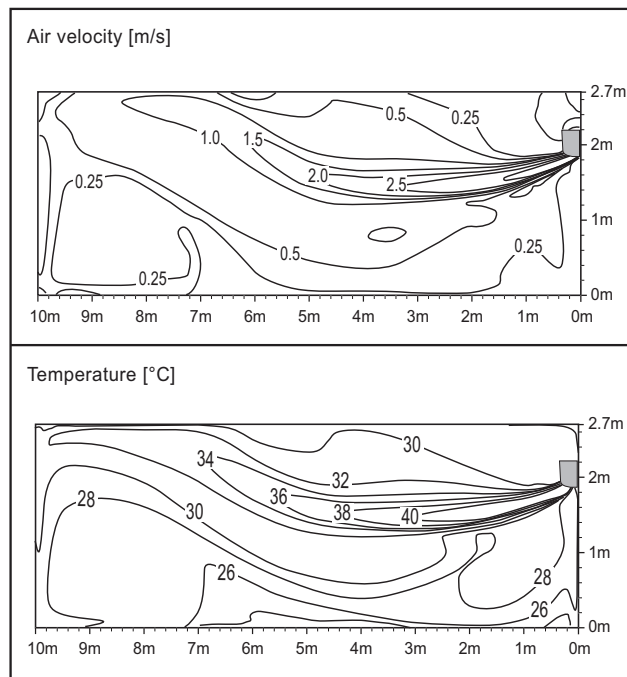
#### Cooling

Discharge angle: 22°



#### Heating

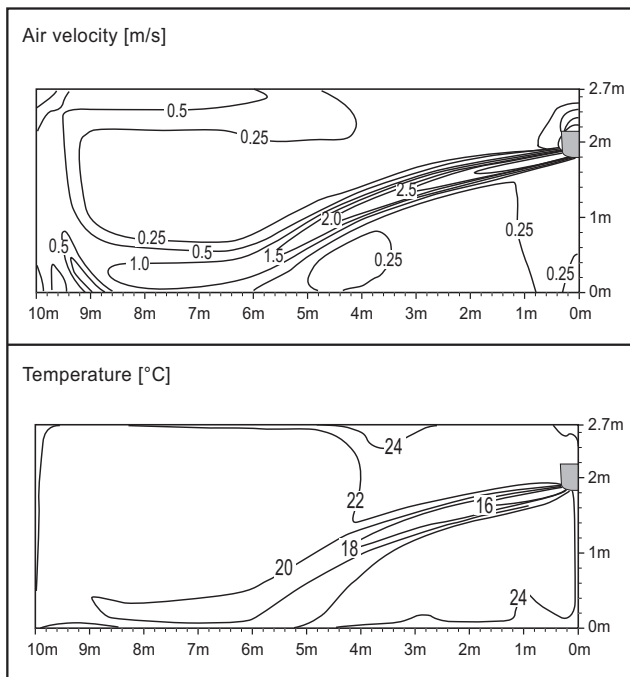
Discharge angle: 42°



### ■ ZJNW36GRLA1 [US36F NR0]

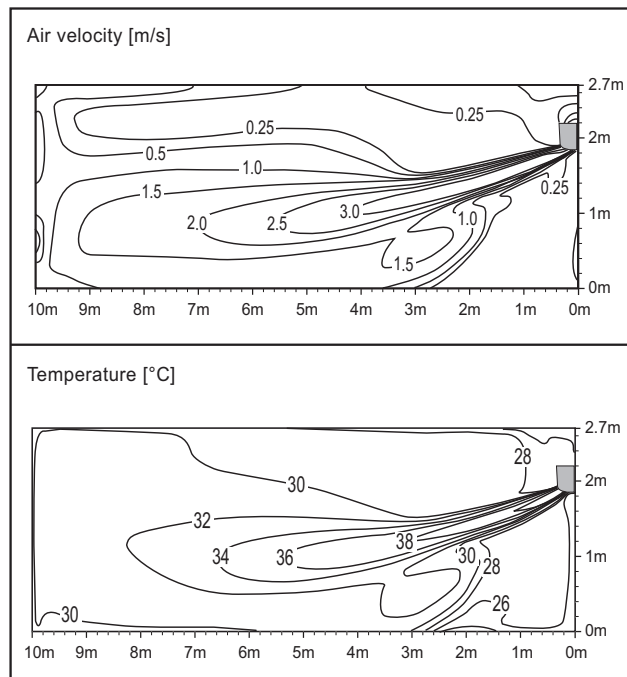
#### Cooling

Discharge angle: 22°



#### Heating

Discharge angle: 44°



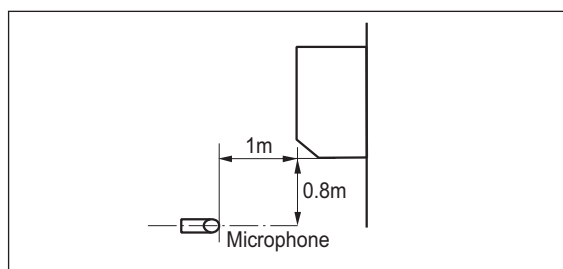
#### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound Levels

### 7.1 Sound Pressure Level

#### Overall

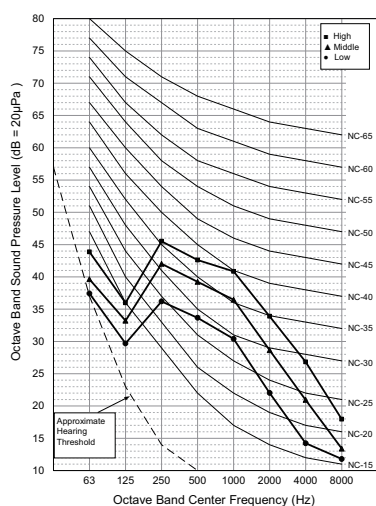


#### Note

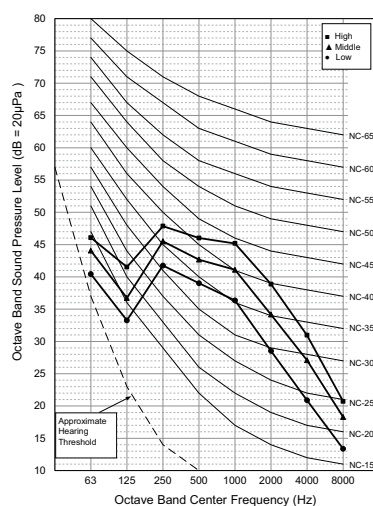
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound Pressure Levels [dB(A)]		
	H	M	L
ZJNW30GRLA1 [US30F NR0]	46	42	38
ZJNW36GRLA1 [US36F NR0]	51	46	42

**ZJNW30GRLA1 [US30F NR0]**



**ZJNW36GRLA1 [US36F NR0]**



## 7. Sound Levels

### 7.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to “Standard mode” value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

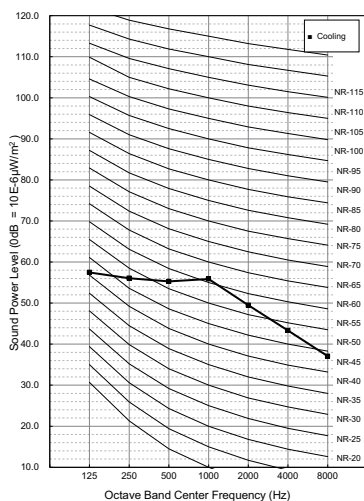
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

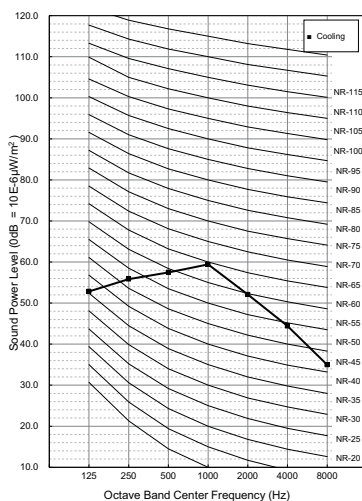
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound Power Levels [dB(A)]
ZJNW30GRLA1 [US30F NR0]	62
ZJNW36GRLA1 [US36F NR0]	65

**ZJNW30GRLA0 [UJ30R NR0]**



**ZJNW36GRLA0 [UJ36R NR0]**

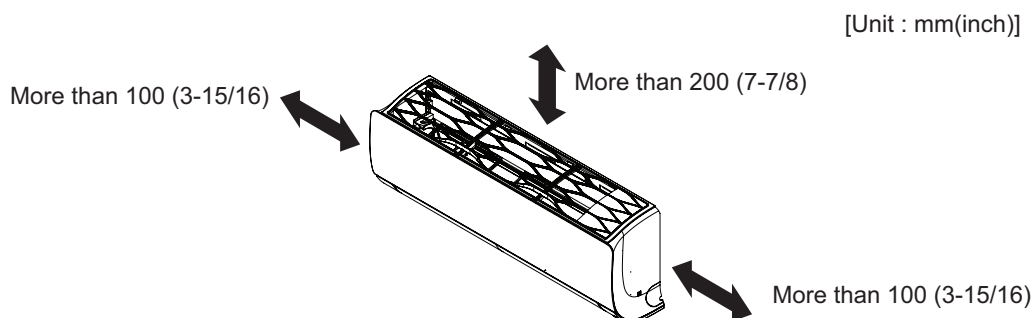


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.



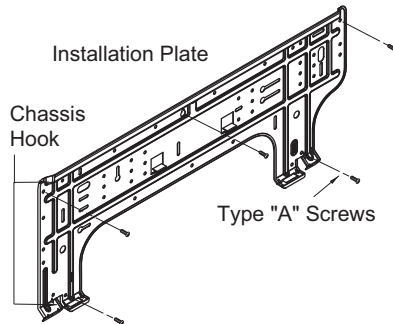


## 8. Installation

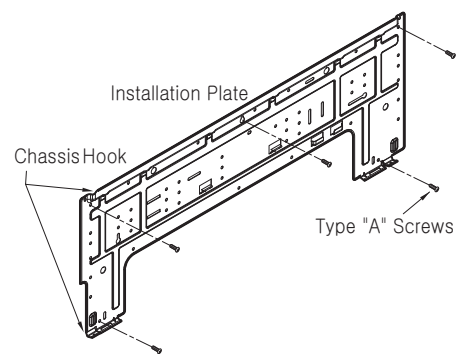
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
  - Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
    - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
  - Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

**SJ Chassis**

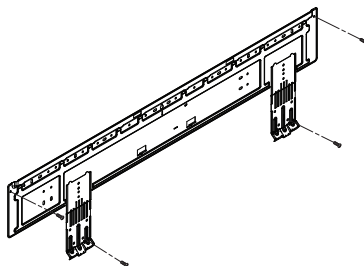


**SK Chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

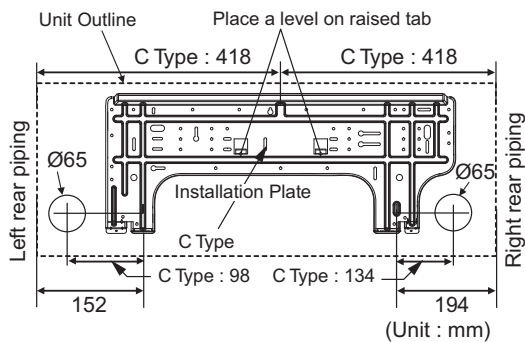
**SR Chassis**



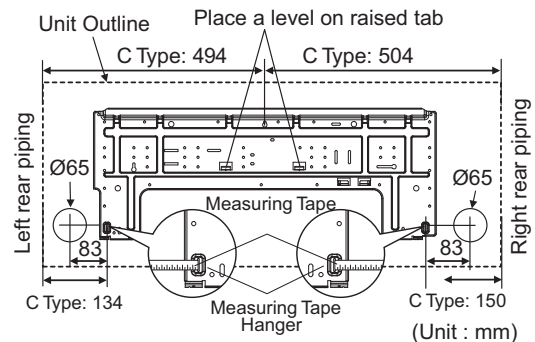
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

**SJ chassis**



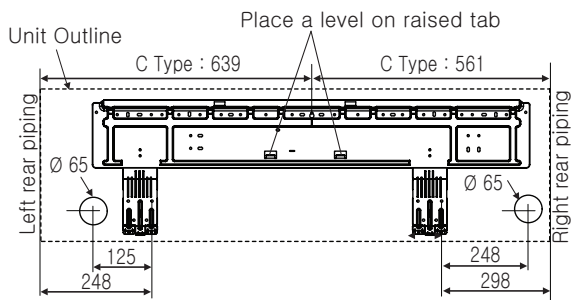
**SK chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

### SR chassis



(Unit : mm)

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ! CAUTION

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

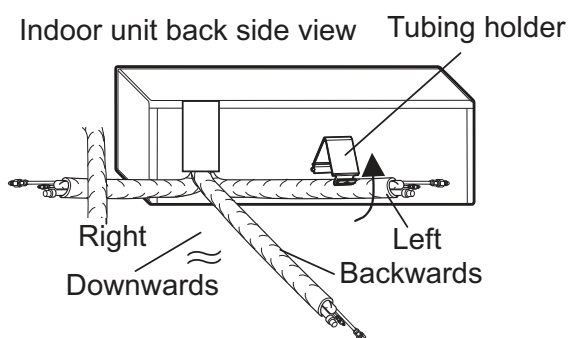
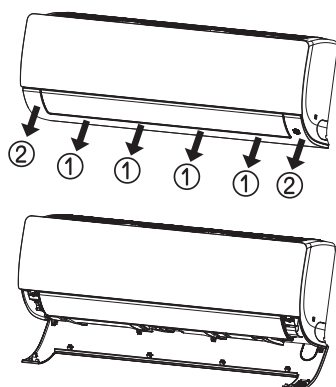
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK/SR chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.

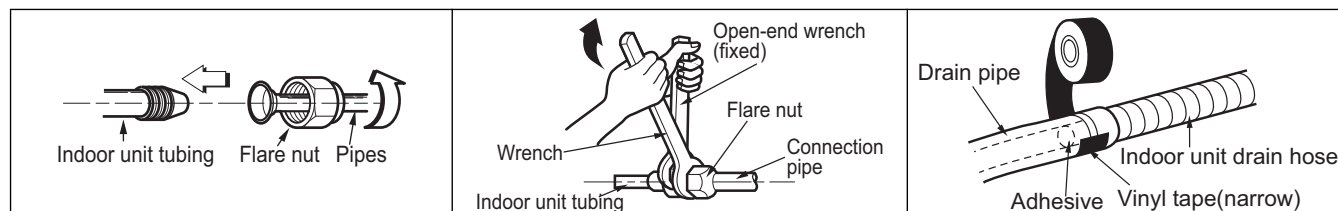


※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ Connecting the installation pipe and drain hose

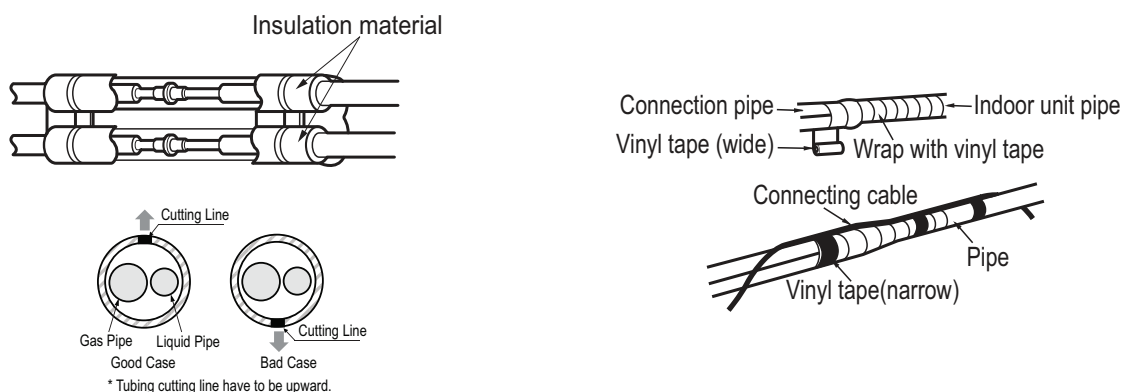


1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

##### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.

## 8. Installation



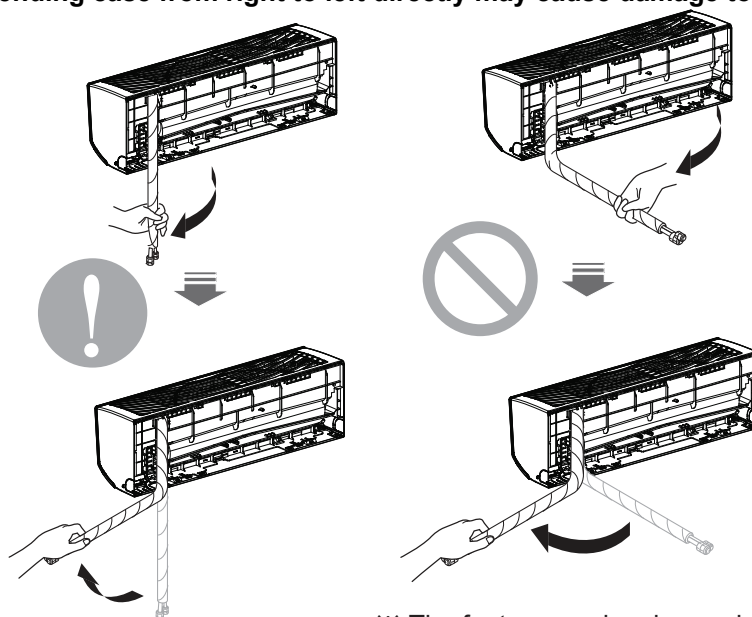
### ! CAUTION

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

### ! CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



※ The feature can be changed according to type

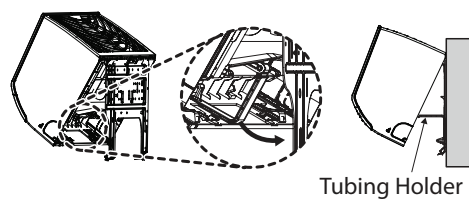
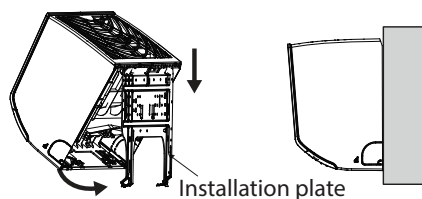
- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.

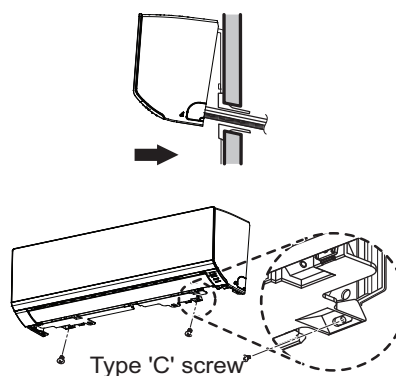
## 8. Installation



\* The feature can be changed according to type of model.

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

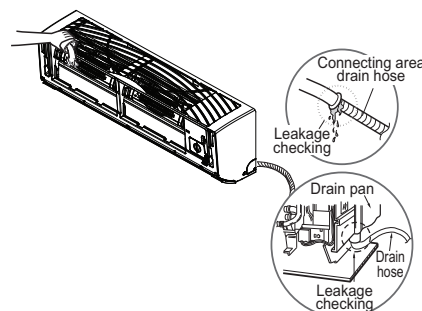
### ⚠ CAUTION

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

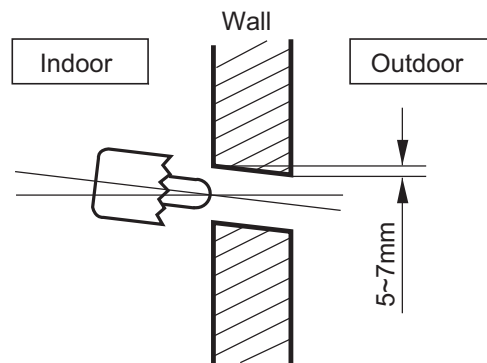


\* The feature can be changed according to type of model.

## 8. Installation

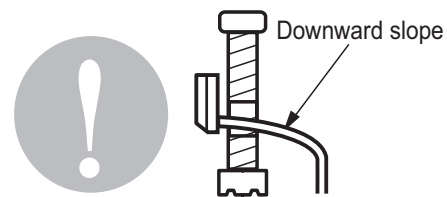
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing$  70mm hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

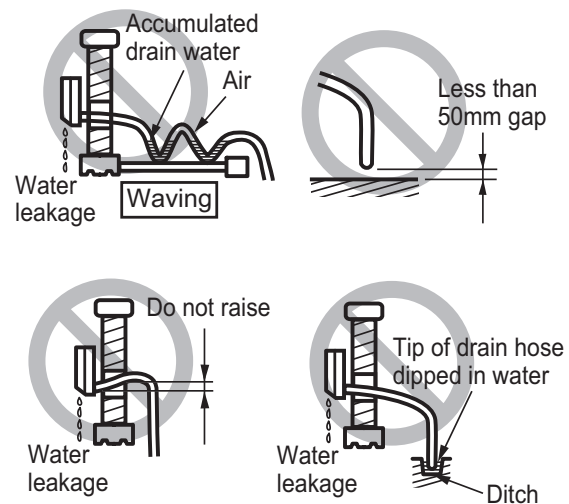


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

## 8. Installation

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### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

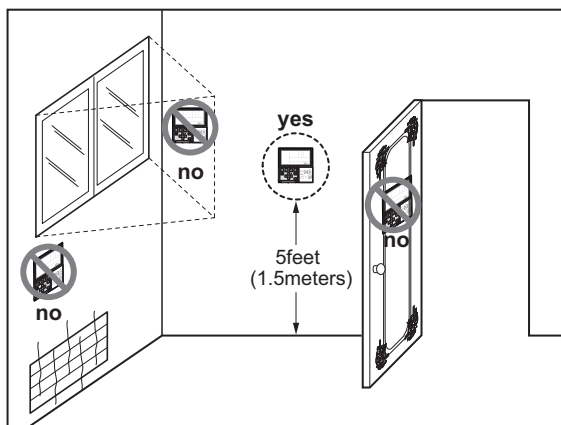
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)



# **MULTI/SINGLE**

Indoor unit

## **ART COOL Mirror**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	AMNW07GSJR0 [AM07BP NSJ], USNW09GJRZ0 [AM09BP NSJ] S3NM09JARZA [AC09BQ NSJ], USNW12GJRZ0 [AM12BP NSJ], S3NM12JARZA [AC12BQ NSJ], USNW18GKRZ0 [AM18BP NSK], S3NM18KLRZA [AC18BQ NSK], AMNW24GSKR0 [AM24BP NSK], S3NM24K2RZA [AC24BQ NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	AMNW07GSJR0 [AM07BP NSJ] USNW09GJRZ0 [AM09BP NSJ] S3NM09JARZA [AC09BQ NSJ] USNW12GJRZ0 [AM12BP NSJ] S3NM12JARZA [AC12BQ NSJ] USNW18GKRZ0 [AM18BP NSK] S3NM18KLRZA [AC18BQ NSK] AMNW24GSKR0[AM24BP NSK] S3NM24K2RZA [AC24BQ NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

Model Name				AMNW07GSJR0 [AM07BP NSJ]	USNW09GJRZ0 [AM09BP NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		2.1	2.5
	Heating	kW		2.3	3.2
Power Input	Min./Nom./Max.	W		11 / 17 / 30	11 / 18 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.14 / 0.20	0.10 / 0.16 / 0.20
Exterior Color code			-	Munsell 7.5PB 0.2/20 (RAL 9005)	
Dimensions	Body	W × H × D	mm	837 × 308 × 192	837 × 308 × 192
		W × H × D	inch	32-15/16 × 12-1/8 × 7-9/16	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W × H × D	mm	909 × 383 × 256	909 × 383 × 256
		W × H × D	inch	35-25/32 × 15-3/32 × 10-3/32	35-25/32 × 15-3/32 × 10-3/32
Weight	Body	kg (lbs)		9.1 (20.1)	9.9 (21.8)
	Shipping	kg (lbs)		12.5 (27.6)	13.0 (28.7)
Heat Exchanger	(Row×Column×Fins per inch) × No.	-		(2 × 15 × 21) × 1	(2 × 15 × 21) × 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.19 (2.05)	0.19 (2.05)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	8.6 / 7.2 / 5.6	9.2 / 7.4 / 5.6
		H / M / L	ft <sup>3</sup> /min	304 / 254 / 198	325 / 261 / 198
Fan Motor	Type	-		BLDC	BLDC
	Output	W × No.		30 × 1	30 × 1
Sound Pressure Level	H / M / L	dB(A)		35 / 32 / 27	36 / 33 / 27
Sound Power Level	Rated	dB(A)		57	57
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)			No. × mm <sup>2</sup> (AWG)	4C × 0.75 (18)	4C × 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				S3NM09JARZA [AC09BQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		2.5
	Heating	kW		3.3
Power Input	Min./Nom./Max.	W		11 / 18 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W x H x D	mm	837 × 308 × 192
		W x H x D	inch	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W x H x D	mm	909 × 383 × 256
		W x H x D	inch	35-25/32 × 15-3/32 × 10-3/32
Weight	Body	kg (lbs)		9.9 (21.8)
	Shipping	kg (lbs)		13.6 (30.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 15 × 21) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	12.5 / 10.0 / 7.5 / 4.2
			ft <sup>3</sup> /min	441 / 353 / 265 / 148
		(Heating) SH / H / M / L	m <sup>3</sup> /min	13.0 / 10.0 / 7.2 / 5.6
			ft <sup>3</sup> /min	459 / 353 / 254 / 198
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / 19
		(Heating) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / -
Sound Power Level		Rated	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				USNW12GJR20 [AM12BP NSJ]
Power Supply			V, Ø, Hz	220-240, 1, 50
				220, 1, 60
Capacity	Cooling		kW	3.5
	Heating		kW	3.8
Power Input	Min./Nom./Max.		W	11 / 19 / 30
Running Current	Min./Nom./Max.		A	0.10 / 0.17 / 0.20
Exterior Color code			-	Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W × H × D	mm	837 × 308 × 192
		W × H × D	inch	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W × H × D	mm	909 × 383 × 256
		W × H × D	inch	35-25/32 × 15-3/32 × 10-3/32
Weight	Body		kg (lbs)	9.9 (21.8)
	Shipping		kg (lbs)	13.0 (28.7)
Heat Exchanger	(Row×Column×Fins per inch) × No.		-	(2 × 15 × 21) × 1
	Face Area		m² (ft²)	0.19 (2.05)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m³/min	9.6 / 8.1 / 5.6
		H / M / L	ft³/min	339 / 286 / 198
Fan Motor	Type		-	BLDC
	Output		W × No.	30 × 1
Sound Pressure Level		H / M / L	dB(A)	40 / 35 / 27
Sound Power Level		Rated	dB(A)	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Protector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)			No. × mm <sup>2</sup> (AWG)	4C × 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				S3NM12JARZA [AC12BQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		3.5
	Heating	kW		4.0
Power Input	Min./Nom./Max.	W		11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.17 / 0.20
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W x H x D	mm	837 × 308 × 192
		W x H x D	inch	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W x H x D	mm	909 × 383 × 256
		W x H x D	inch	35-25/32 × 15-3/32 × 10-3/32
Weight	Body	kg (lbs)		9.9 (21.8)
	Shipping	kg (lbs)		13.6 (30.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 15 × 21) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	12.5 / 10.0 / 7.5 / 4.2
			ft <sup>3</sup> /min	441 / 353 / 265 / 148
		(Heating) SH / H / M / L	m <sup>3</sup> /min	13.0 / 10.0 / 7.2 / 5.6
			ft <sup>3</sup> /min	459 / 353 / 254 / 198
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / 19
		(Heating) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / -
Sound Power Level		Rated	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

- Due to our policy of innovation some specifications may be changed without notification.
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- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				USNW18GKRZ0 [AM18BP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5.0
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W × H × D	mm	998 × 345 × 212
		W × H × D	inch	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W × H × D	mm	1,080 × 422 × 281
		W × H × D	inch	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		13.2 (29.1)
	Shipping	kg (lbs)		17.6 (38.8)
Heat Exchanger	(Row×Column×Fins per inch) × No.	-		(2 × 16 × 20) × 1 + (1 × 8 × 22) × 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	14.2 / 11.3 / 9.9
		H / M / L	ft <sup>3</sup> /min	501 / 399 / 350
Fan Motor	Type	-		BLDC
	Output	W × No.		60 × 1
Sound Pressure Level		H / M / L	dB(A)	44 / 38 / 35
Sound Power Level		Rated	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. × mm <sup>2</sup> (AWG)		4C × 0.75 (18)

### Note

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3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.



## 2. Specifications

Model Name				S3NM18KLRZA [AC18BQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5.0
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W x H x D	mm	998 × 345 × 212
		W x H x D	inch	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W x H x D	mm	1,080 × 422 × 281
		W x H x D	inch	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		12.8(28.2)
	Shipping	kg (lbs)		17.4(38.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 16 × 20) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	15.5 / 14.5 / 13.0 / 10.5
			ft <sup>3</sup> /min	547 / 512 / 459 / 371
		(Heating) SH / H / M / L	m <sup>3</sup> /min	18.5 / 16.0 / 13.5 / 11.0
			ft <sup>3</sup> /min	653 / 565 / 477 / 388
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	47 / 44 / 39 / 34 / 31
		(Heating) SH / H / M / L / SL	dB(A)	48 / 44 / 39 / 34 / -
Sound Power Level		Rated	dB(A)	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

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- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				AMNW24GSKR0 [AM24BP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W × H × D	mm	998 × 345 × 212
		W × H × D	inch	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W × H × D	mm	1,080 × 422 × 281
		W × H × D	inch	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		14.0 (30.9)
	Shipping	kg (lbs)		18.0 (39.7)
Heat Exchanger	(Row×Column×Fins per inch) × No.	-		(2 × 16 × 20) × 1 + (1 × 8 × 22) × 1
	Face Area	m <sup>2</sup> (ft <sup>2</sup> )		0.28 (3.01)
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	15.2 / 12.7 / 10.2
		H / M / L	ft <sup>3</sup> /min	537 / 449 / 360
Fan Motor	Type	-		BLDC
	Output	W × No.		60 × 1
Sound Pressure Level		H / M / L	dB(A)	46 / 41 / 36
Sound Power Level		Rated	dB(A)	65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Connections Method		-		Flared
Power and Communication Cable (included Earth)		No. × mm <sup>2</sup> (AWG)		4C × 0.75 (18)

### Note

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2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				S3NM24K2RZA [AC24BQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		6.6
	Heating	kW		7.5
Power Input	Min./Nom./Max.	W		27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.24 / 0.33 / 0.40
Exterior Color code		-		Munsell 7.5PB 0.2/20 (RAL 9005)
Dimensions	Body	W x H x D	mm	998 × 345 × 212
		W x H x D	inch	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W x H x D	mm	1,080 × 422 × 281
		W x H x D	inch	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		13.5 (29.8)
	Shipping	kg (lbs)		18.3 (40.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 16 × 20) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	18.3 / 16.1 / 13.1 / 10.5
			ft <sup>3</sup> /min	646 / 569 / 463 / 371
		(Heating) SH / H / M / L	m <sup>3</sup> /min	19.8 / 17.6 / 14.3 / 11.0
			ft <sup>3</sup> /min	699 / 622 / 505 / 388
Fan Motor	Type		-	BLDC
	Output		W x No.	58 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	49 / 47 / 42 / 34 / 31
		(Heating) SH / H / M / L / SL	dB(A)	50 / 47 / 42 / 34 / -
Sound Power Level		Rated	dB(A)	65
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 15.88 (5/8)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

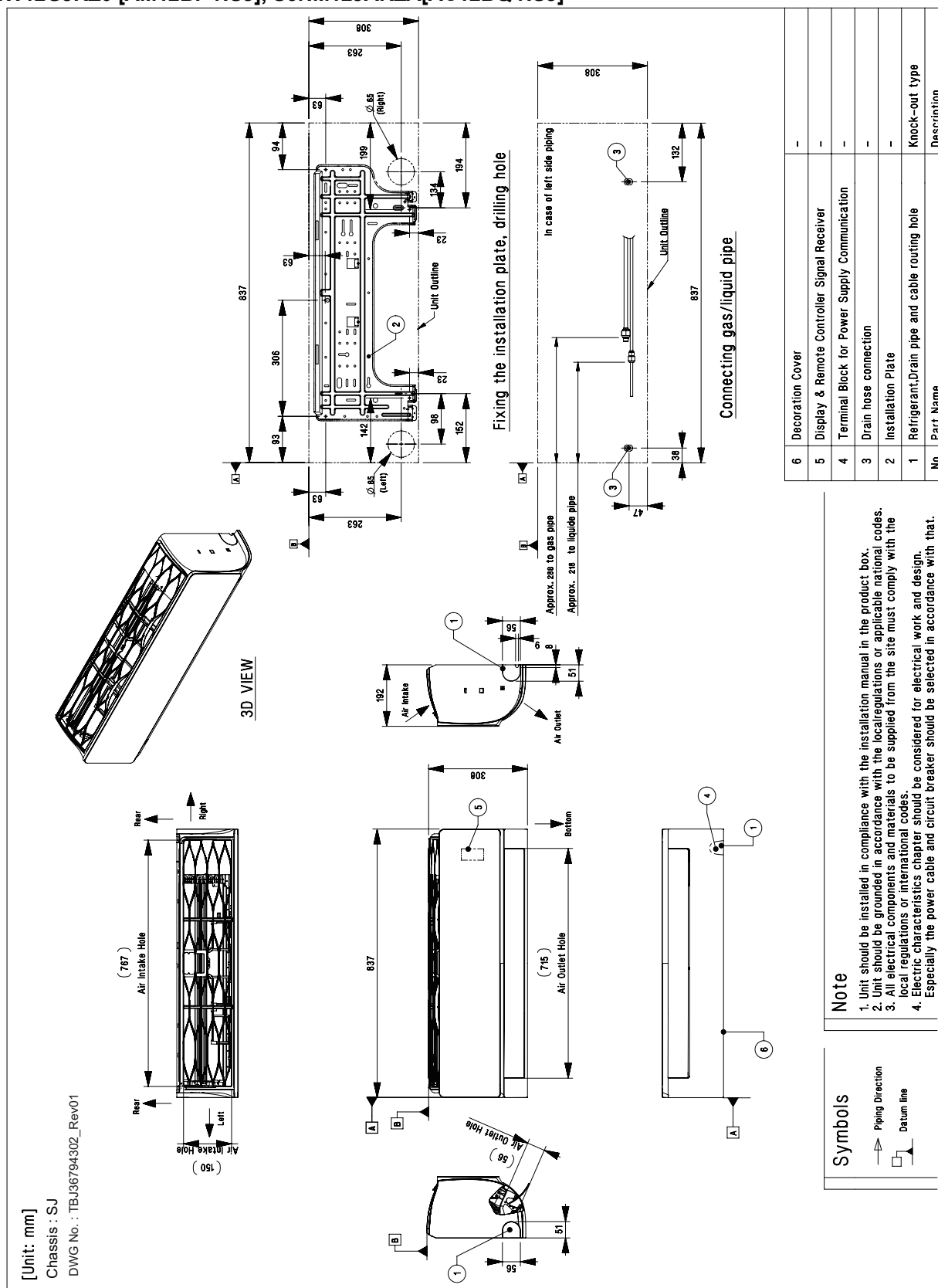
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  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 3. Dimensions

### ◆ ARTCOOL Mirror (SJ Chassis)

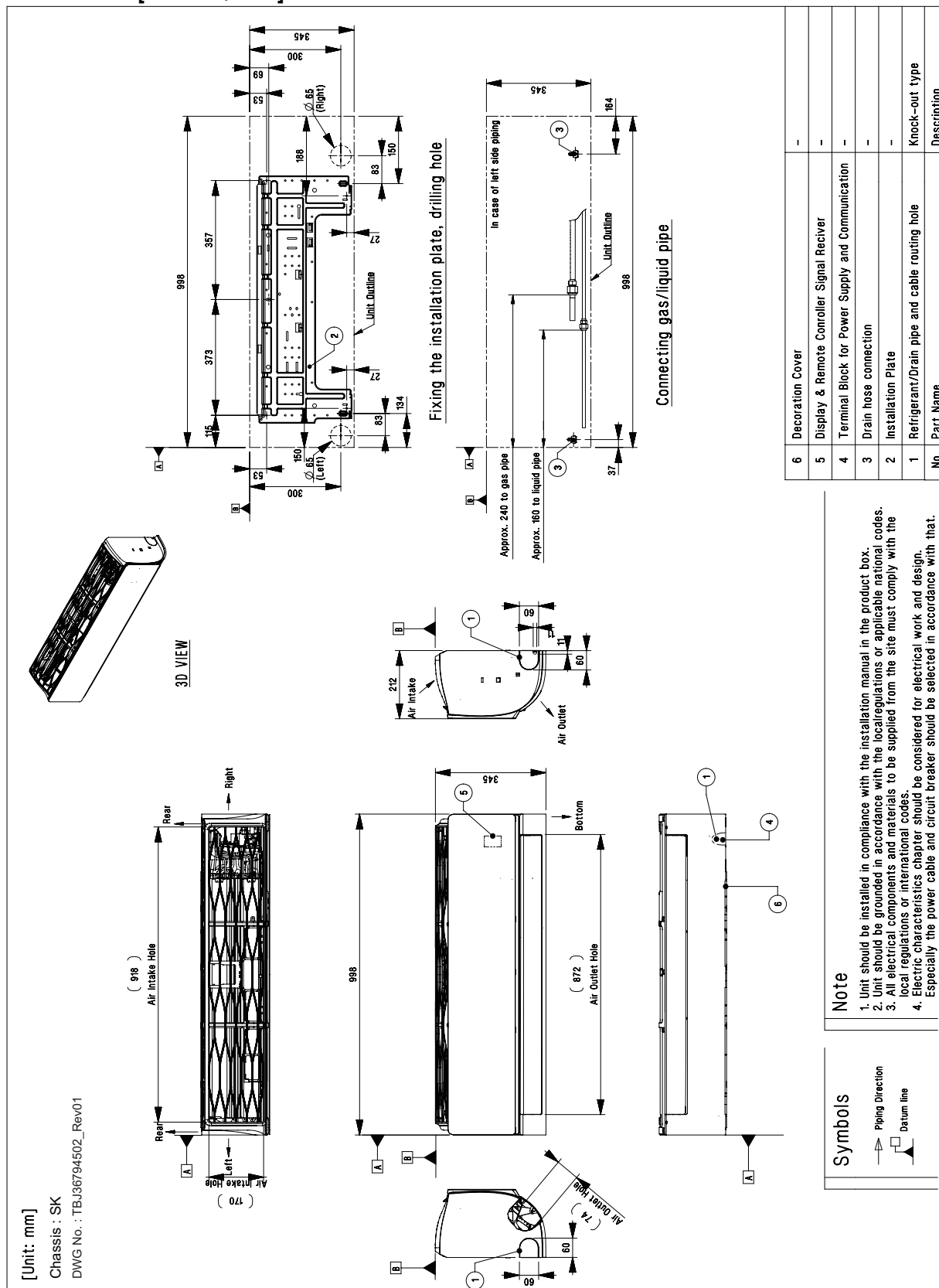
AMNW07GSJR0 [AM07BP NSJ], USNW09GJRZ0 [AM09BP NSJ], S3NM09JARZA [AC09BQ NSJ],  
USNW12GJRZ0 [AM12BP NSJ], S3NM12JARZA[AC12BQ NSJ]



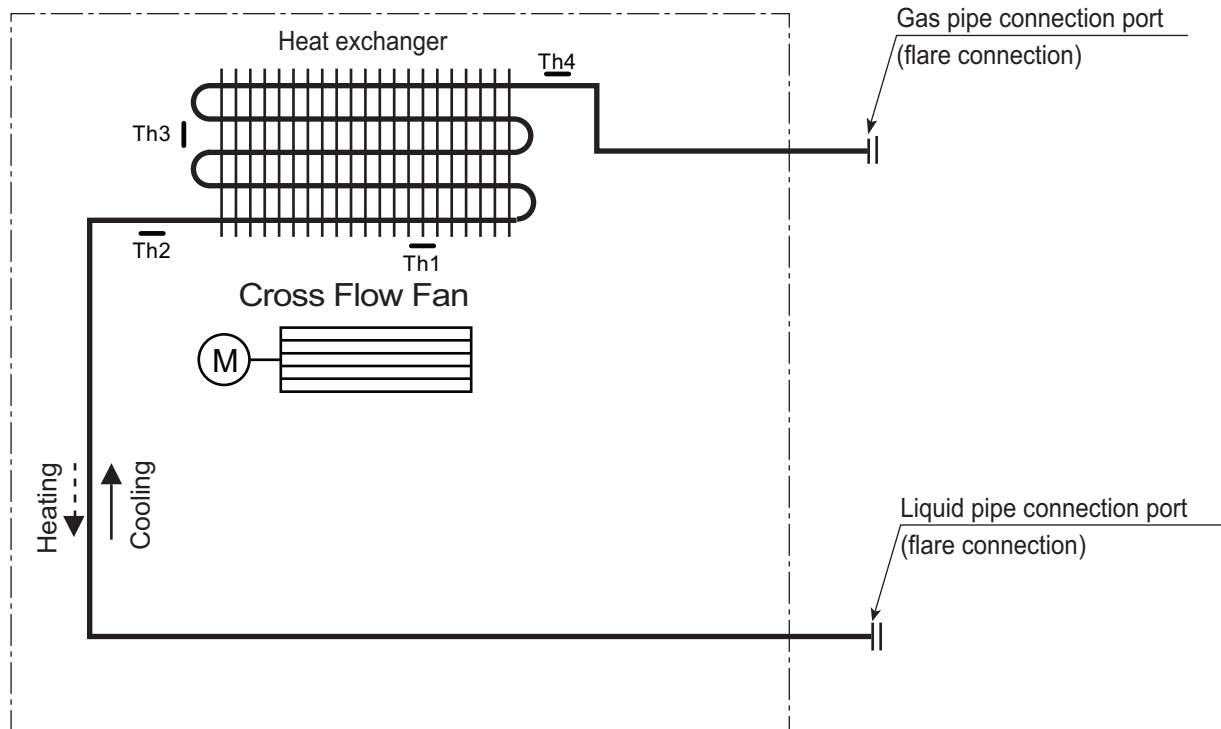
## 3. Dimensions

### ◆ ARTCOOL Mirror (SK Chassis)

USNW18GKRZ0 [AM18BP NSK], S3NM18KLRZA[AC18BQ NSK], AMNW24GSKR0 [AM24BP NSK], S3NM24K2RZA[AC24BQ NSK]



## 4. Piping diagrams

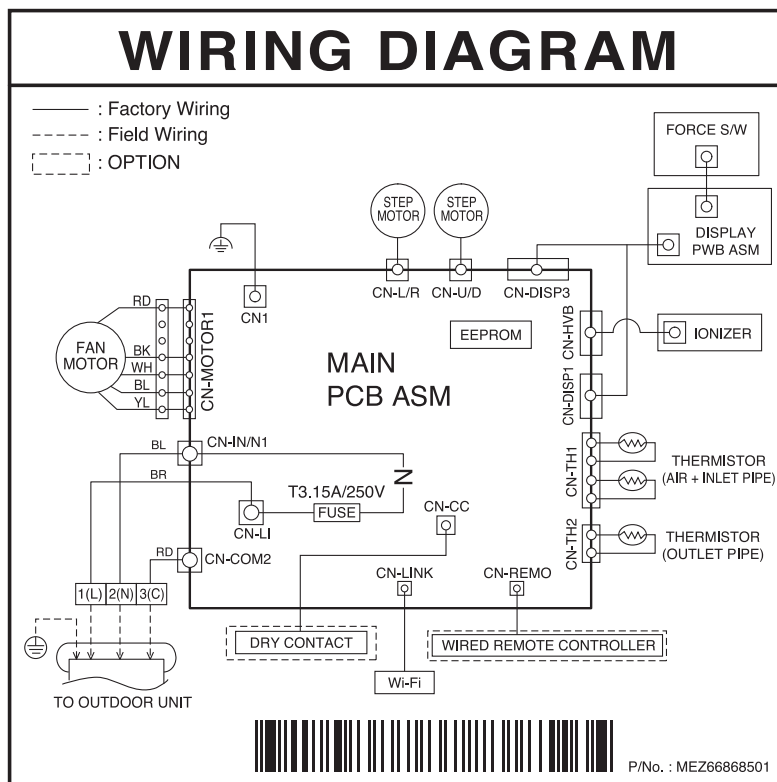


LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1
Th2	Thermistor for evaporator inlet temperature	
Th3*	Thermistor for evaporator middle temperature	CN-TH3
Th4	Thermistor for evaporator outlet temperature	CN-TH2

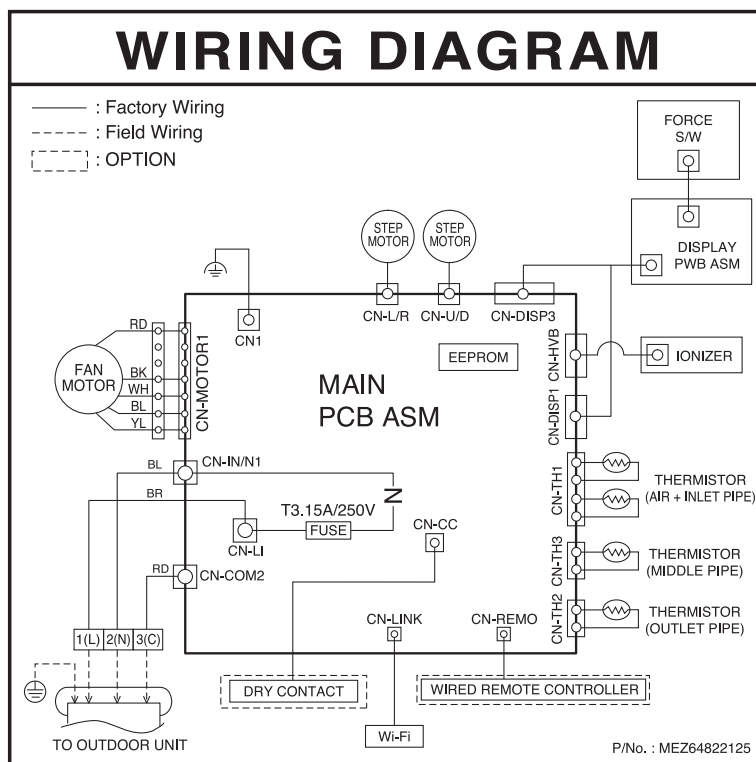
- \* : AMNW07GSJR0 [AM07BP NSJ], AMNW24GSKR0 [AM24BP NSK] models are not available.

## 5. Wiring Diagrams

■ Models : AMNW07GSJR0 [AM07BP NSJ], AMNW24GSKR0 [AM24BP NSK]

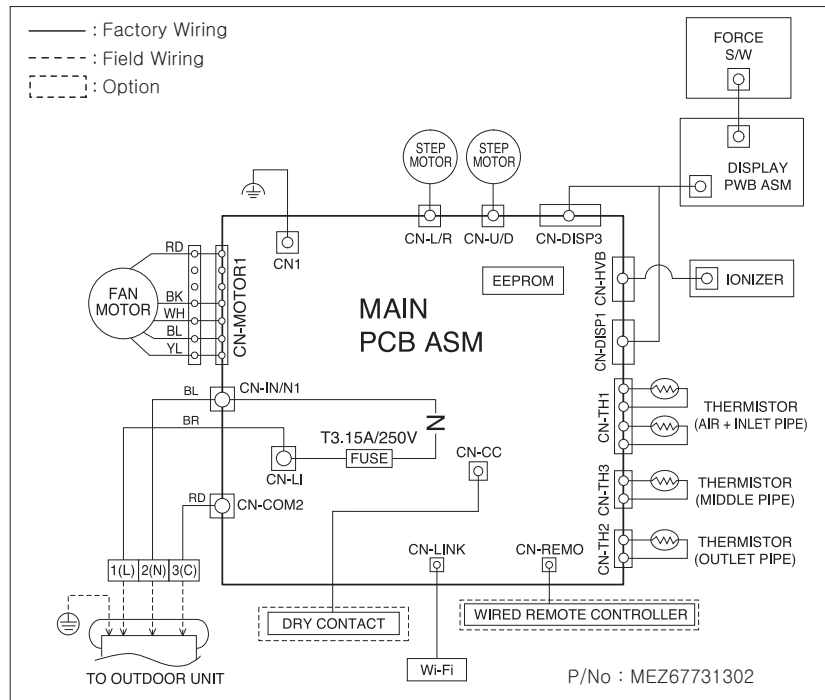


■ Models : USNW09GJRZ0 [AM09BP NSJ], USNW12GJRZ0 [AM12BP NSJ],  
USNW18GKRZ0 [AM18BP NSK]



## 5. Wiring Diagrams

- Models : S3NM09JARZA[AC09BQ NSJ], S3NM12JARZA[AC12BQ NSJ], S3NM18KLRZA[AC18BQ NSK], S3NM24K2RZA[AC24BQ NSK]





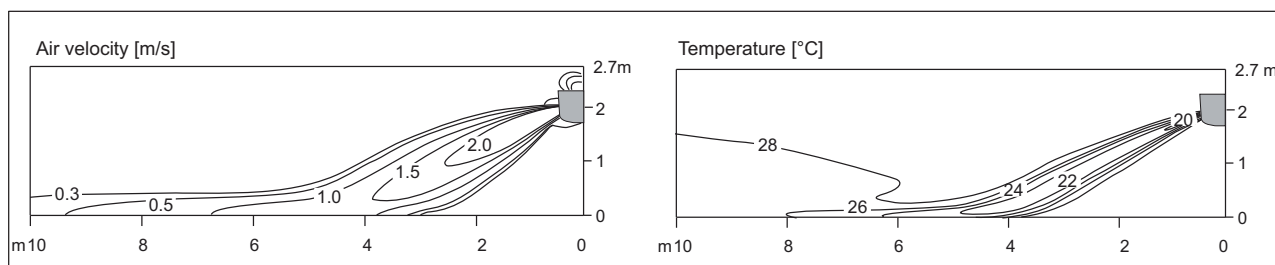
## 6. Air flow and temperature distributions (reference data)

■ Models : AMNW07GSJR0 [AM07BP NSJ], USNW09GJRZ0 [AM09BP NSJ]  
USNW12GJRZ0 [AM12BP NSJ]

### ◆ Cooling

#### Side View

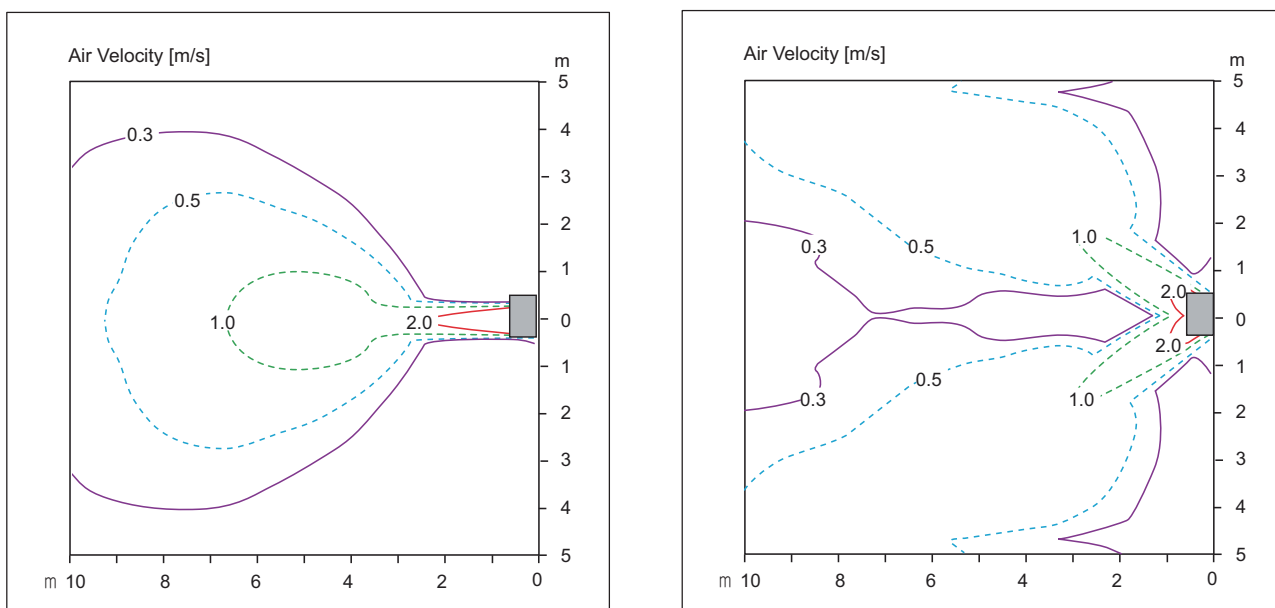
Discharge angle: 35°



- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.5m

- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

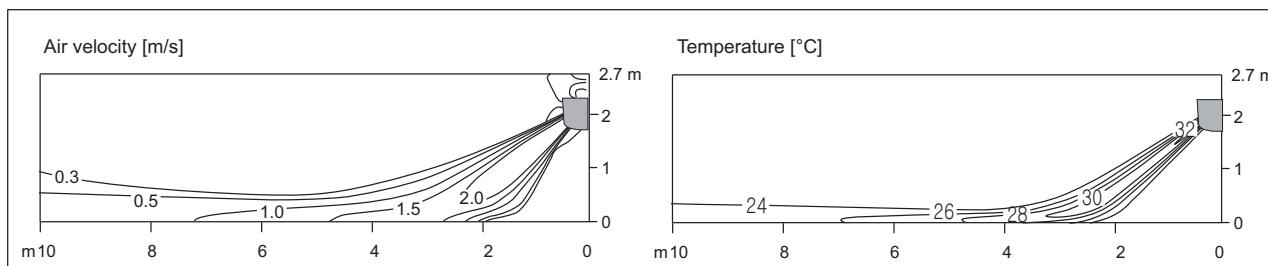
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

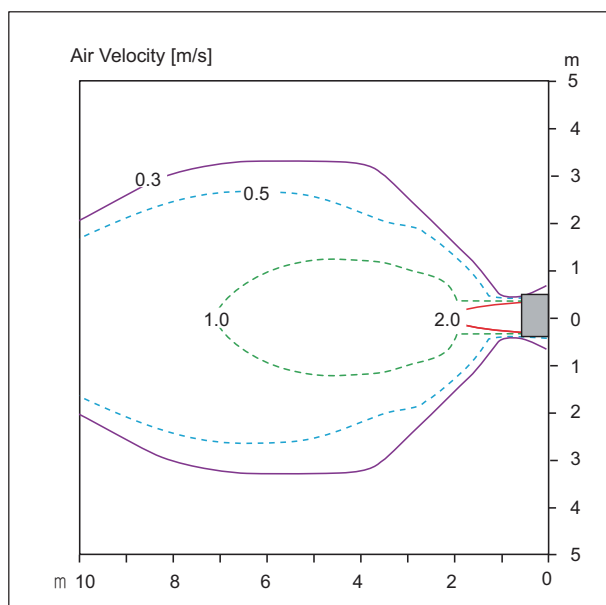
Discharge angle: 55°



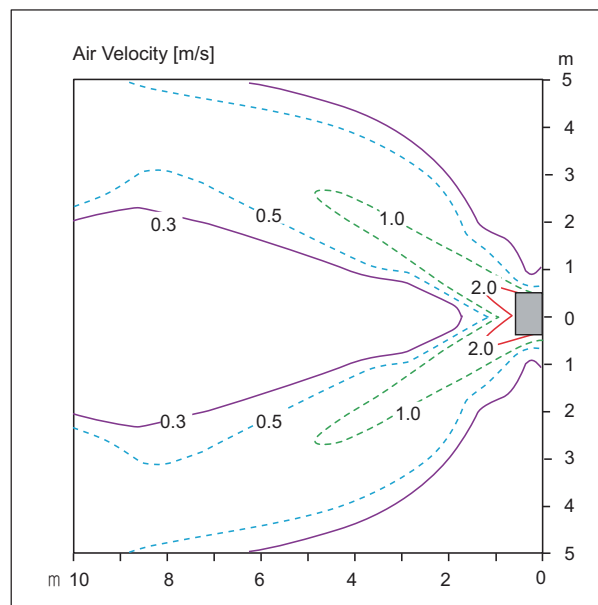
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

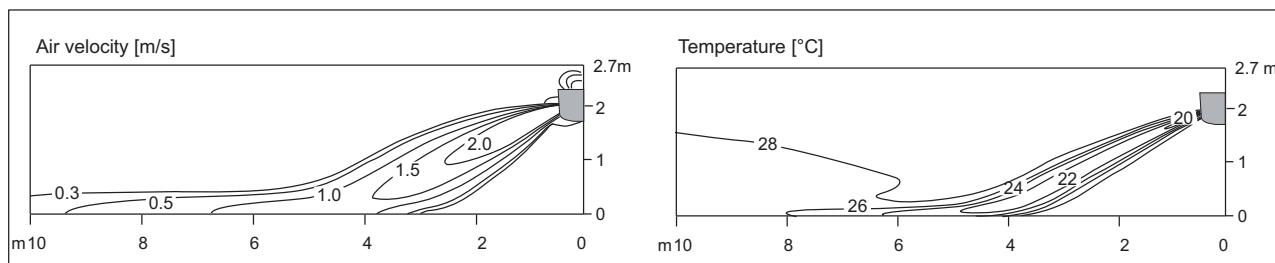
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM09JARZA[AC09BQ NSJ], S3NM12JARZA[AC12BQ NSJ]

### ◆ Cooling

#### Side View

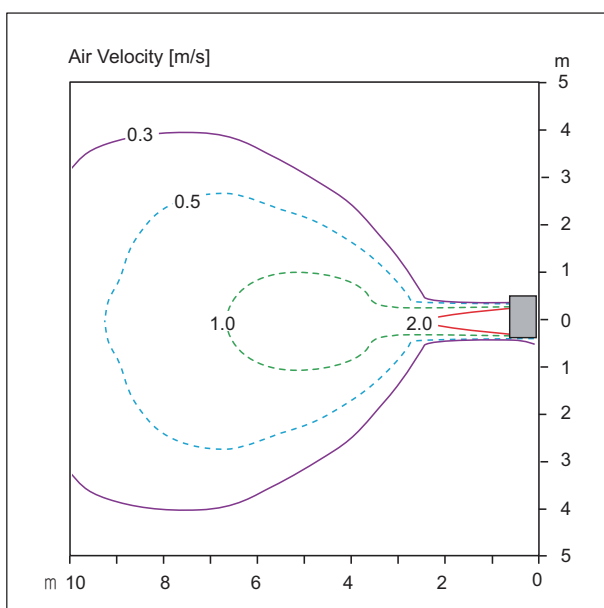
Discharge angle: 35°



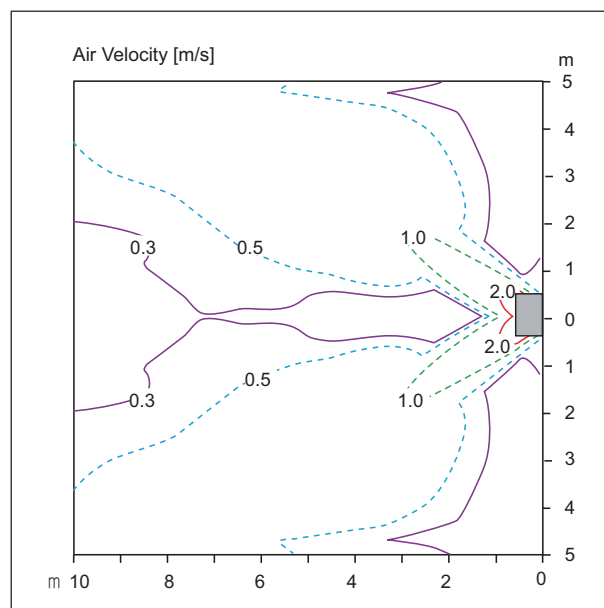
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

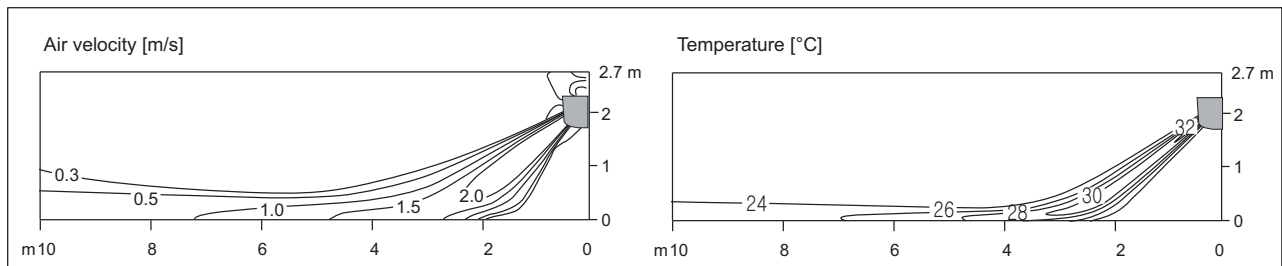
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

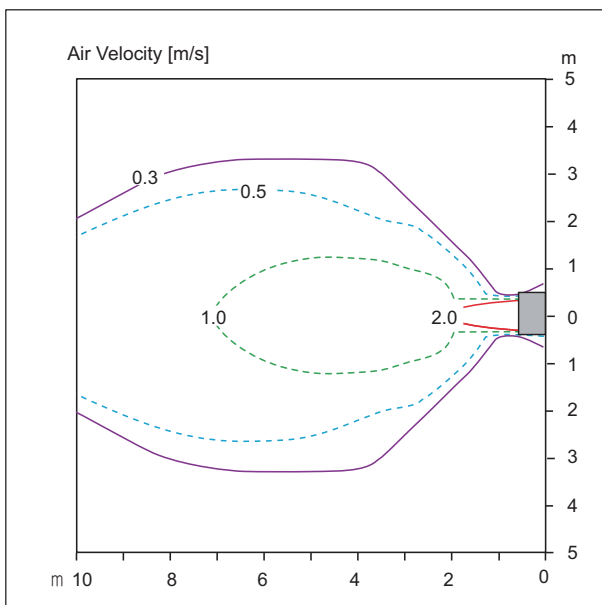
Discharge angle: 55°



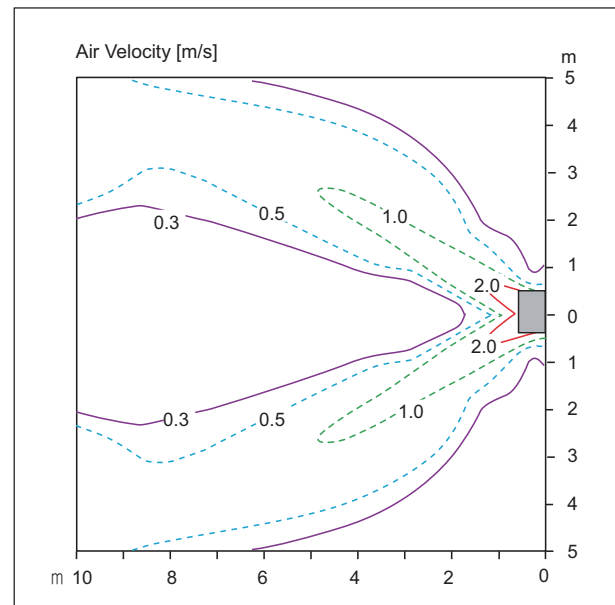
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

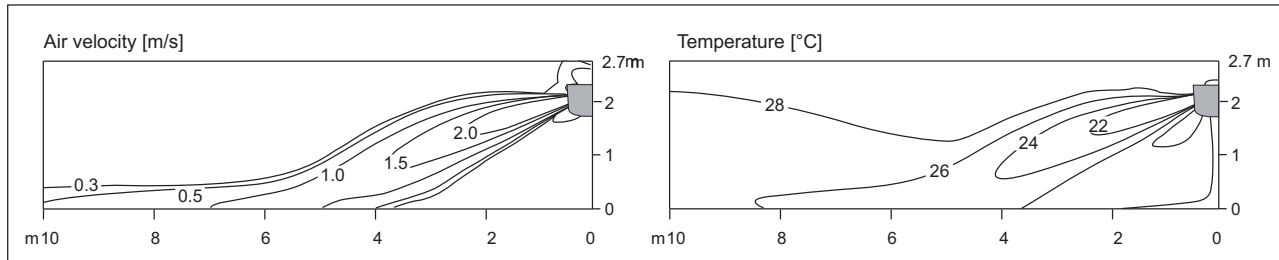
## 6. Air flow and temperature distributions (reference data)

### ■ Models : USNW18GKRZ0 [AM18BP NSK]

#### ◆ Cooling

##### Side View

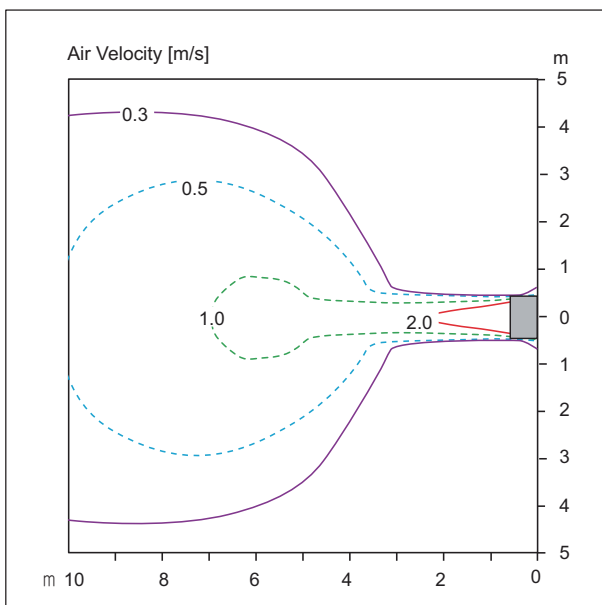
Discharge angle: 25°



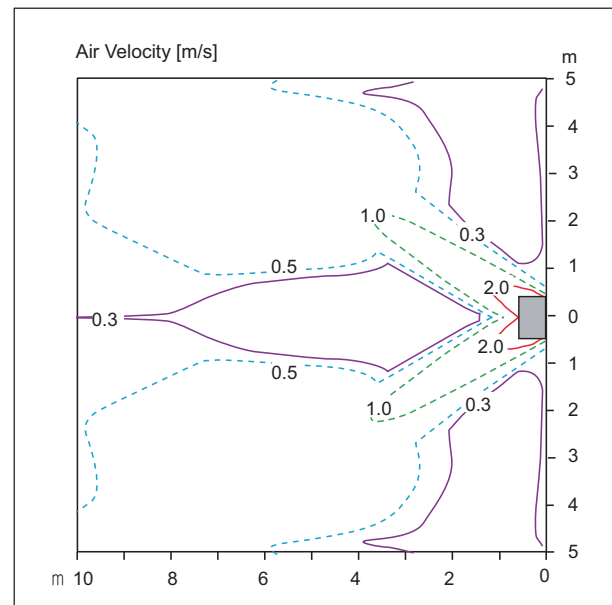
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

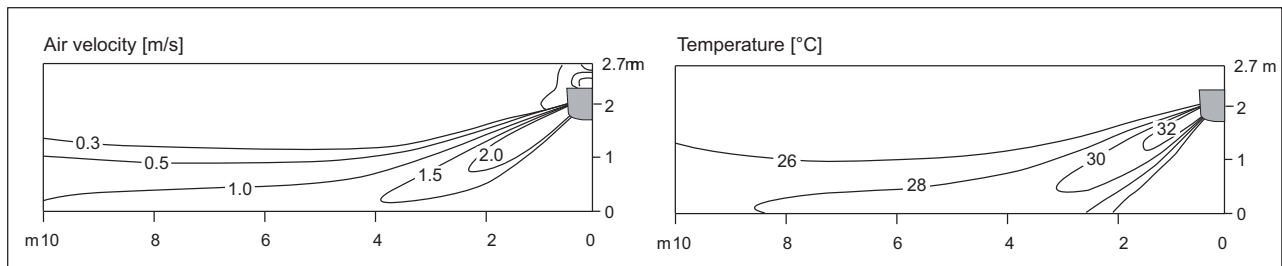
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

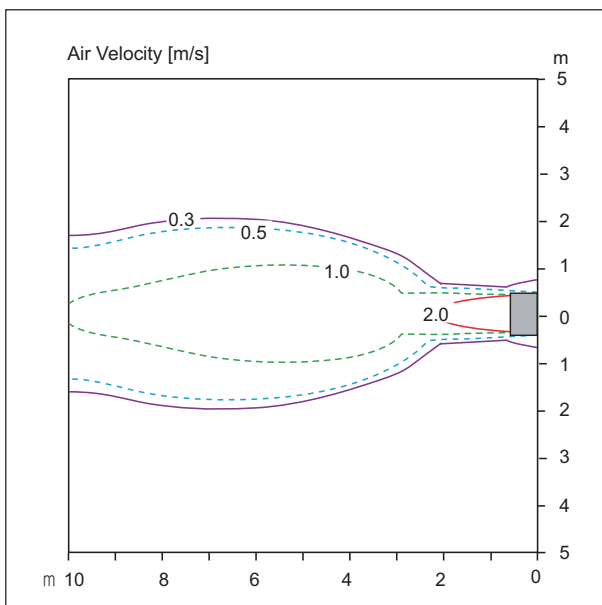
Discharge angle: 45°



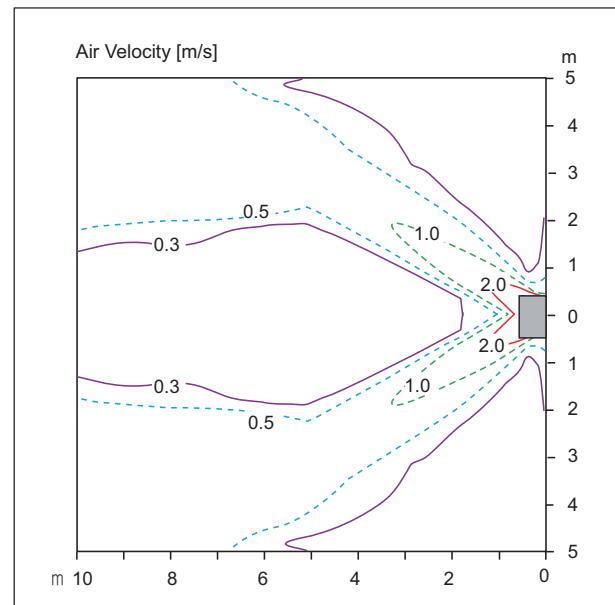
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

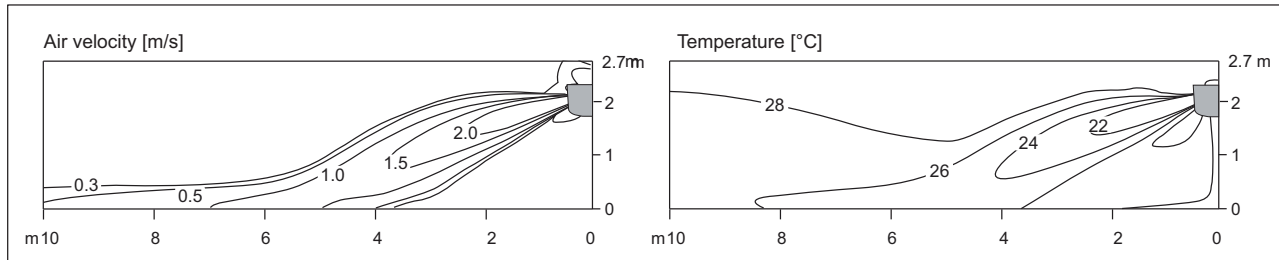
## 6. Air flow and temperature distributions (reference data)

### ■ Models : S3NM18KLRZA[AC18BQ NSK]

#### ◆ Cooling

##### Side View

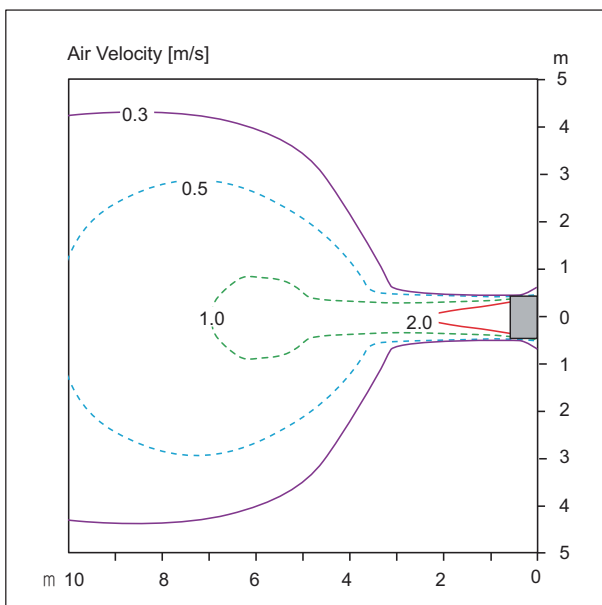
Discharge angle: 25°



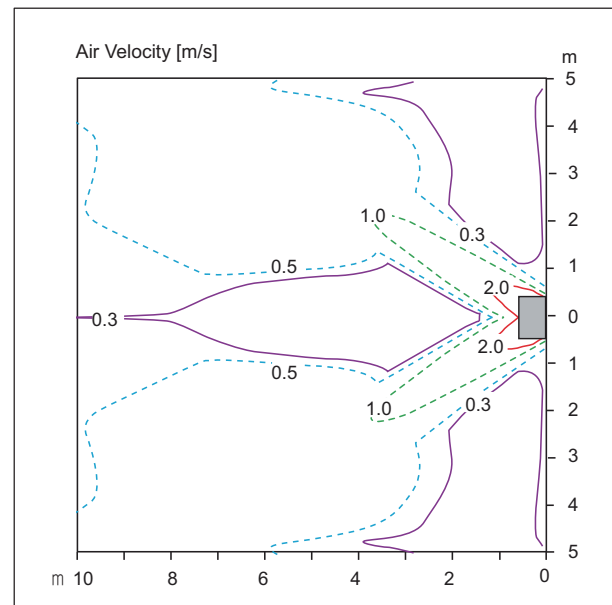
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

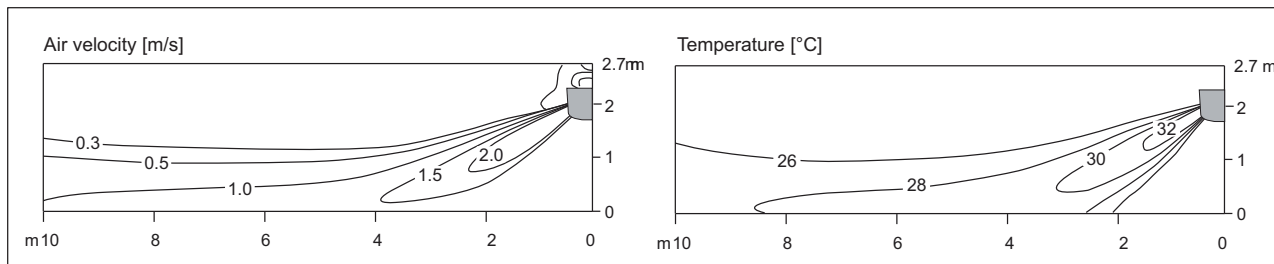
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

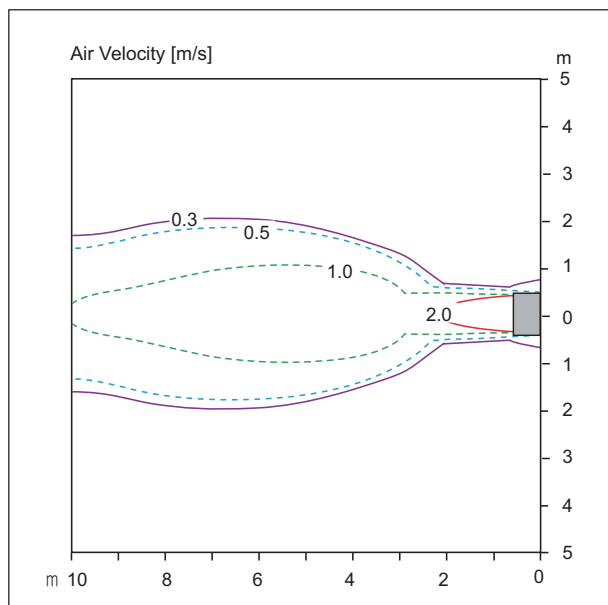
Discharge angle: 45°



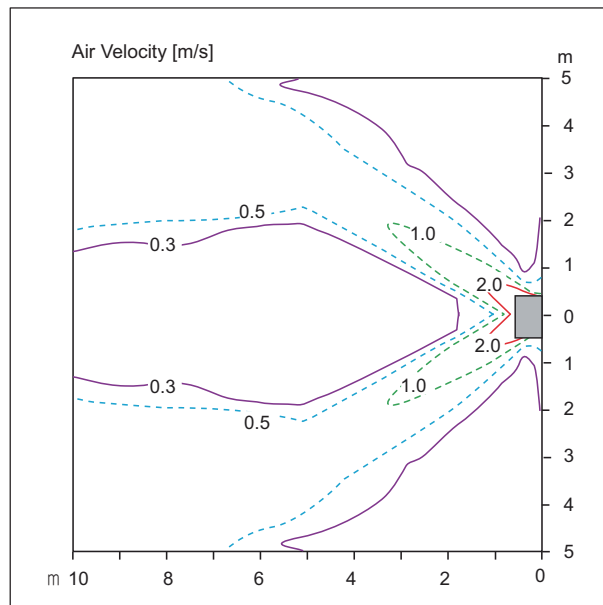
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.



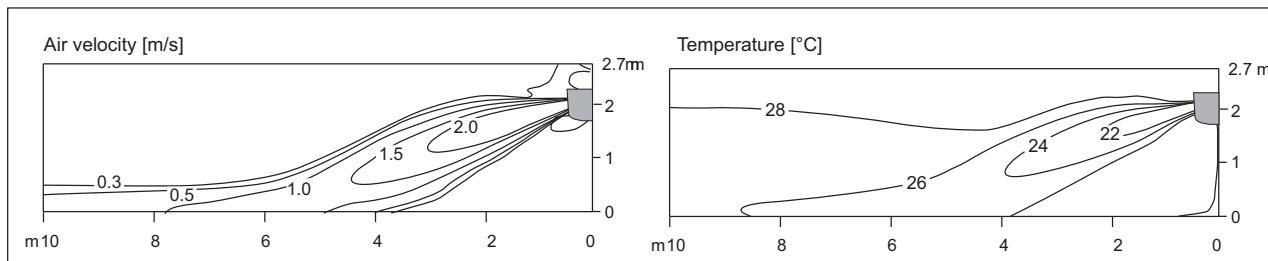
## 6. Air flow and temperature distributions (reference data)

### ■ Models : AMNW24GSKR0 [AM24BP NSK]

#### ◆ Cooling

##### Side View

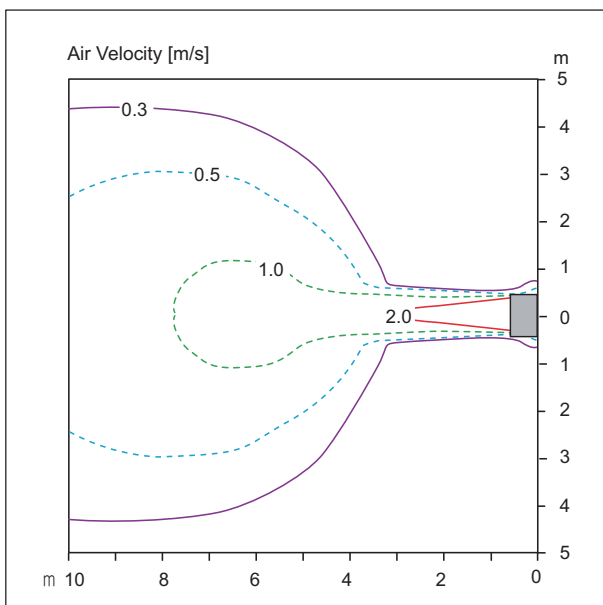
Discharge angle: 25°



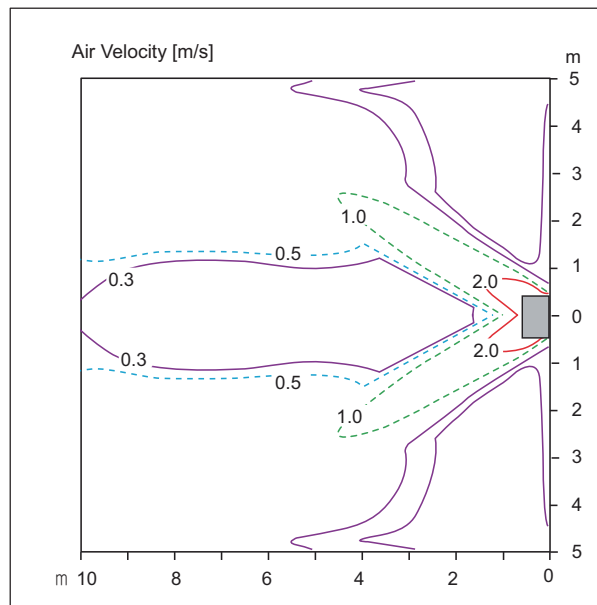
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 15.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

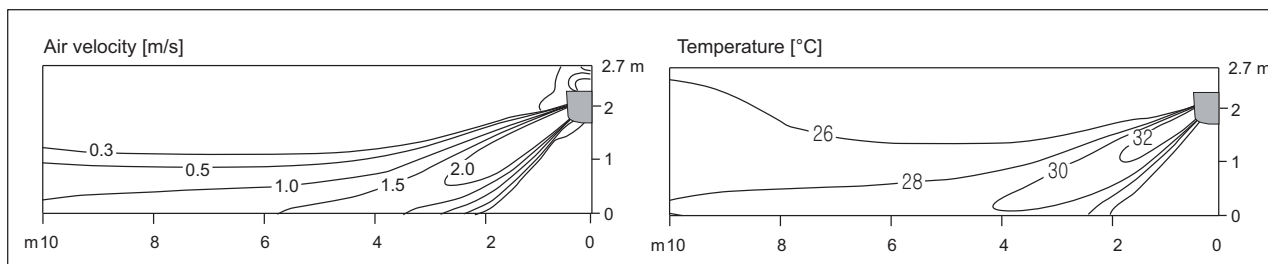
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

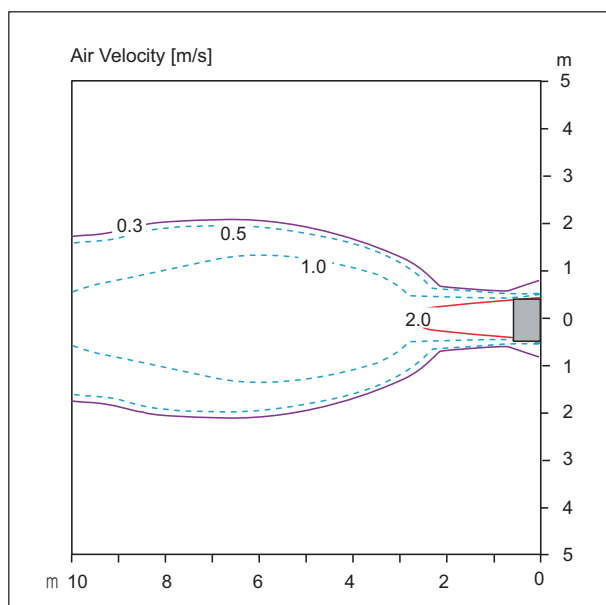
Discharge angle: 45°



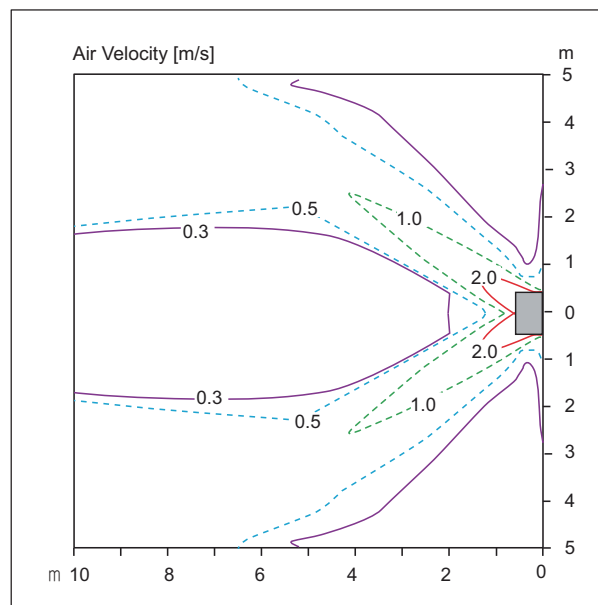
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

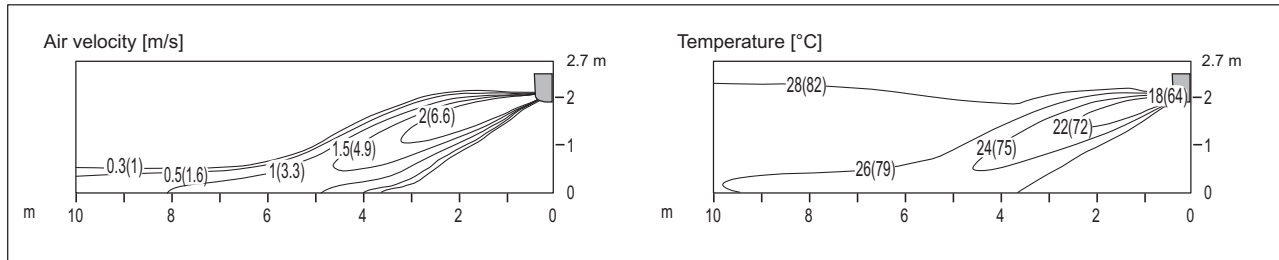
## 6. Air flow and temperature distributions (reference data)

### ■ Models : S3NM24K2RZA[AC24BQ NSK]

#### ◆ Cooling

Side View

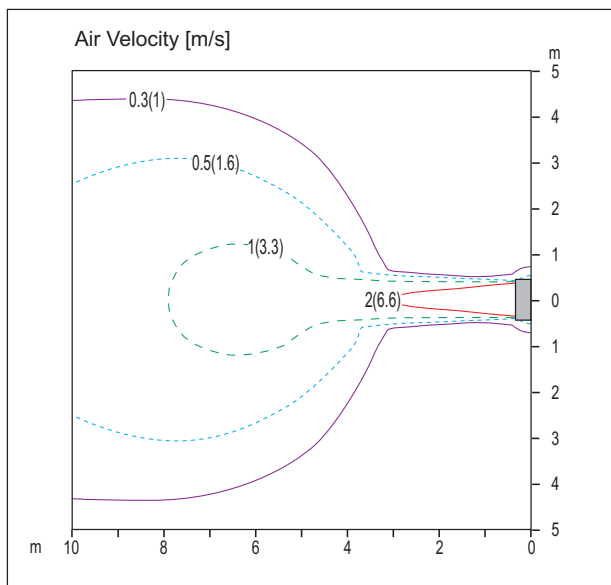
Discharge angle: 25°



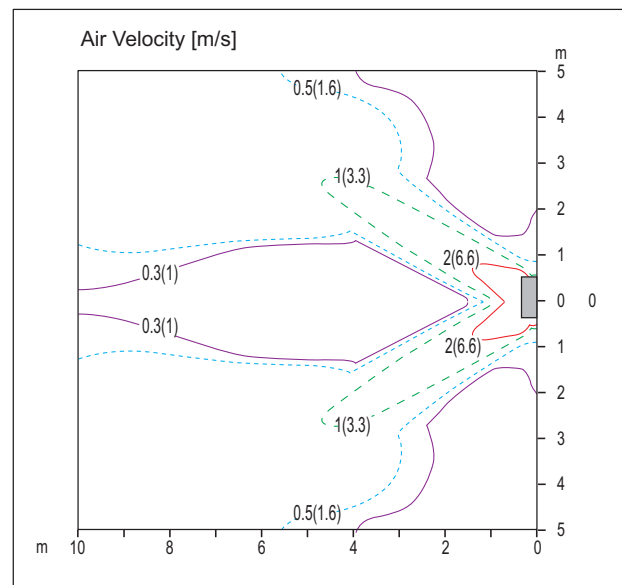
- Vertical Louver : Center
- Fan speed : Super High

Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 15.4m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

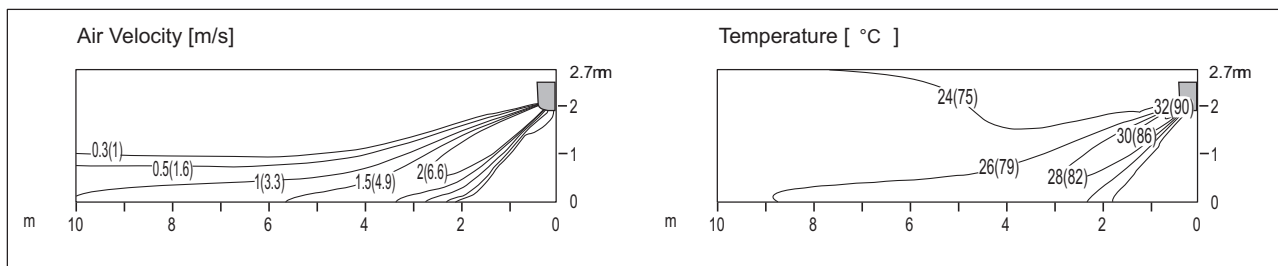
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

Side View

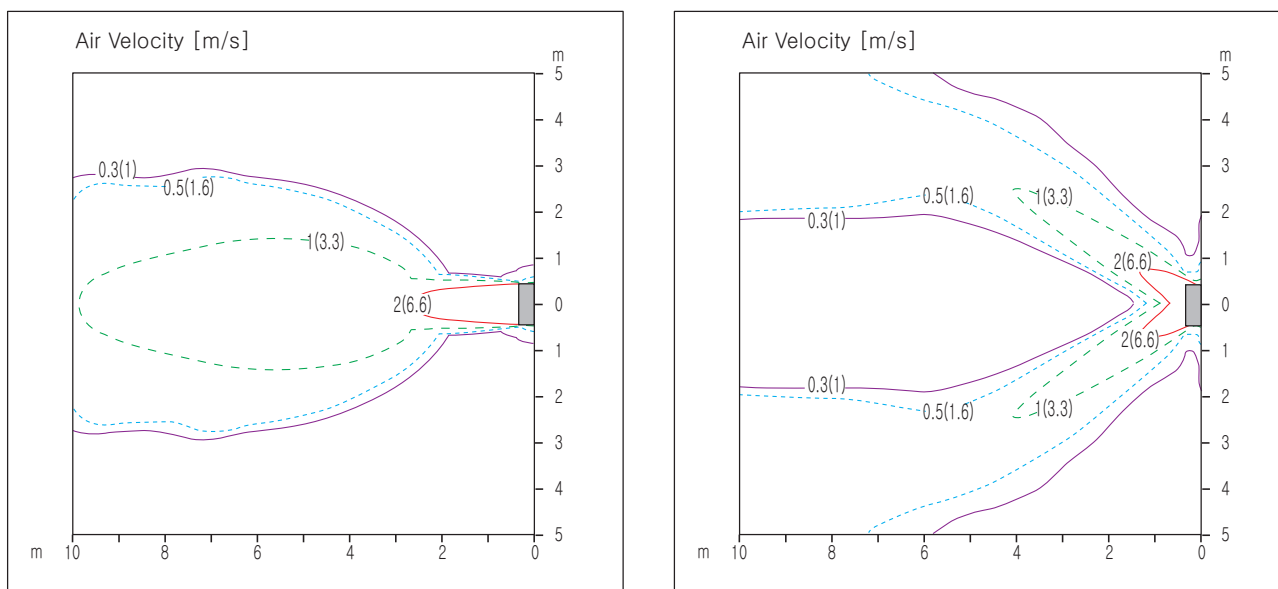
Discharge angle: 45°



- Vertical Louver : Center
- Fan speed : Super High

### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 19.5m

- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

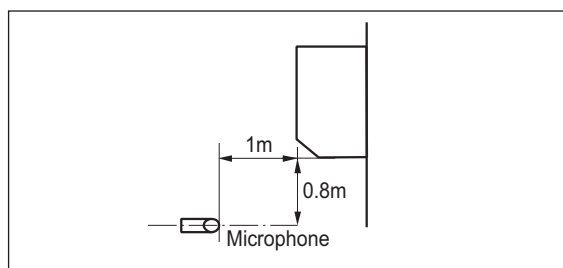
### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### ■ Overall



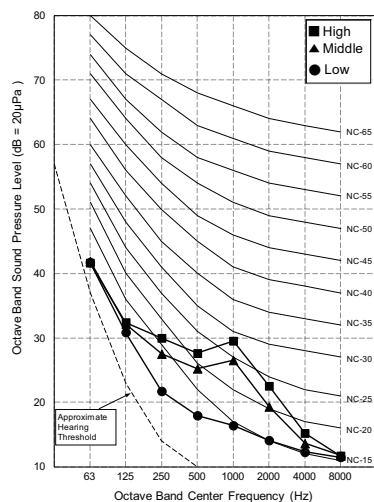
#### Note

1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

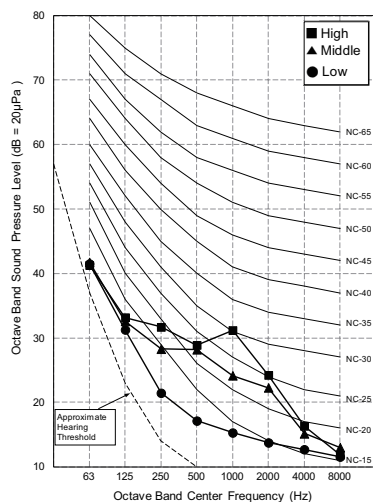
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW07GSJR0 [AM07BP NSJ]	35	32	27
USNW09GJRZ0 [AM09BP NSJ]	36	33	27
S3NM09JARZA [AC09BQ NSJ]	41	35	27
USNW12GJRZ0 [AM12BP NSJ]	40	35	27
S3NM12JARZA [AC12BQ NSJ]	41	35	27
USNW18GKRZ0 [AM18BP NSK]	44	38	35
S3NM18KLRZA [AC18BQ NSK]	44	39	34
AMNW24GSKR0 [AM24BP NSK]	46	41	36
S3NM24K2RZA [AC24BQ NSK]	47	42	34

# 7. Sound levels

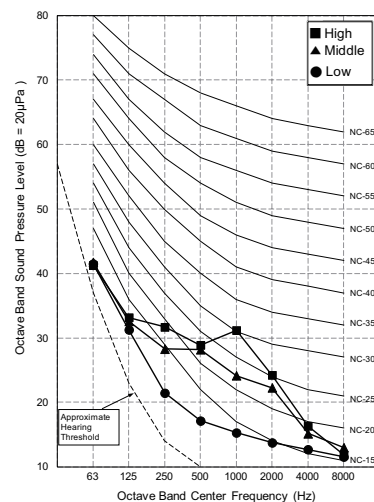
AMNW07GSJR0 [AM07BP NSJ]



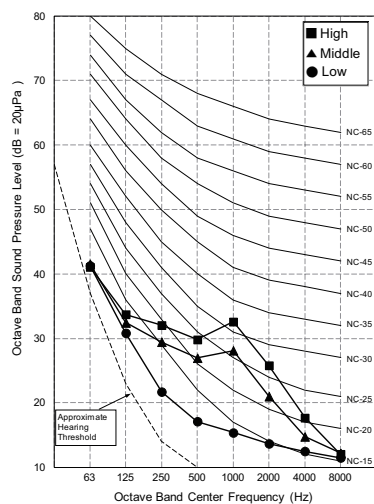
USNW09GJRZ0 [AM09BP NSJ]



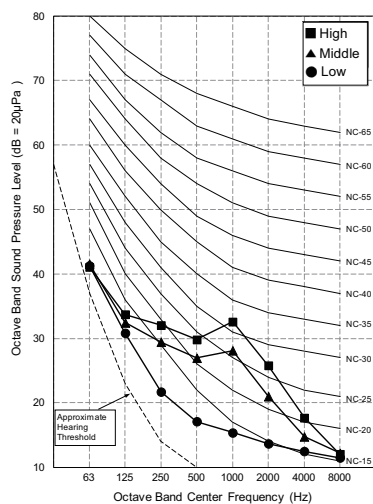
S3NM09JARZA [AC09BQ NSJ]



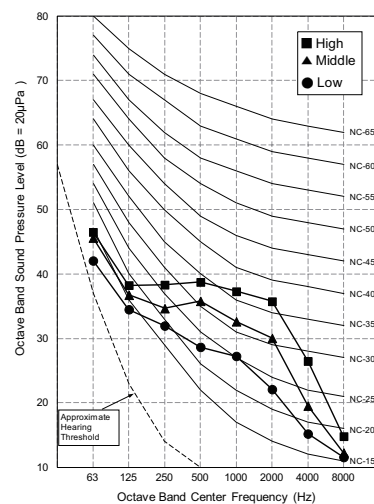
USNW12GJRZ0 [AM12BP NSJ]



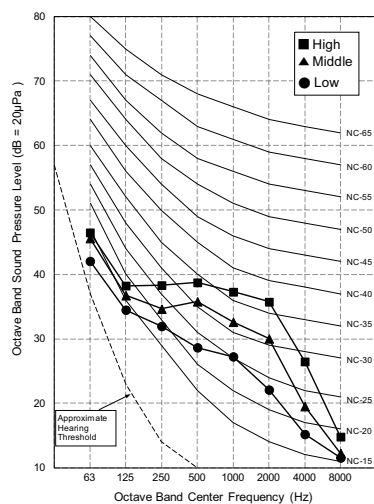
S3NM12JARZA [AC12BQ NSJ]



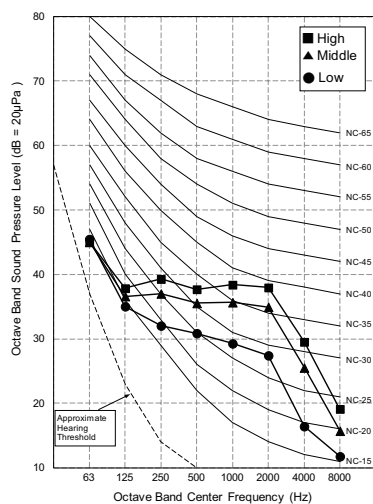
USNW18GKRZ0 [AM18BP NSK]



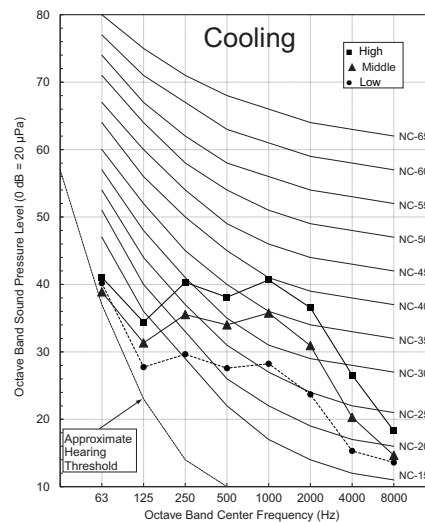
S3NM18KLRZA [AC18BQ NSK]



AMNW24GSKR0 [AM24BP NSK]

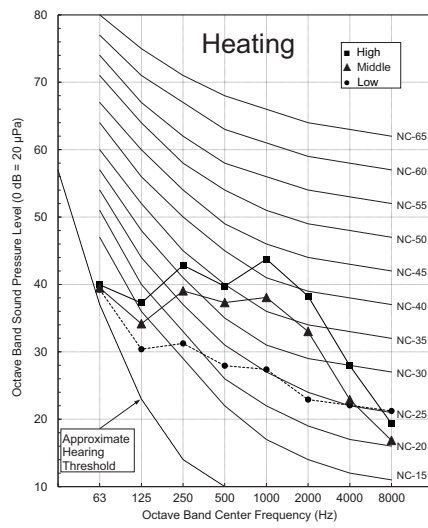


S3NM24K2RZA [AC24BQ NSK]



## 7. Sound levels

### S3NM24K2RZA [AC24BQ NSK]



## 7. Sound levels

### 7.2 Sound power level

#### Note

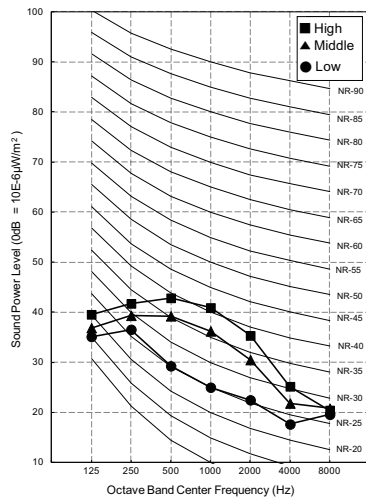
1. Operating condition
  - Power source : 220-240V 50 Hz / 220V 60 Hz
  - Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
  - Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
  - External static pressure is according to "Standard mode" value. Refer to the specifications.
2. Data is valid at diffuse field condition.
3. Data is valid at nominal operating condition
4. Sound level can be increased in static pressure mode or used air guide.
5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).
6. Reference acoustic intensity 0dB =  $10E-6\mu W/m^2$
7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard.  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power Levels [dB(A)]
AMNW07GSJR0 [AM07BP NSJ]	57
USNW09GJRZ0 [AM09BP NSJ]	57
S3NM09JARZA [AC09BQ NSJ]	59
USNW12GJRZ0 [AM12BP NSJ]	57
S3NM12JARZA [AC12BQ NSJ]	59
USNW18GKRZ0 [AM18BP NSK]	59
S3NM18KLRZA [AC18BQ NSK]	60
AMNW24GSKR0 [AM24BP NSK]	65
S3NM24K2RZA [AC24BQ NSK]	65

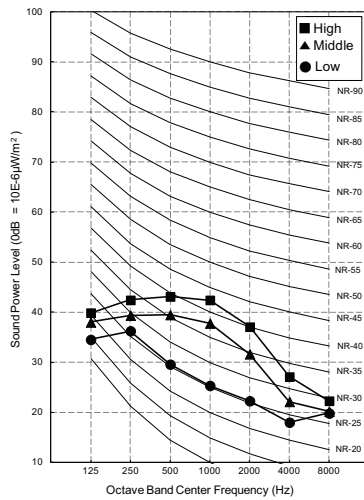


# 7. Sound levels

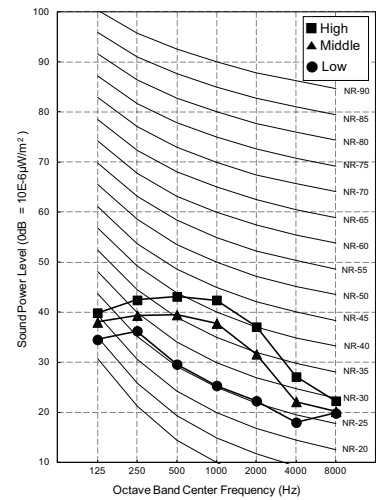
AMNW07GSJR0 [AM07BP NSJ]



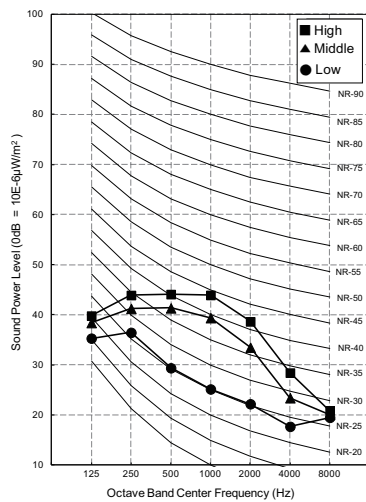
USNW09GJRZ0 [AM09BP NSJ]



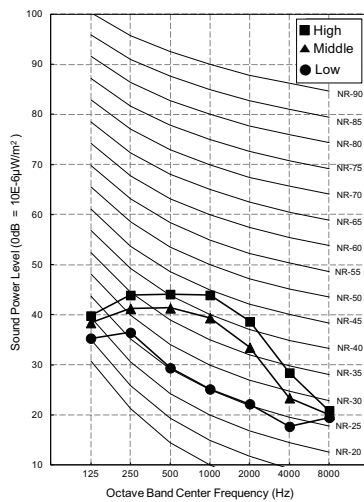
S3NM09JARZA [AC09BQ NSJ]



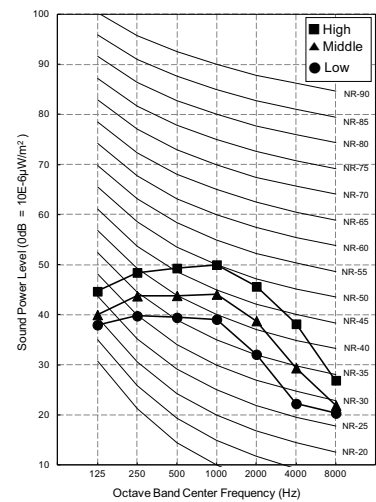
USNW12GJRZ0 [AM12BP NSJ]



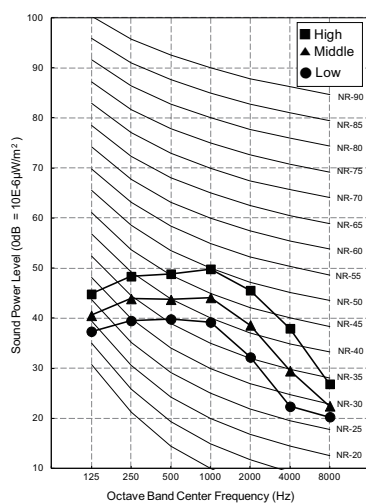
S3NM12JARZA [AC12BQ NSJ]



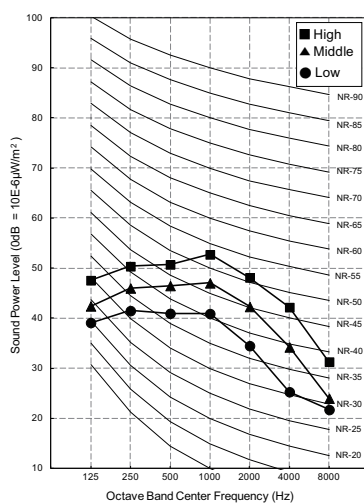
USNW18GKRZ0 [AM18BP NSK]



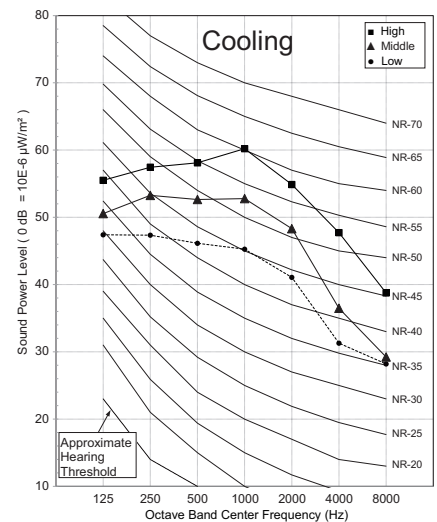
S3NM18KLRZA [AC18BQ NSK]



AMNW24GSKR0 [AM24BP NSK]

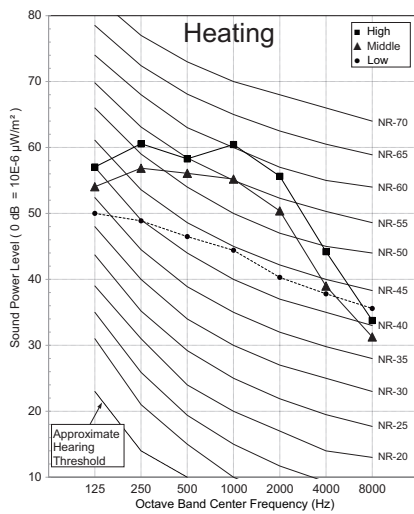


S3NM24K2RZA [AC24BQ NSK]



## 7. Sound levels

### S3NM24K2RZA [AC24BQ NSK]

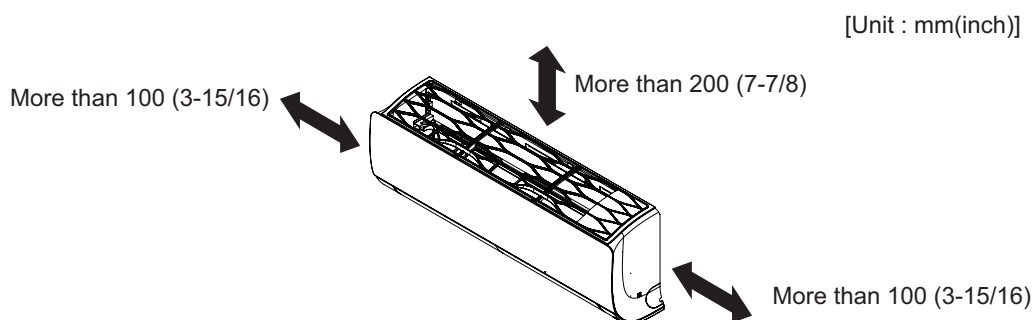


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.

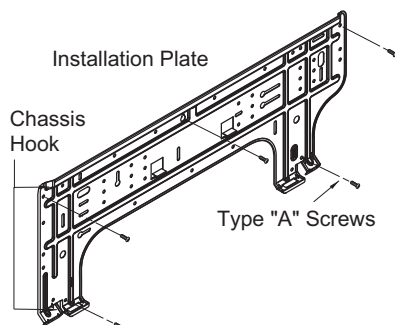


## 8. Installation

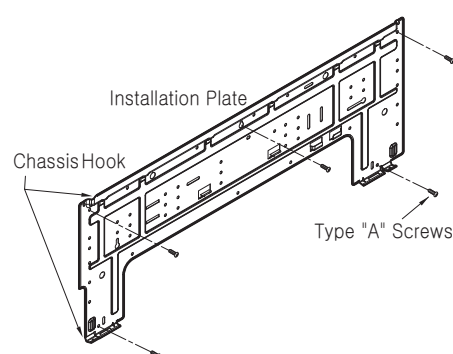
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
- 1. Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
  - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
- 2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

**SJ Chassis**

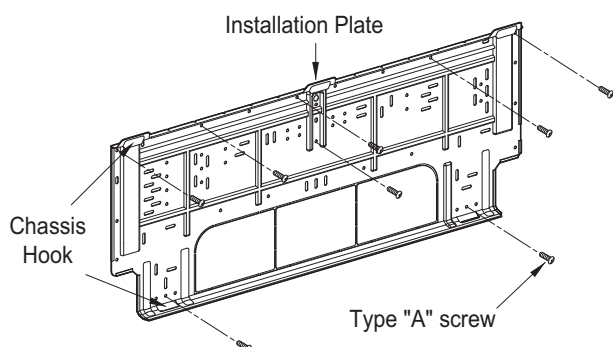


**SK Chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

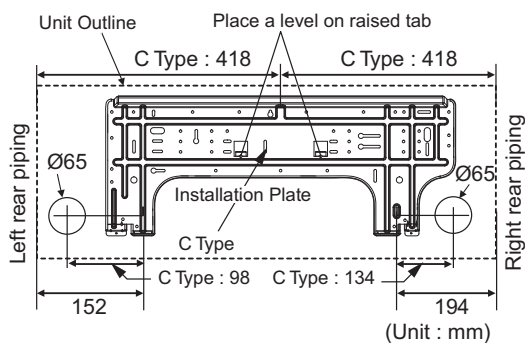
**SV Chassis**



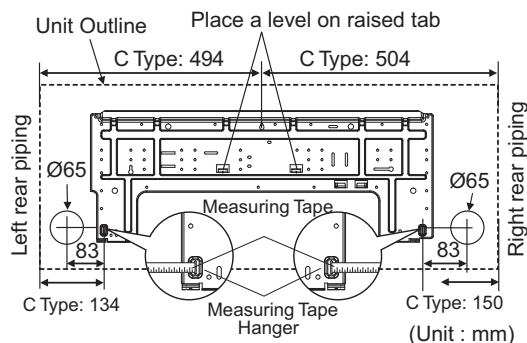
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

**SJ chassis**



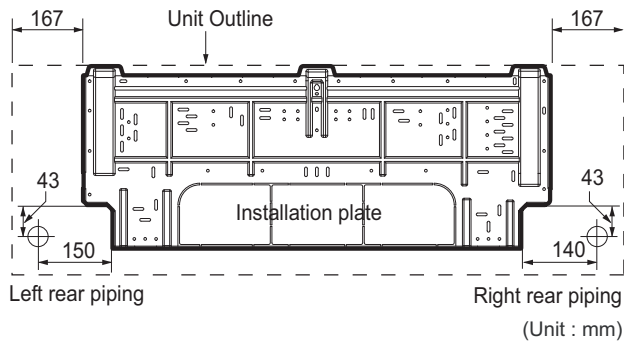
**SK chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

**SV chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### **CAUTION**

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

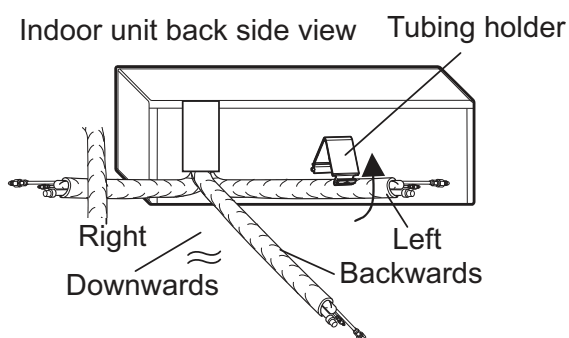
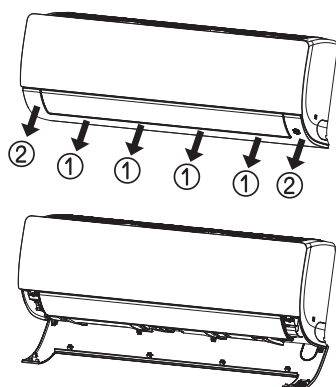
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.



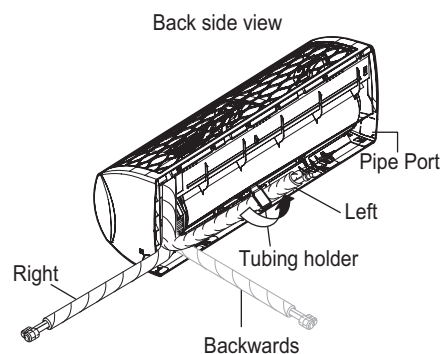
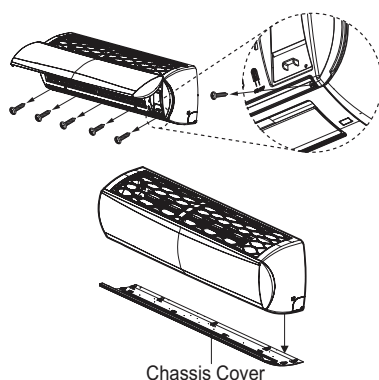
※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ SV chassis

1. Open the panel of the indoor unit.
2. Remove the chassis cover from the unit by loosening 5 screws.
3. Pull back the tubing holder.
4. Remove pipe port cover and position the piping.

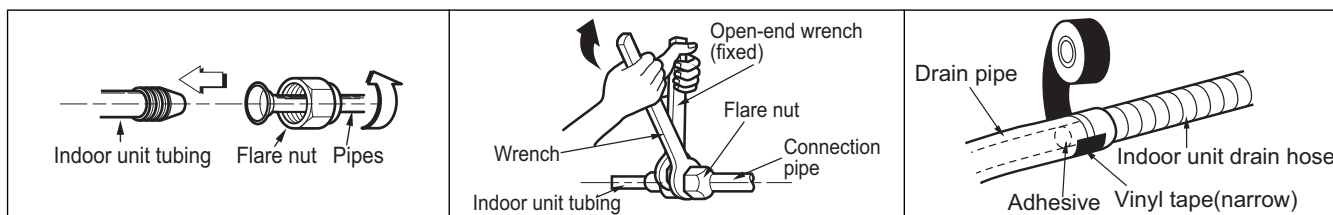


\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

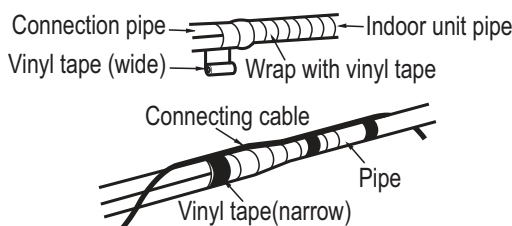
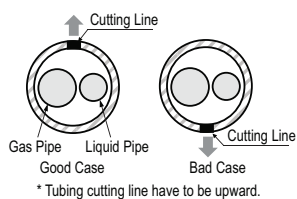
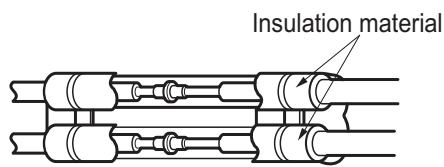
### ■ Connecting the installation pipe and drain hose



1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

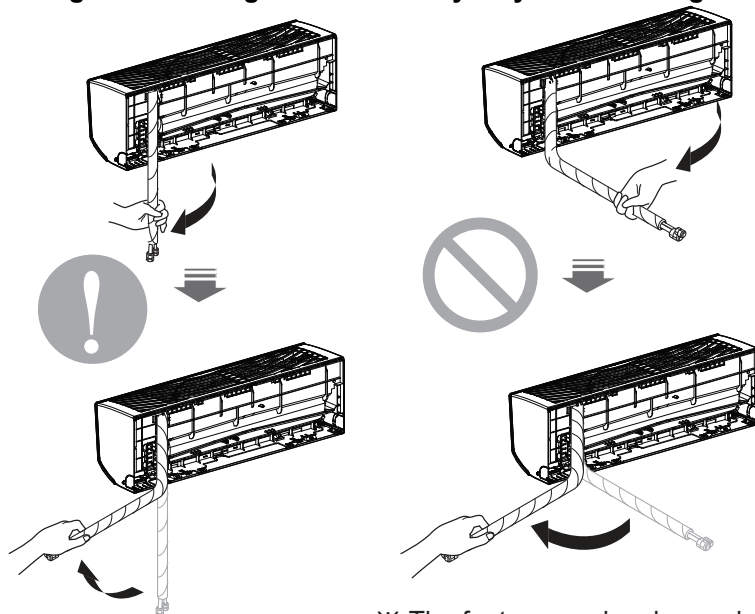
If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

## 8. Installation

### ⚠ CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



※ The feature can be changed according to type

- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.



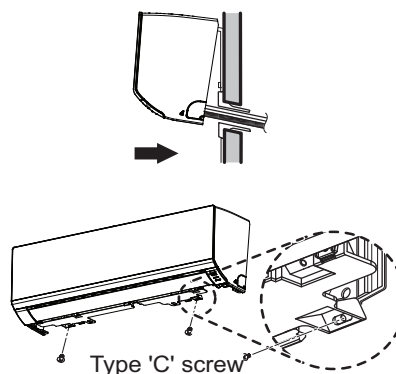
\* The feature can be changed according to type of model.



## 8. Installation

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

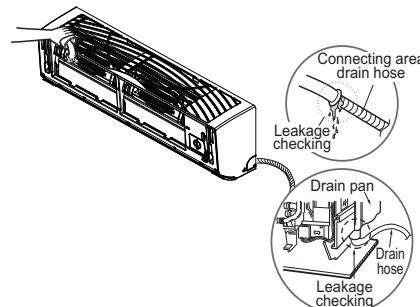
#### **CAUTION**

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

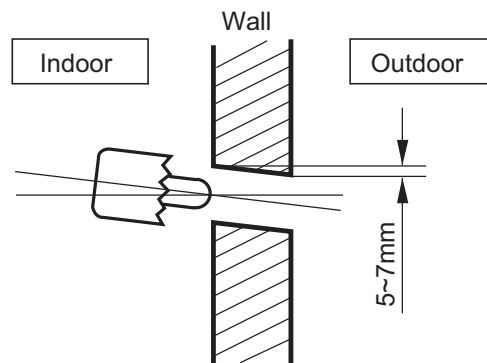


\* The feature can be changed according to type of model.

## 8. Installation

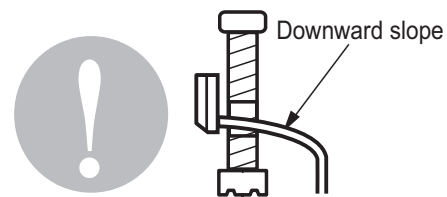
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing$  70mm hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

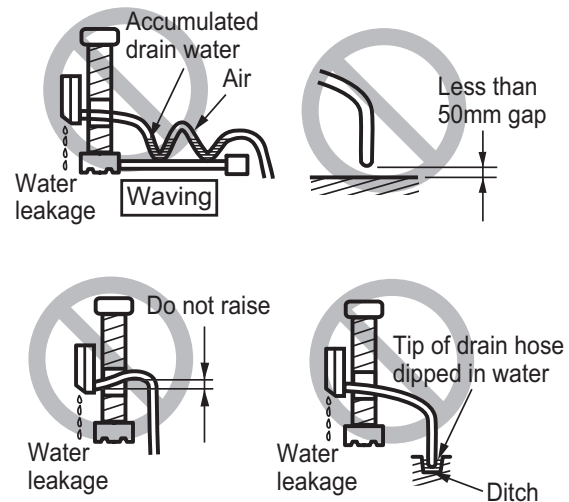


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

## 8. Installation

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### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

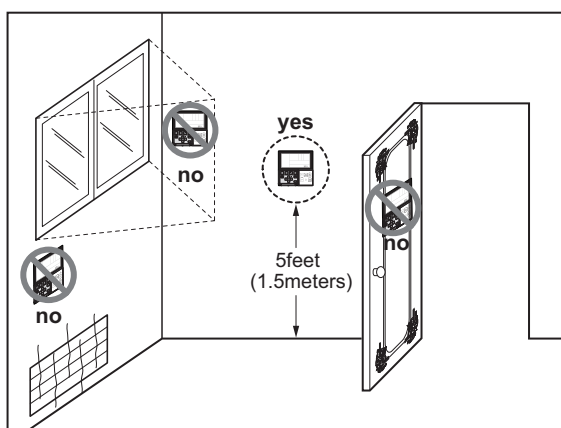
### **! WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **ART COOL**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZMNW09GAF10 [MA09R NF1] ZMNW12GAF10 [MA12R NF1]
Air flow	Air supply outlet	3
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	5 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Airpurifier (Plasma)	X
	Airpurifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O(7hr)
	Timer(on/off)	O
	Timer(weekly)*	X
	Two thermistor control*	X
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		X
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZMNW09GAF10 [MA09R NF1] ZMNW12GAF10 [MA12R NF1]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	X
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	X
		PQRCHCA0Q(W)	for Hotel	X
	Standard	PREMTB001	Standard II (White)	X
		PREMTBB01	Standard II (Black)	X
		PREMTB100**	Standard III (White)	X
		PREMTBB10**	Standard III (Black)	X
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	X
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, -: Not applicable, Embedded: Included with product.
2. \*: Some advanced functions controlled by individual controller cannot be operated.
3. \*\*: It could not be operated some functions.
4. \*\*\*: Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

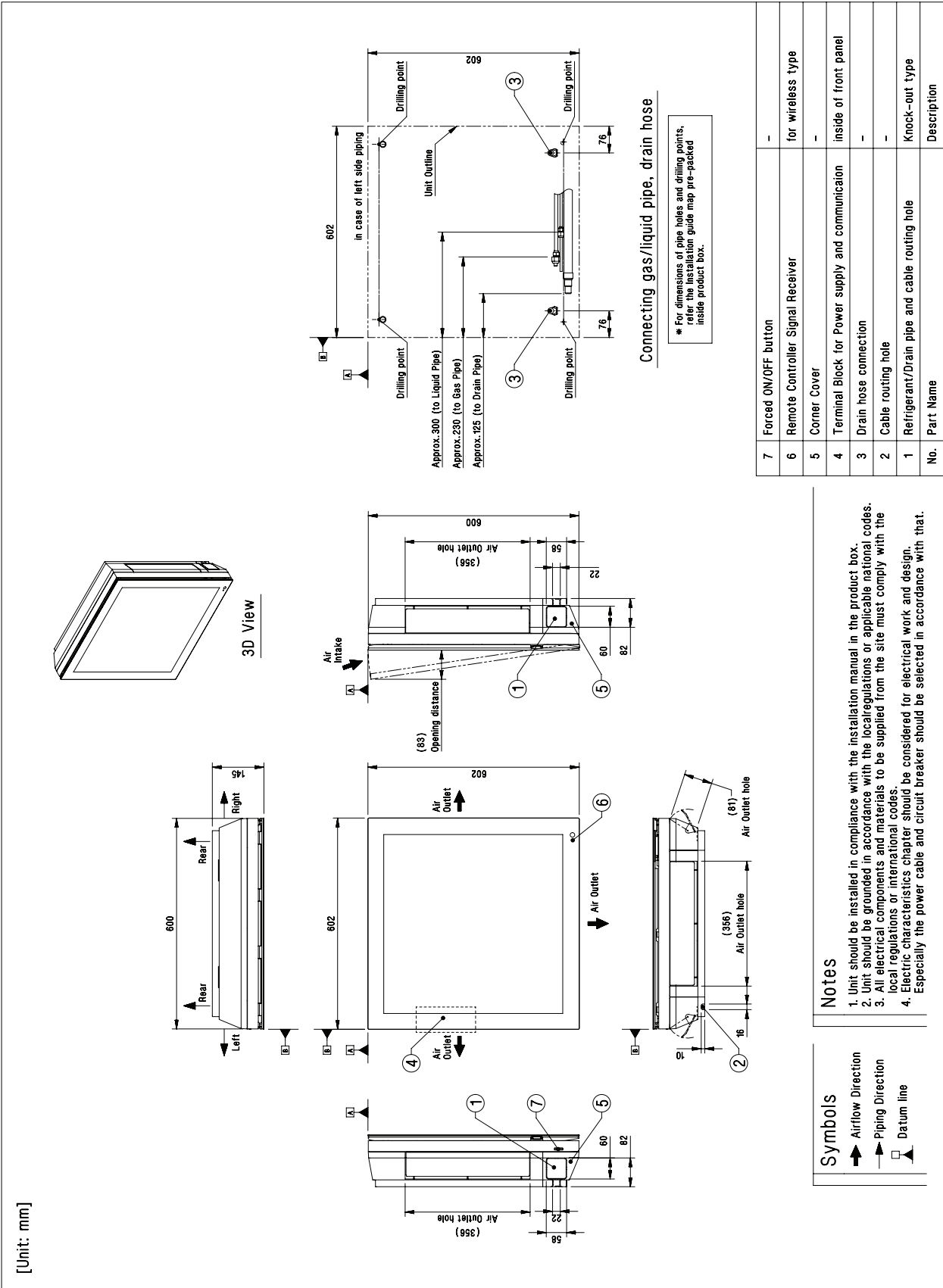
## 2. Specifications

Model Name				ZMNW09GAF10 [MA09R NF1]	ZMNW12GAF10 [MA12R NF1]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input			W x No.	40 × 1	40 × 1
Running Current			A	0.2	0.2
Casing Color			-	Magic Gray	Magic Gray
Dimensions	Body	W x H x D	mm	600 × 600 × 145	600 × 600 × 145
		W x H x D	inch	23-5/8 x 23-5/8 x 5-23/32	23-5/8 x 23-5/8 x 5-23/32
Net Weight	Body		kg (lbs)	15.0 (33.1)	15.0 (33.1)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 20 x 21) x 1	(2 x 20 x 21) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.18 (1.92)	0.18 (1.92)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	7.7 / 5.9 / 4.4	8.9 / 7.3 / 5.6
		H / M / L	ft <sup>3</sup> /min	272 / 208 / 155	314 / 258 / 198
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	24 x 1	24 x 1
Sound Pressure Level		H / M / L	dB(A)	38 / 32 / 27	44 / 38 / 32
Sound Power Level		Rated	dB(A)	52	54
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain (O.D. / I.D.)		mm	Ø 21.5 / 16.0	Ø 21.5 / 16.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
<b>Note</b> 1. Due to our policy of innovation some specifications may be changed without notification. 2. Wiring cable size must comply with the applicable local and national code. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that. 3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)). 4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity. • Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB • Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB • Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.					

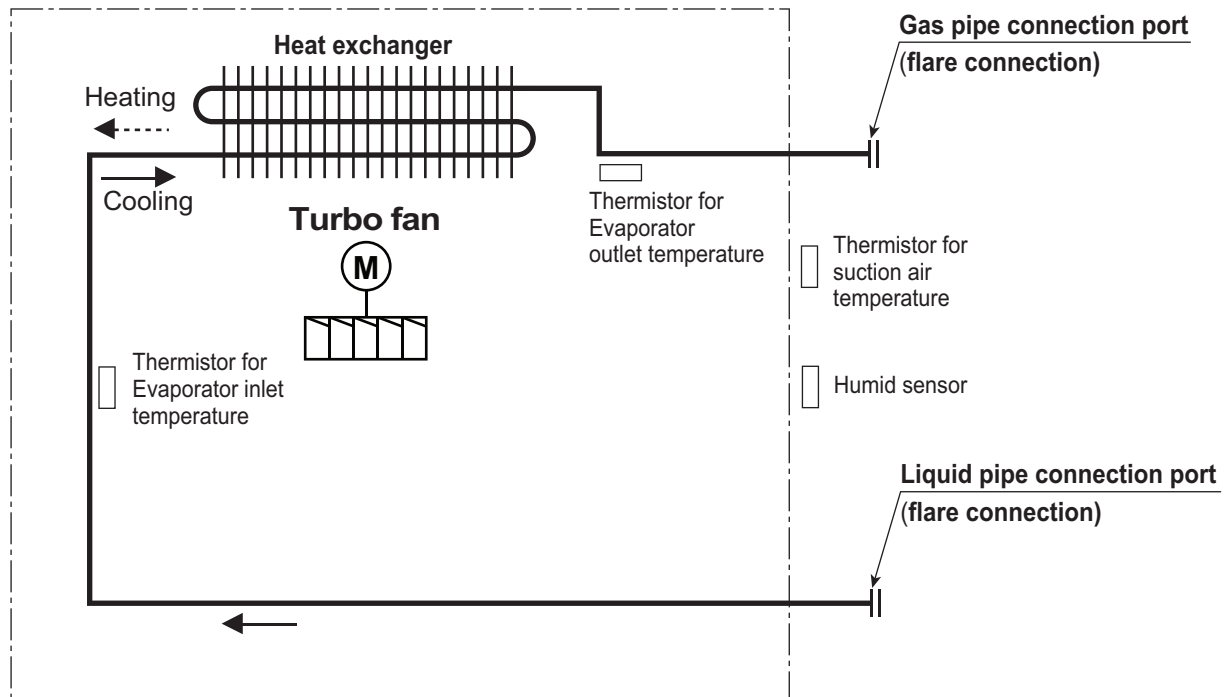


3. Dimensions

ZMNW09GAF10 [MA09R NF1] / ZMNW12GAF10 [MA12R NF1]



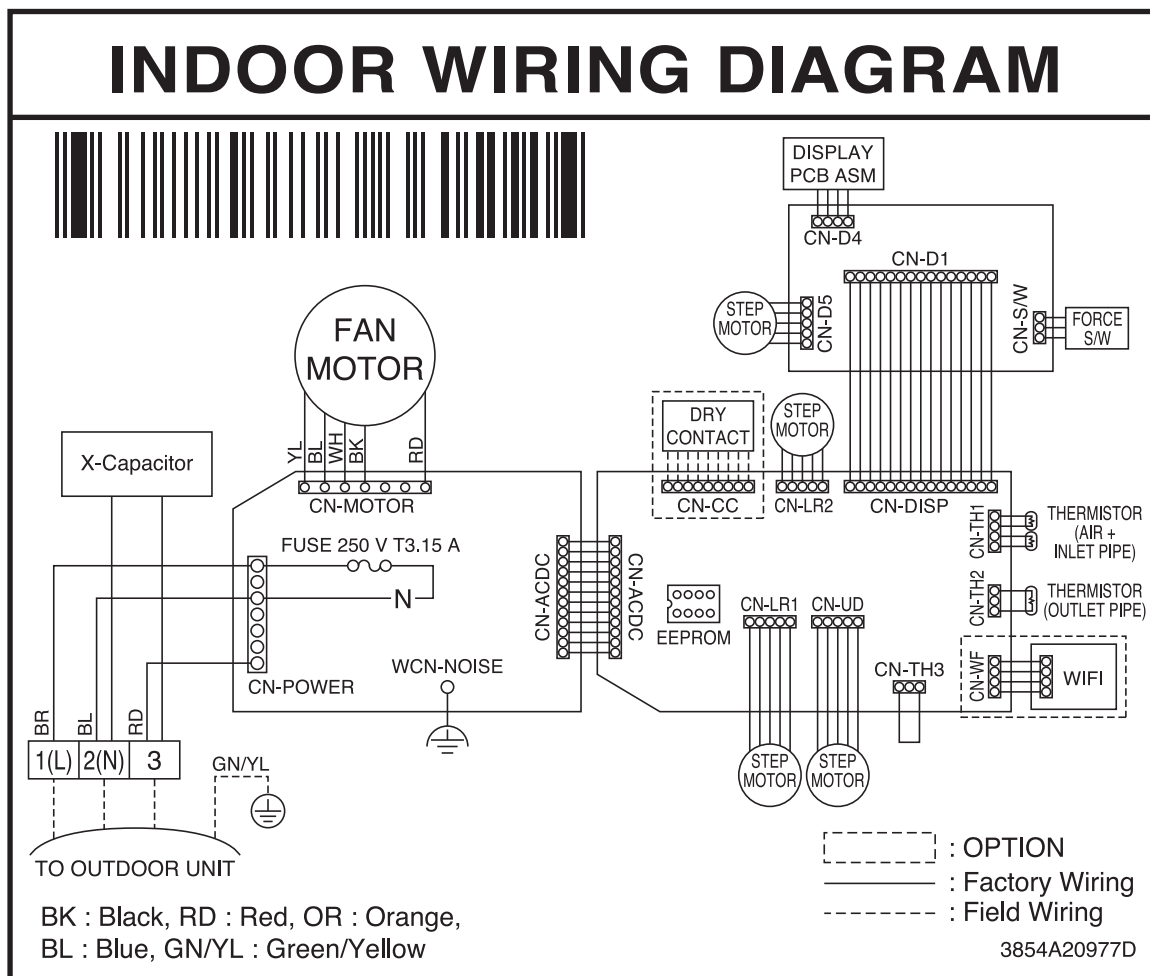
## 4. Piping diagrams



Description	PCB Connector
Thermistor for suction air temperature	CN-TH1
Thermistor for evaporator inlet temperature	
Thermistor for evaporator outlet temperature	CN-TH2

## 5. Wiring Diagrams

■ Models : ZMNW09GAF10 [MA09R NF1], ZMNW12GAF10 [MA12R NF1]

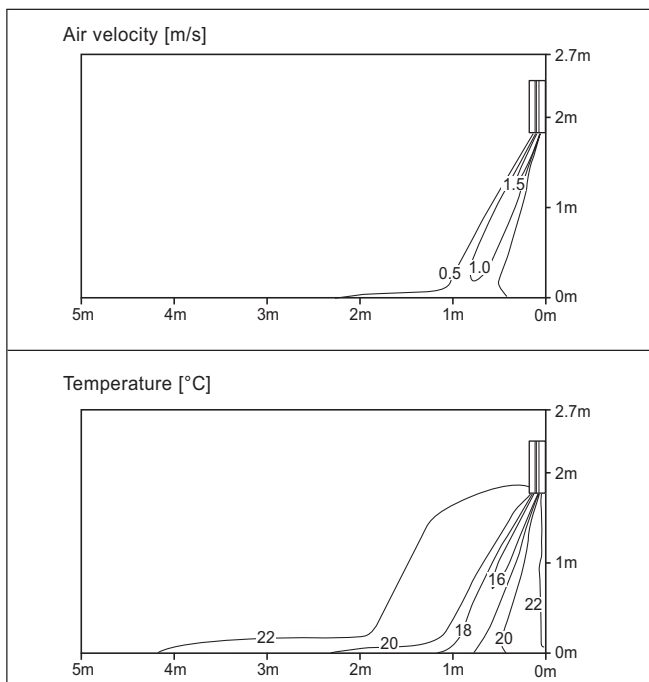


## 6. Air flow and temperature distributions (reference data)

### ■ Model : ZMNW09GAF10 [MA09R NF1]

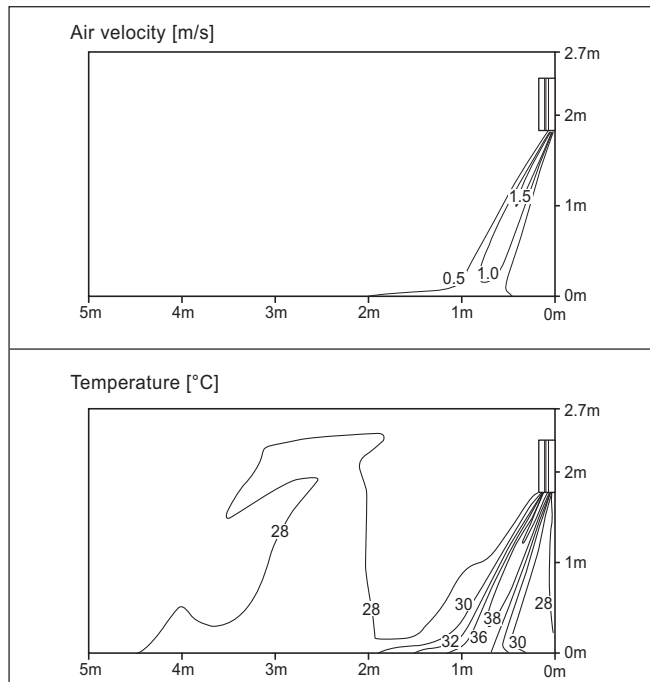
#### Cooling

Discharge angle: 20°



#### Heating

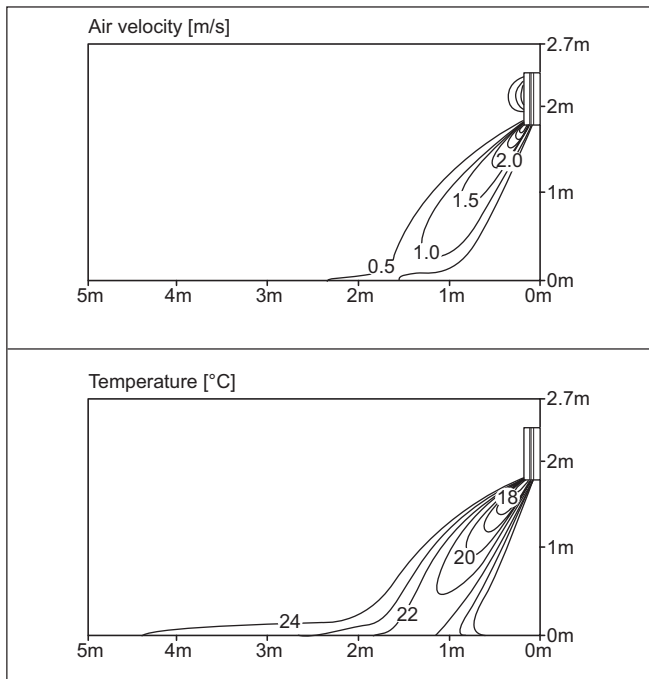
Discharge angle: 20°



### ■ Model : ZMNW12GAF10 [MA12R NF1]

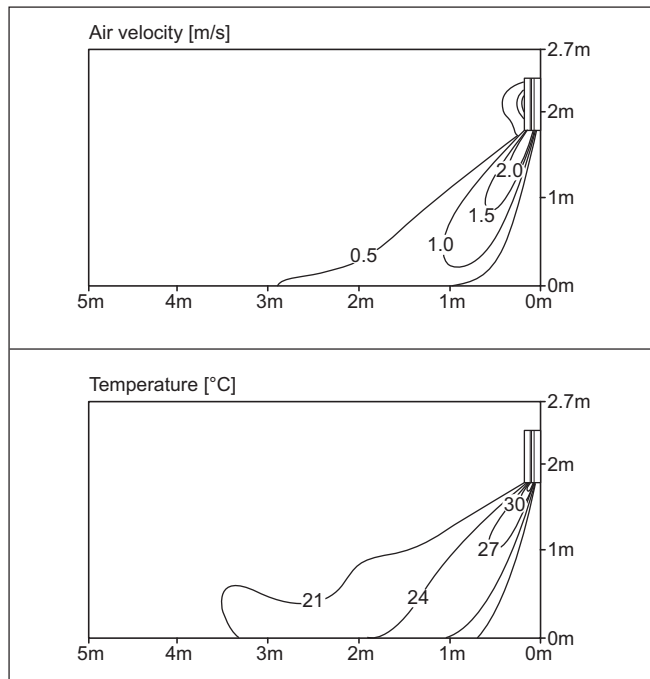
#### Cooling

Discharge angle: 40°



#### Heating

Discharge angle: 50°



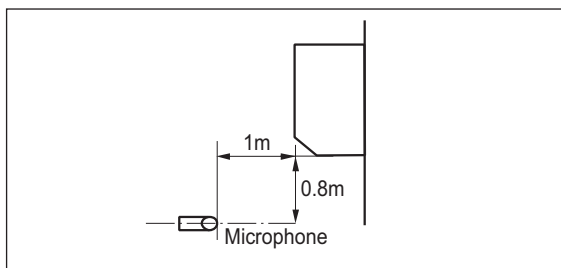
#### Note

- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### Overall

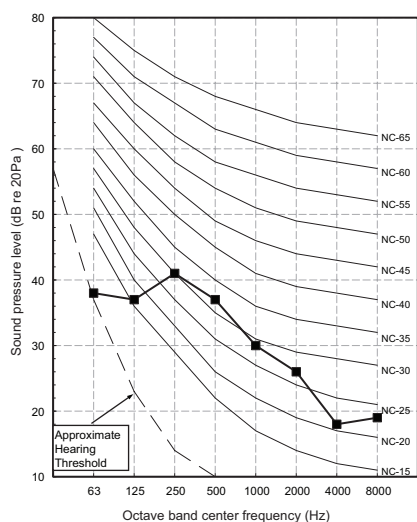


#### Note

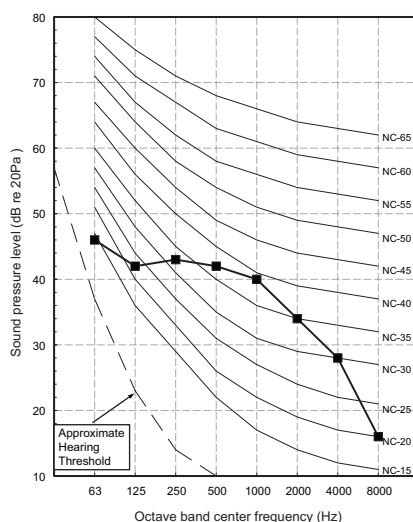
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZMNW09GAF10 [MA09R NF1]	38	32	27
ZMNW12GAF10 [MA12R NF1]	44	38	32

**ZMNW09GAF10 [MA09R NF1]**



**ZMNW12GAF10 [MA12R NF1]**



## 7. Sound levels

### 7.2 Sound power level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

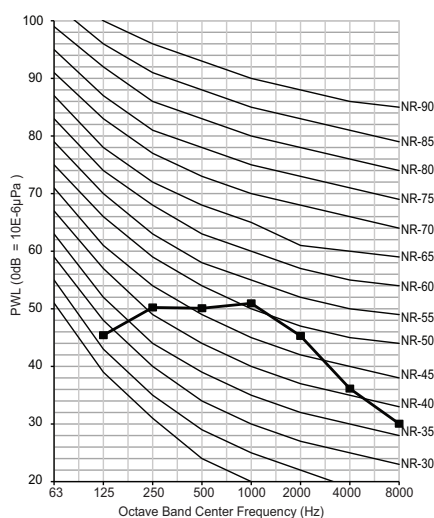
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

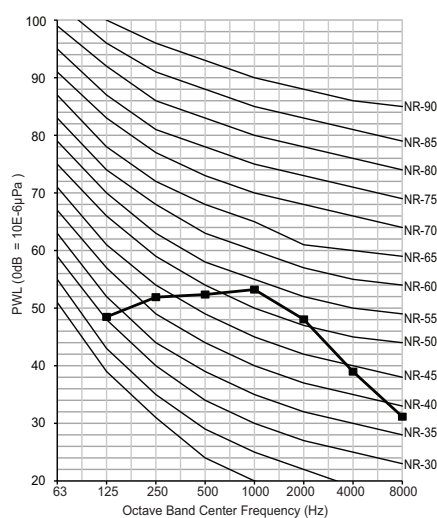
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
ZMNW09GAF10 [MA09R NF1]	52
ZMNW12GAF10 [MA12R NF1]	54

**ZMNW09GAF10 [MA09R NF1]**



**ZMNW12GAF10 [MA12R NF1]**

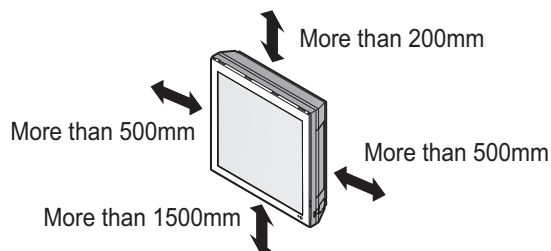


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

### 8.1 Selection of the best location

- Do not have any heat or steam near the unit.
- Select a place where there are no obstacles in front of the unit.
- Make sure that condensation drainage can be conveniently routed away.
- Do not install near a doorway.
- Ensure that the interval between a wall and the left (or right) of the unit is more than 500mm. The unit should be installed as high as possible on the wall, allowing a minimum of 200mm from ceiling.
- Use a stud finder to locate studs to prevent unnecessary damage to the wall.
- The mounting wall should be strong and solid enough to protect it from the vibration.



#### **⚠ CAUTION**

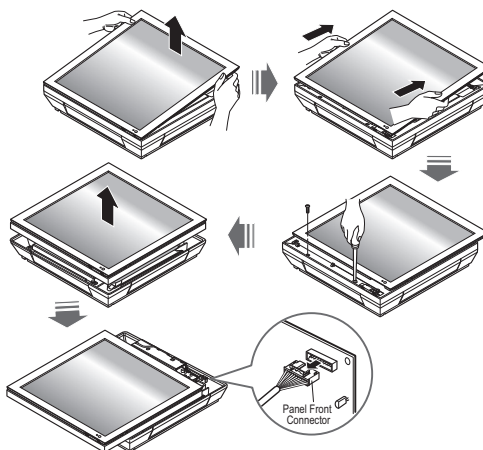
- Install the indoor unit on the wall where the height from the floors is more than 1.5 meters.

## 8. Installation

### 8.2 Preparing work for installation

#### 1. Open front panel

- 1) Pull the upper part of the front panel
- 2) Lift up the panel
- 3) To detach the front panel, remove the two screws at the lower part
- 4) Detach the front panel from the body
- 5) To detach the panel, disconnect the connector at the upper part

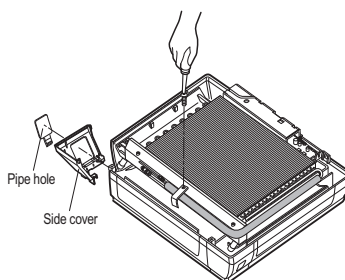


#### 2. Removing pipe cover and side cover

- 1) Remove the screw of the center tuning cover.
- 2) Pull up the side cover of desired connecting direction, then cover side is separated.
- 3) Pick the pipe hole of the side cover

#### CAUTION

- After removing the pipe hole, cut the burr for safety.



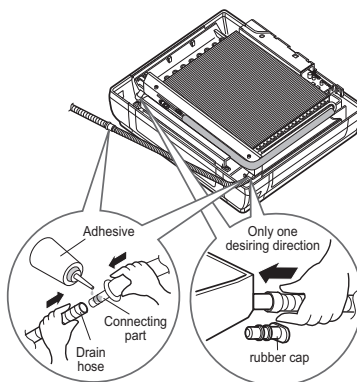
When connecting pipe path through rear wall, don't remove the hole.



## 8. Installation

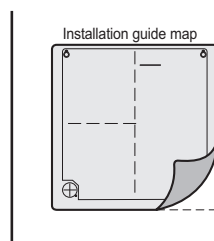
### 3. Drain hose junction

- 1) Remove the rubber stopped in the desired drain direction.
- 2) Insert drain hose into the handle of drain pan, and join drain hose and connecting hose according to the figure by.

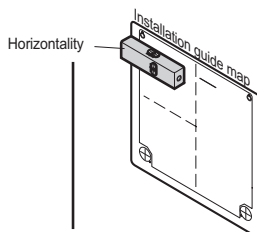


### 4. Sticking the installation guide map and fixing indoor unit

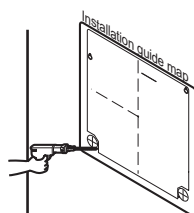
- 1) Put up the installation guide map on the desired surface.



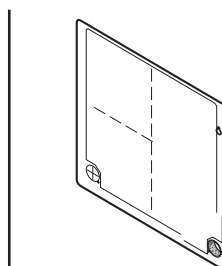
- 2) Check the level by horizontal mete and fix lightly the map by adhesive tape.



- 3) Make a hole with diameter of 6mm and depth of 30-35mm when piercing a screw point.

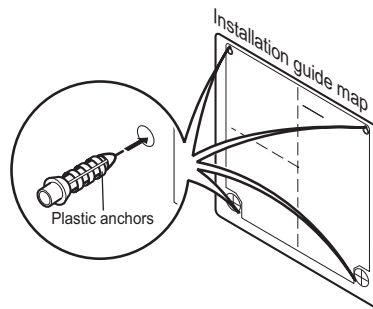


- 4) Drill the piercing part for connecting pipe as diameter 50mm. (In case of piercing rear surface)

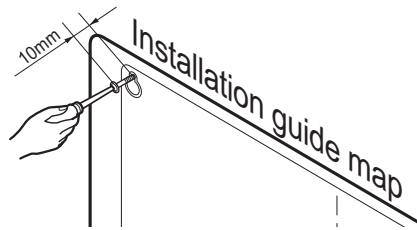


- 5) Drive the four plastic anchors into drilled points.

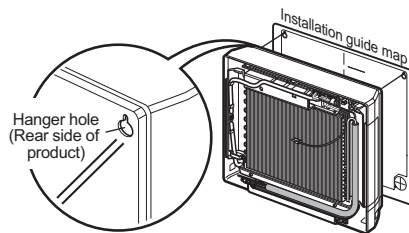
## 8. Installation



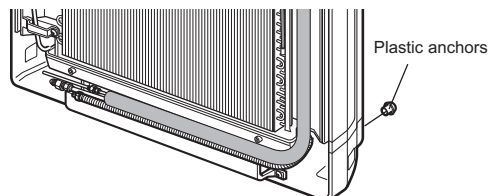
- 6) First, drive the two points of the upper parts by screws. (Leave 10mm for hanging product)



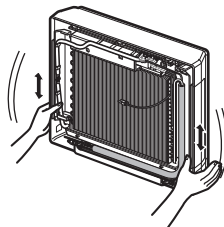
- 7) Hang the hole of product at the upper screws. (at this time, remove the map) (Make sure the product do not fall down)



- 8) Drive the lower parts after facing the hole of product with plastic anchors, and fix completely the upper screws.



- 9) Check if the product is fixed properly by slightly moving the product.



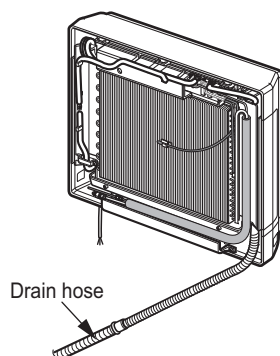
- 10) If nothing is wrong till now then connect the pipe and the wire.  
(Refer to the installation manual reference)

## 8. Installation

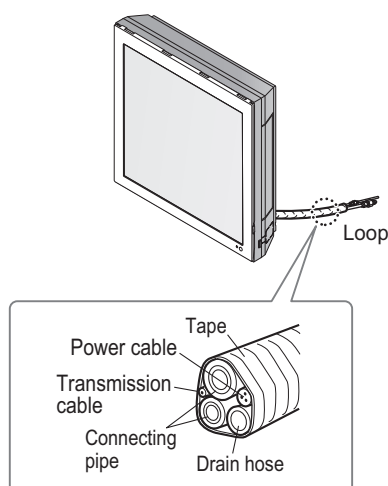
### 8.3 Connection of piping

- Preparing the indoor unit's piping and drain hose for installation through the wall.

#### 1. Route the indoor tubing and the drain hose in the direction of rear left or right



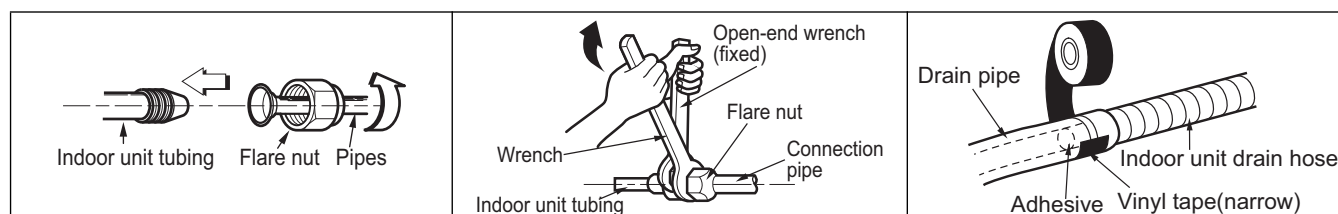
#### 2. Tape the tubing, drain hose and the connecting cable. Make sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause drain pan to overflow inside the unit.



#### Note

- If the drain hose is routed inside the room, insulate the hose with an insulation material\* so that dripping from condensation will not damage furniture or floors.
- Foamed polyethylene or equivalent is recommended.

### ■ Connecting the installation pipe and drain hose

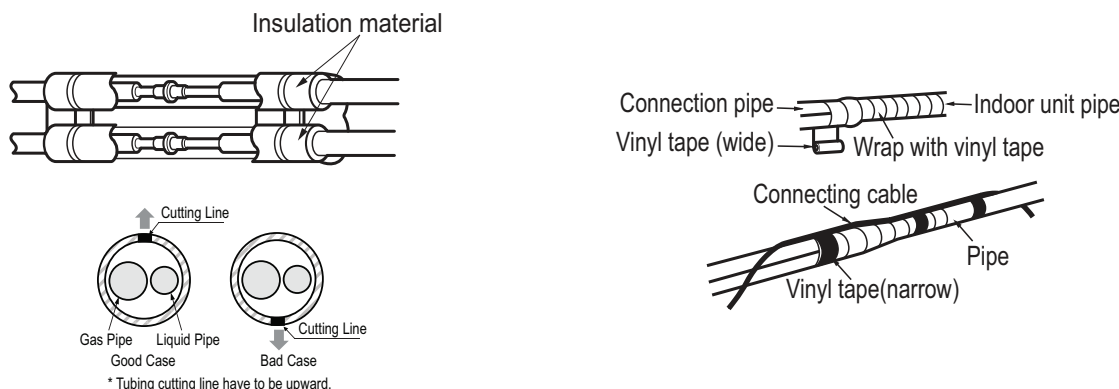


- Align the center of the pipes and sufficiently tighten the flare nut by hand.
- Tighten the flare nut with a wrench.
- When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

## 8. Installation

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

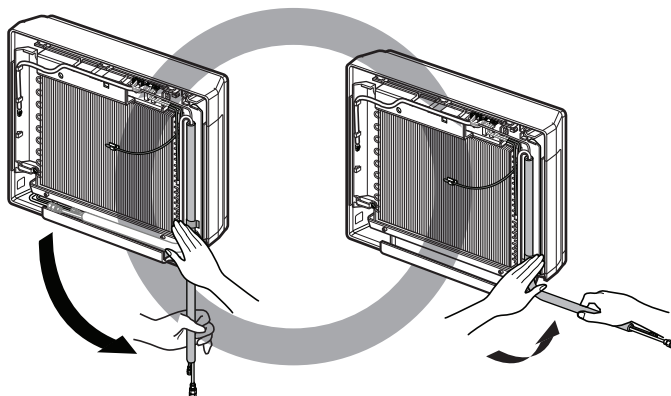
### ⚠ WARNING

#### Installation Information (For right piping)

##### • Correct method

For right piping, follow the instruction given below.

1. Press on the upper side of clamp and unfold the tubing to downward slowly.



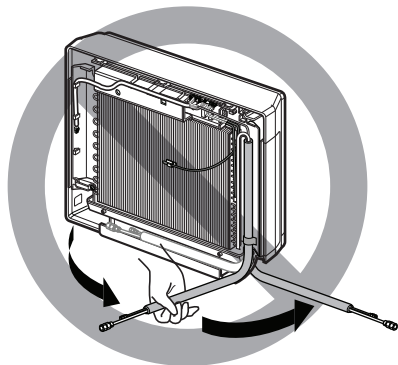
2. Bend the tubing to the right side of chassis.

## 8. Installation

---

- **Wrong method**

1. Following bending type from left to right could cause problem of pipe damage.

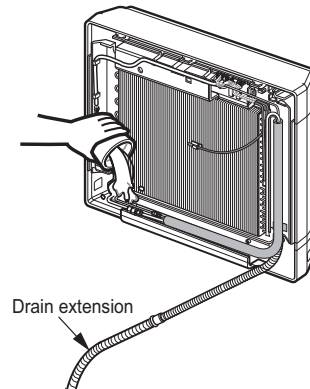


## 8. Installation

### 8.4 Checking the drainage

#### ◆ To check the drainage.

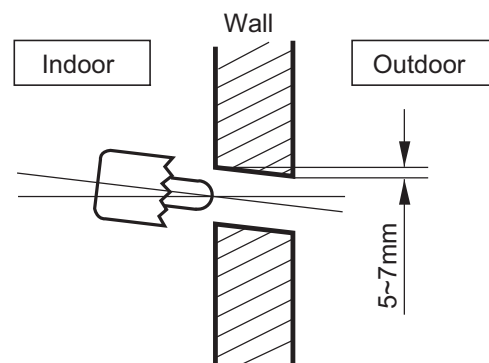
1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.
3. Do not use 'Anti freezing solution.



\* The feature can be changed according to type of model.

#### ◆ Drill a Hole in the wall

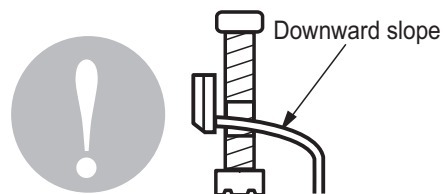
1. Drill the piping hole with a  $\varnothing$  70mm hole core drill. Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.



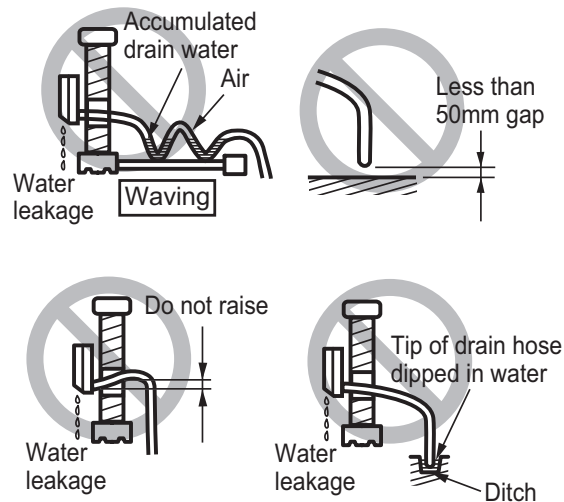
## 8. Installation

### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow

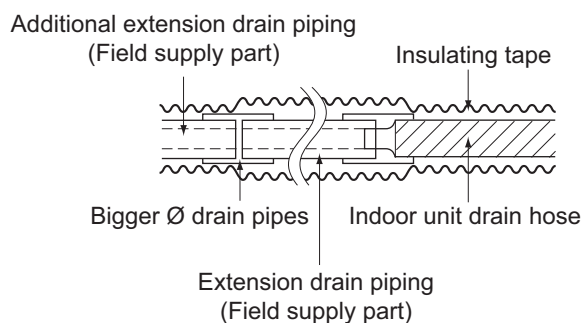


2. Do not make drain piping like the following.

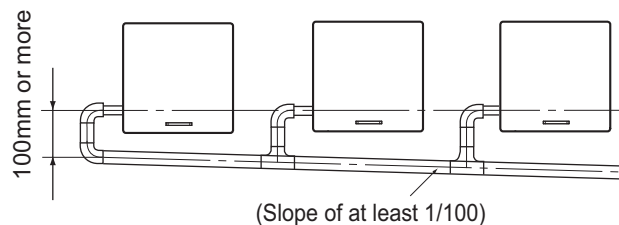


\* The feature can be changed according to type of model.

3. When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is outdoors.



4. Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose size or bigger.
5. In case of converging multiple drain pipes, install them referring to figure.

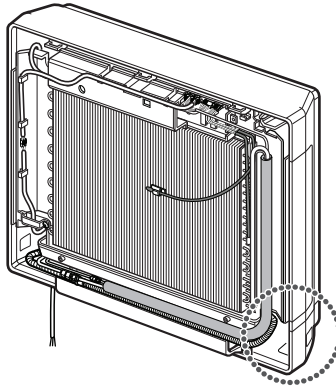


6. Select diameter of drain piping which adapts to the capacity of the unit connected

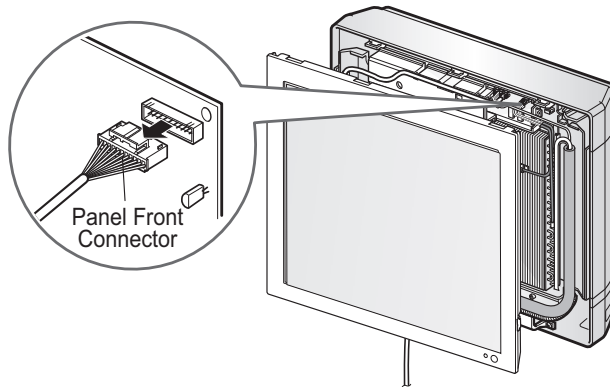
## 8. Installation

### 8.5 Front panel assembly

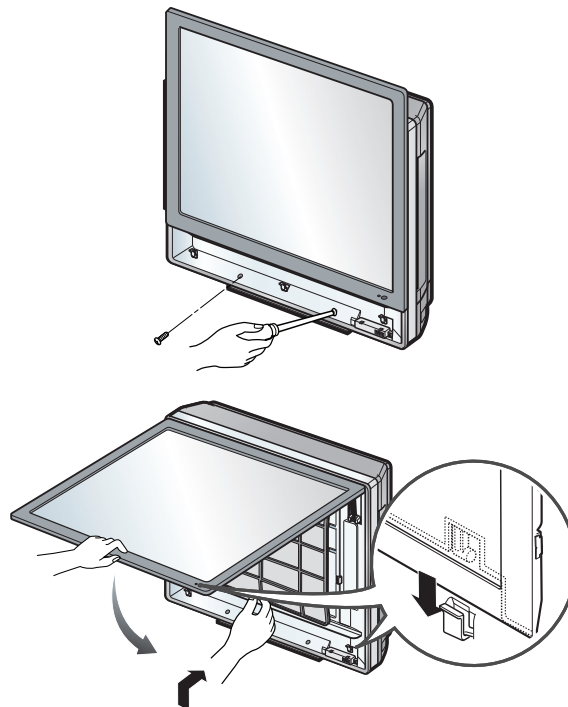
1. First, check the side cover assembly exactly then fix power cord in the bottom groove of cover's left side.



2. Assemble connecting lead wire with controller and first fix the upper part of panel front then match the lower part of panel front



3. Screw up panel front, and suspend the Hook of panel front in the groove





## 8. Installation

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### 8.6 Connecting the cable

1. Connect the cable to the indoor unit by connecting the wires to the terminals on the control board individually according to the outdoor unit connection. (Ensure that the color of the wires of the outdoor unit and the terminal no. are the same as those of the indoor unit.)

The earth wire should be longer than the common wires.

2. When installing, refer to the circuit diagram on the control box of indoor unit.
  - When installing, refer to the wiring diagram on the control cover inside outdoor unit.

---

#### CAUTION

- The above circuit diagram is subject to change without notice.
  - Be sure to connect wires according to the wiring diagram.
  - Connect the wires firmly, so that it cannot be pulled out easily.
  - Connect the wires according to color codes by referring to the wiring diagram.
- 

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

1. **Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.**
  2. **The screw which fasten the wiring in the casing of electrical fittings are liable to become loose due from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burn-out of the wires.)**
  3. **Confirm the specification of power source.**
  4. **Confirm that electrical capacity is sufficient.**
  5. **See to that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.**
  6. **Confirm that the cable thickness is as specified in the power source specification. (Particularly note the relation between cable length and thickness.**
  7. **Never fail to equip a leakage breaker where it is wet and moist area.**
  8. **The following would be caused by voltage drop.**
    - **Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.**
  9. **The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 3mm in each active(phase) conductors.**
-

# MULTI/SINGLE

Indoor unit

## **ART COOL Silver**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	S3NM09JASZA[AC09SQ NSJ] S3NM12JASZA[AC12SQ NSJ] S3NM18KLSZA[AC18SQ NSK]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (5 Steps)
	Airflow direction control (up & down)	O (6 Steps)
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	6 / 6 / 6
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	O (7hr)
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Embedded)
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	S3NM09JASZA[AC09SQ NSJ] S3NM12JASZA[AC12SQ NSJ] S3NM18KLSZA[AC18SQ NSK]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	X
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	X
	2-Remo Control Wire	PZCWRC2	0.25m	X
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O (Embedded)
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

Model Name				S3NM09JASZA [AC09SQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		2.5
	Heating	kW		3.3
Power Input	Min./Nom./Max.	W		11 / 18 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.16 / 0.20
Exterior Color code		-		Munsell N8.5 (RAL 9018)
Dimensions	Body	W x H x D	mm	837 × 308 × 192
		W x H x D	inch	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W x H x D	mm	909 × 383 × 256
		W x H x D	inch	35-25/32 × 15-3/32 × 10-3/32
Weight	Body	kg (lbs)		9.9 (21.8)
	Shipping	kg (lbs)		13.6 (30.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 15 × 21) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	12.5 / 10.0 / 7.5 / 4.2
			ft <sup>3</sup> /min	441 / 353 / 265 / 148
		(Heating) SH / H / M / L	m <sup>3</sup> /min	13.0 / 10.0 / 7.2 / 5.6
			ft <sup>3</sup> /min	459 / 353 / 254 / 198
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / 19
		(Heating) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / -
Sound Power Level		Rated	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				S3NM12JASZA [AC12SQ NSJ]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		3.5
	Heating	kW		4.0
Power Input	Min./Nom./Max.	W		11 / 19 / 30
Running Current	Min./Nom./Max.	A		0.10 / 0.17 / 0.20
Exterior Color code		-		Munsell N8.5 (RAL 9018)
Dimensions	Body	W x H x D	mm	837 × 308 × 192
		W x H x D	inch	32-15/16 × 12-1/8 × 7-9/16
	Shipping	W x H x D	mm	909 × 383 × 256
		W x H x D	inch	35-25/32 × 15-3/32 × 10-3/32
Weight	Body	kg (lbs)		9.9 (21.8)
	Shipping	kg (lbs)		13.6 (30.0)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 15 × 21) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.19 (2.05)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	12.5 / 10.0 / 7.5 / 4.2
			ft <sup>3</sup> /min	441 / 353 / 265 / 148
		(Heating) SH / H / M / L	m <sup>3</sup> /min	13.0 / 10.0 / 7.2 / 5.6
			ft <sup>3</sup> /min	459 / 353 / 254 / 198
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / 19
		(Heating) SH / H / M / L / SL	dB(A)	45 / 41 / 35 / 27 / -
Sound Power Level		Rated	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Preotector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

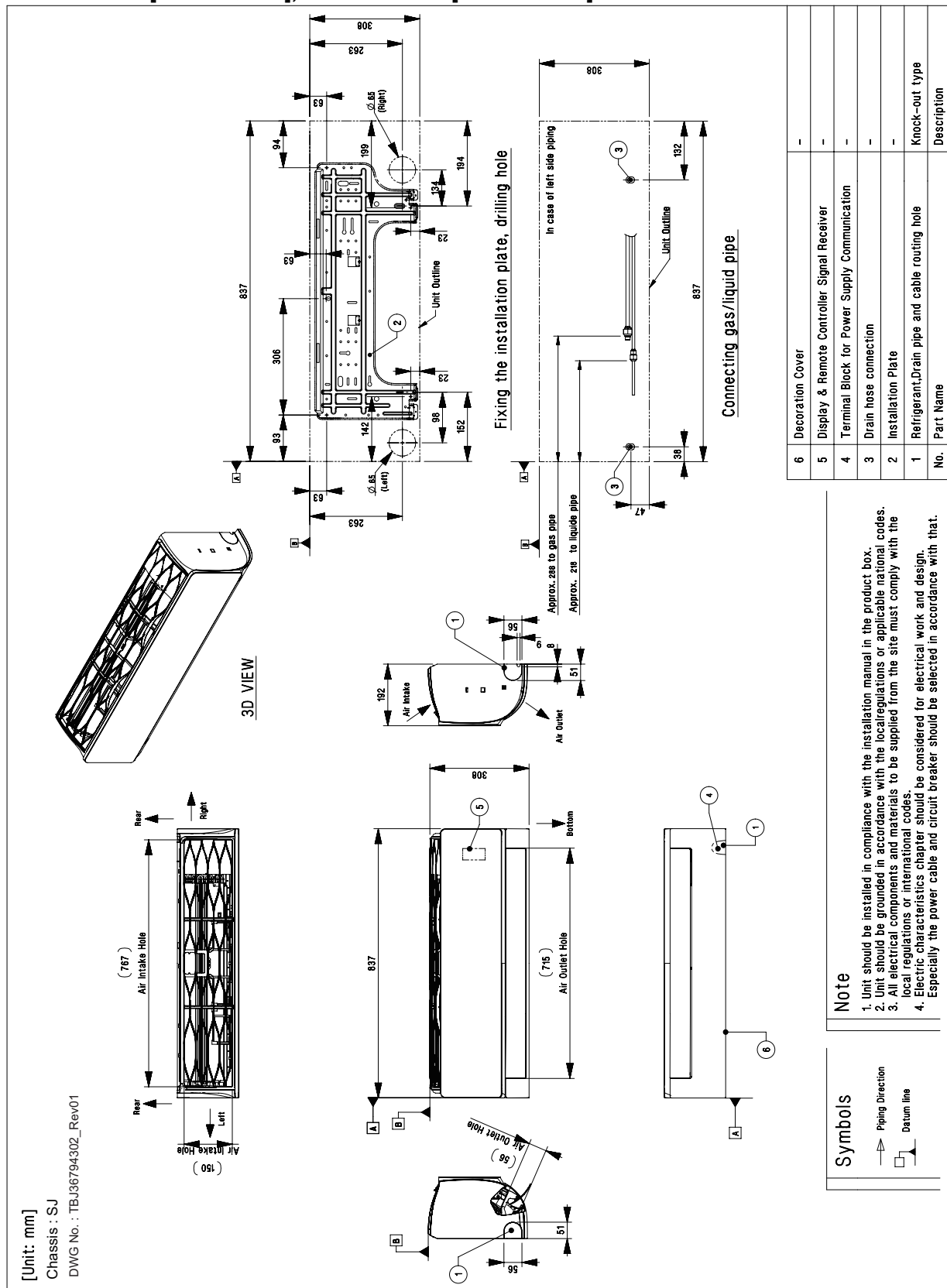
Model Name				S3NM18KLSZA [AC18SQ NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Capacity	Cooling	kW		5.0
	Heating	kW		5.8
Power Input	Min./Nom./Max.	W		26 / 39 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40
Exterior Color code		-		Munsell N8.5 (RAL 9018)
Dimensions	Body	W x H x D	mm	998 × 345 × 212
		W x H x D	inch	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W x H x D	mm	1,080 × 422 × 281
		W x H x D	inch	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		12.8(28.2)
	Shipping	kg (lbs)		17.4(38.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 × 16 × 20) × 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.28 (3.01)
	Corrosion Protection		-	PCM
	Fin Type		-	Slit
	Material, Tube / Fin		-	Cu / Al
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	(Cooling) SH / H / M / L	m <sup>3</sup> /min	15.5 / 14.5 / 13.0 / 10.5
			ft <sup>3</sup> /min	547 / 512 / 459 / 371
		(Heating) SH / H / M / L	m <sup>3</sup> /min	18.5 / 16.0 / 13.5 / 11.0
			ft <sup>3</sup> /min	653 / 565 / 477 / 388
Fan Motor	Type		-	BLDC
	Output		W x No.	30 x 1
Sound Pressure Level		(Cooling) SH / H / M / L / SL	dB(A)	47 / 44 / 39 / 34 / 31
		(Heating) SH / H / M / L / SL	dB(A)	48 / 44 / 39 / 34 / -
Sound Power Level		Rated	dB(A)	60
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 12.7 (1/2)
	Drain	O.D. / I.D.	mm	21.5 / 16.0
Safety Devices			-	Fuse
			-	Thermal Protector for Fan Motor
Connections Method			-	Flared
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 1.0

### Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

### ◆ ARTCOOL Mirror (SJ Chassis)

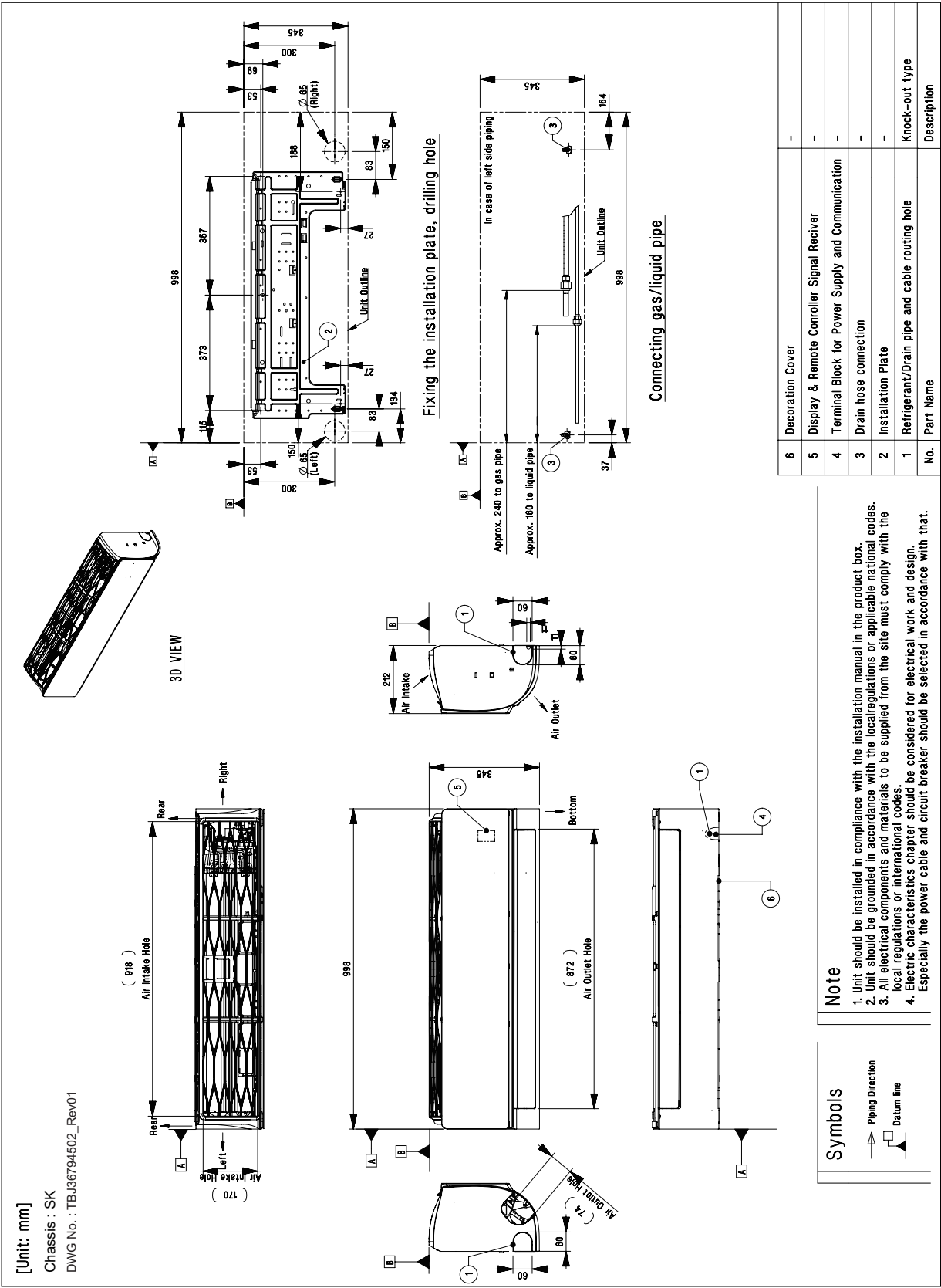
**S3NM09JASZA[AC09SQ NSJ], S3NM12JASZA[AC12SQ NSJ]**



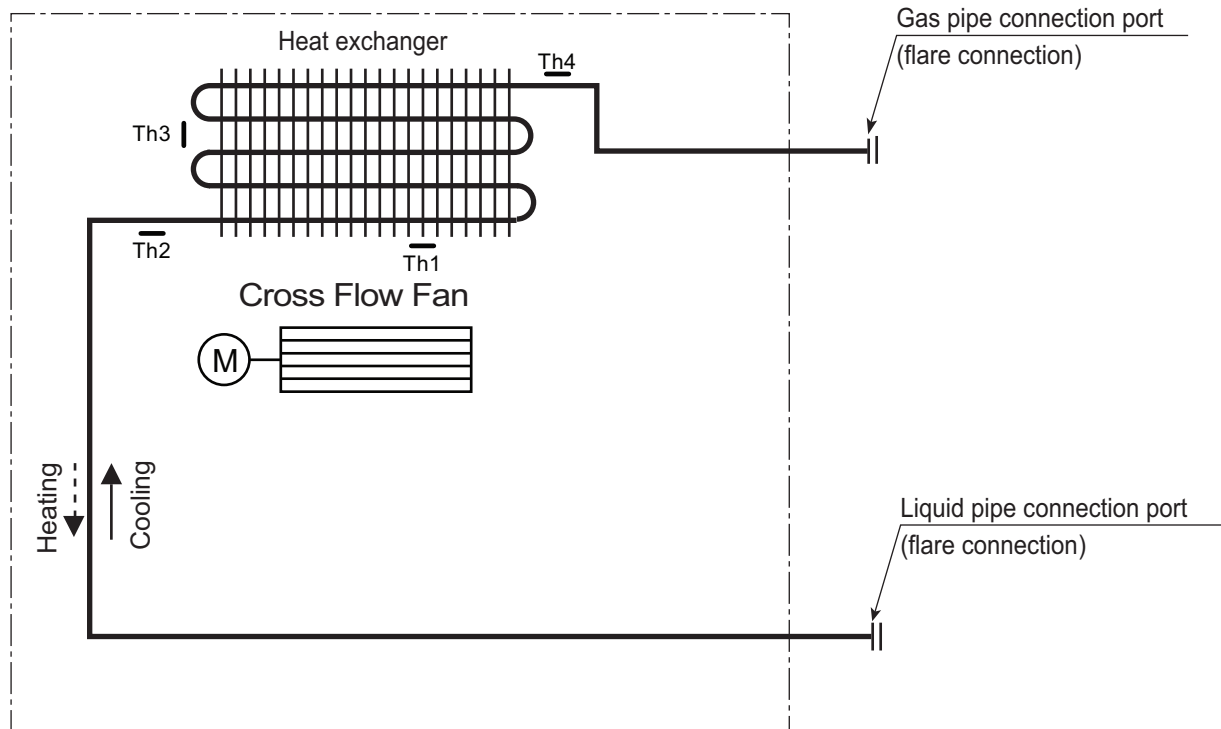


3. Dimensions

◆ ARTCOOL Mirror (SK Chassis)  
S3NM18KLSZA[AC18SQ NSK]



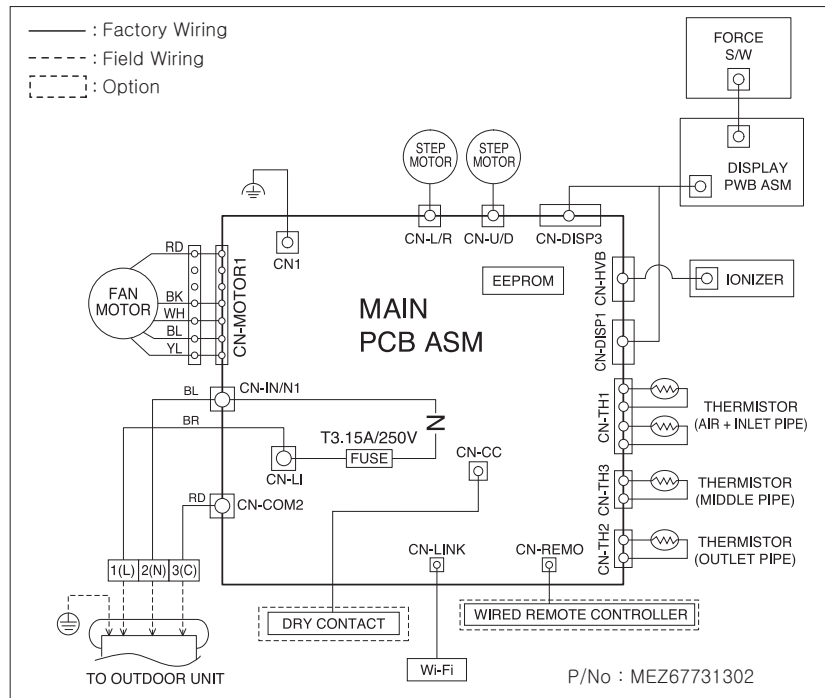
## 4. Piping diagrams



LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1
Th2	Thermistor for evaporator inlet temperature	
Th3	Thermistor for evaporator middle temperature	CN-TH3
Th4	Thermistor for evaporator outlet temperature	CN-TH2

## 5. Wiring Diagrams

- Models : S3NM09JASZA[AC09SQ NSJ], S3NM12JASZA[AC12SQ NSJ], S3NM18KLSZA[AC18SQ NSK]



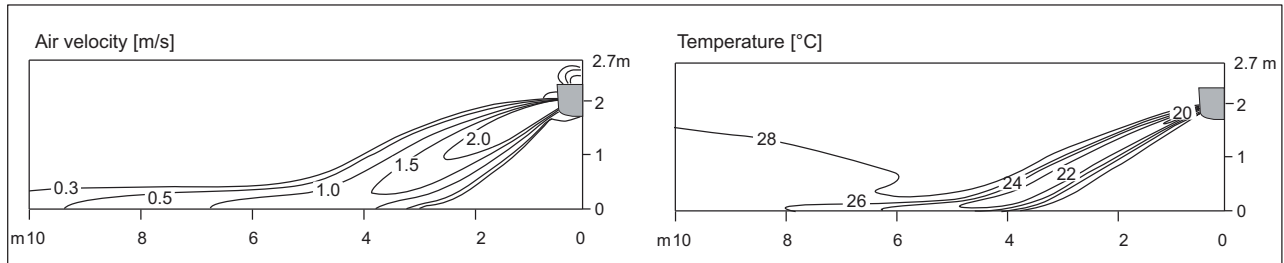
## 6. Air flow and temperature distributions (reference data)

■ Models : S3NM09JASZA[AC09SQ NSJ], S3NM12JASZA[AC12SQ NSJ],

### ◆ Cooling

#### Side View

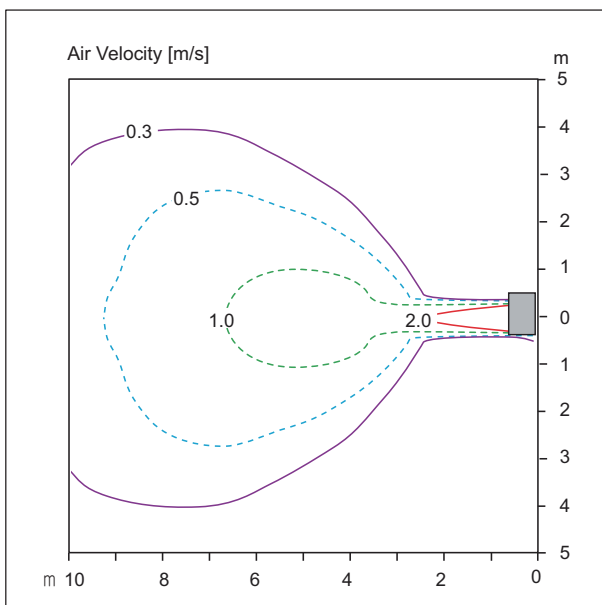
Discharge angle: 35°



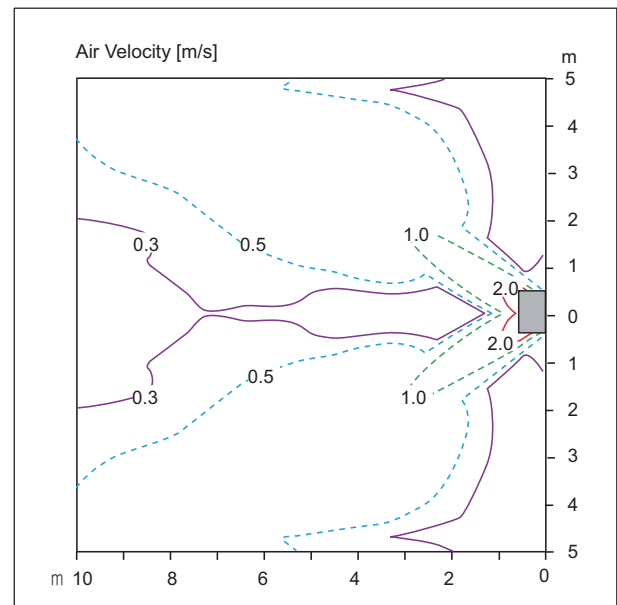
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 35°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 11.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

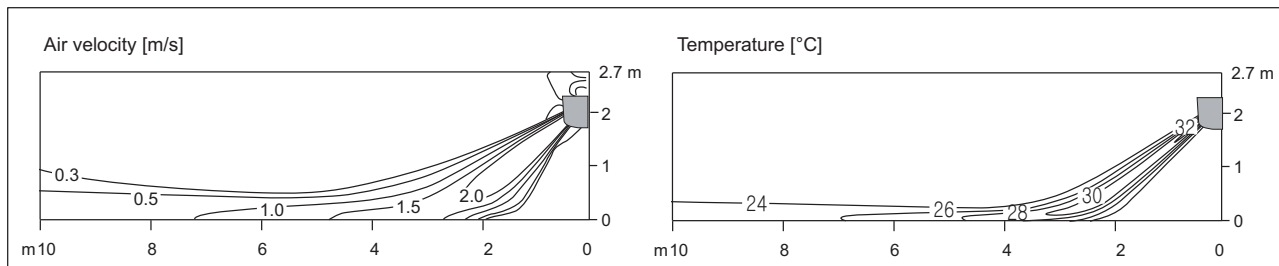
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

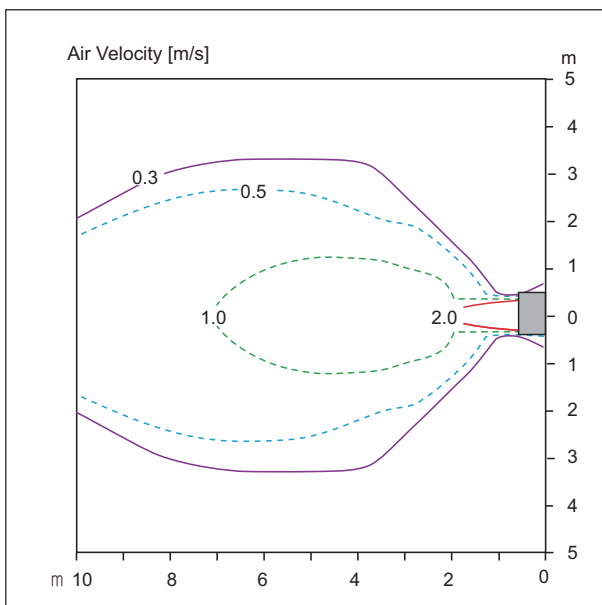
Discharge angle: 55°



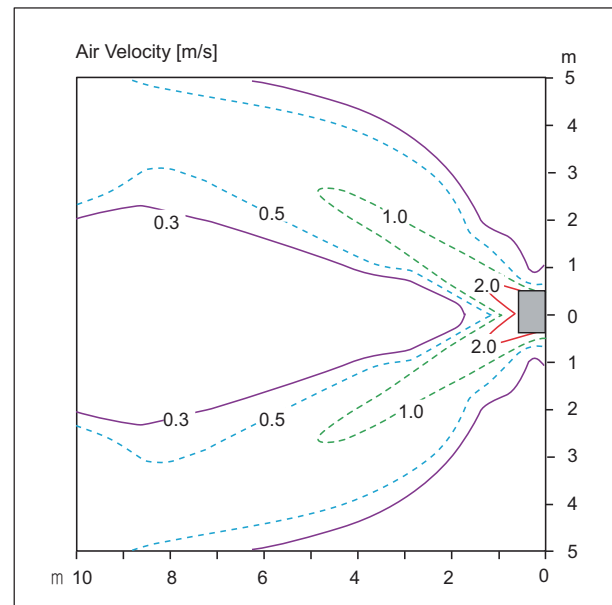
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 55°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 13.5m



- Vertical Louver : Left & Right
- Vertical Vane : 55°
- Fan speed : Super High

### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

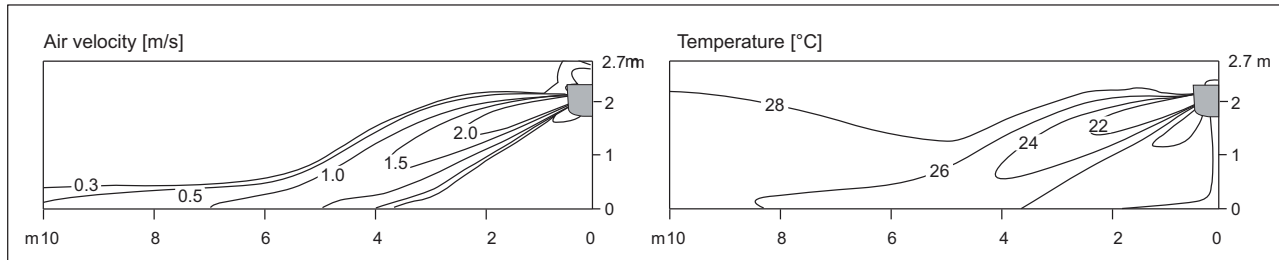
## 6. Air flow and temperature distributions (reference data)

### ■ Models : S3NM18KLSZA[AC18SQ NSK]

#### ◆ Cooling

##### Side View

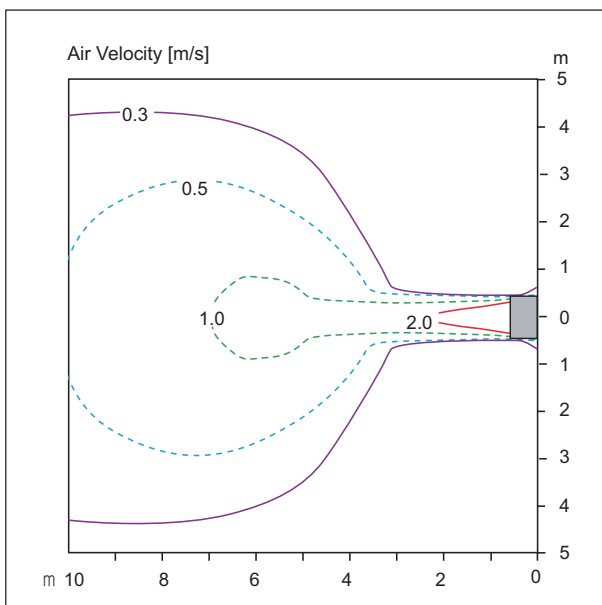
Discharge angle: 25°



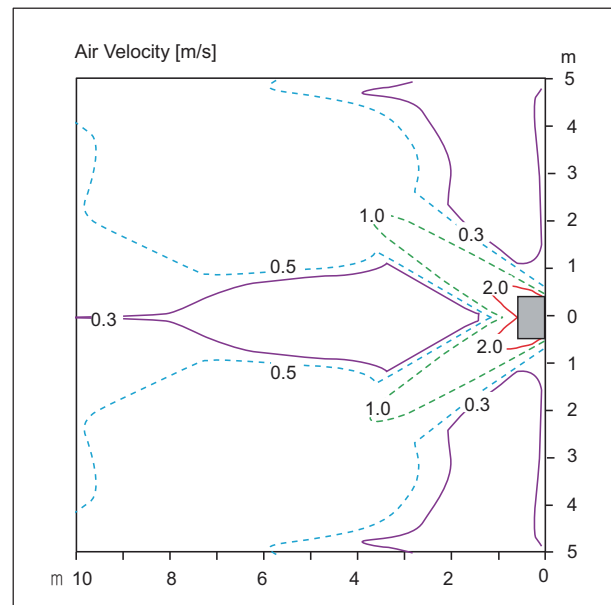
- Vertical Louver : Center
- Fan speed : Super High

##### Top View

Discharge angle: 25°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 12.9m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

#### Note

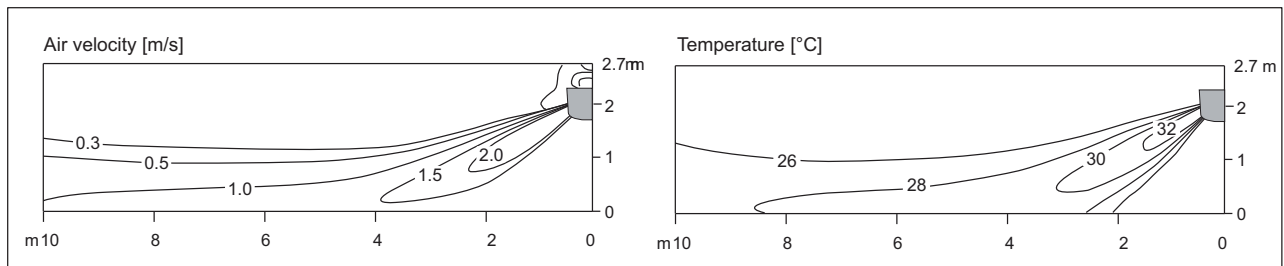
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ◆ Heating

#### Side View

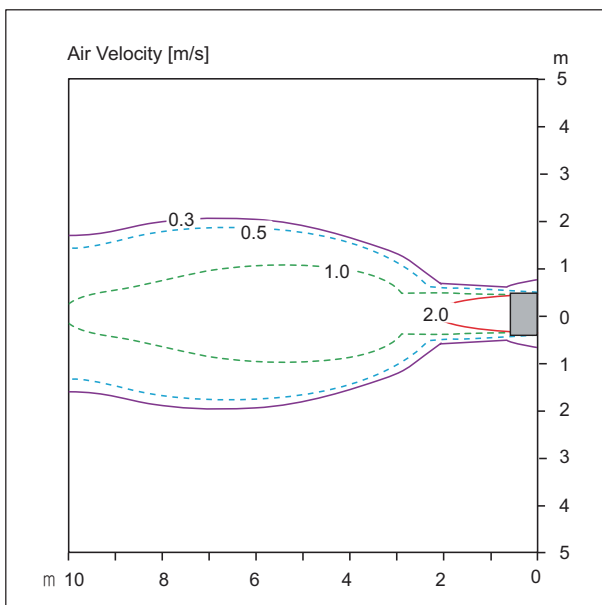
Discharge angle: 45°



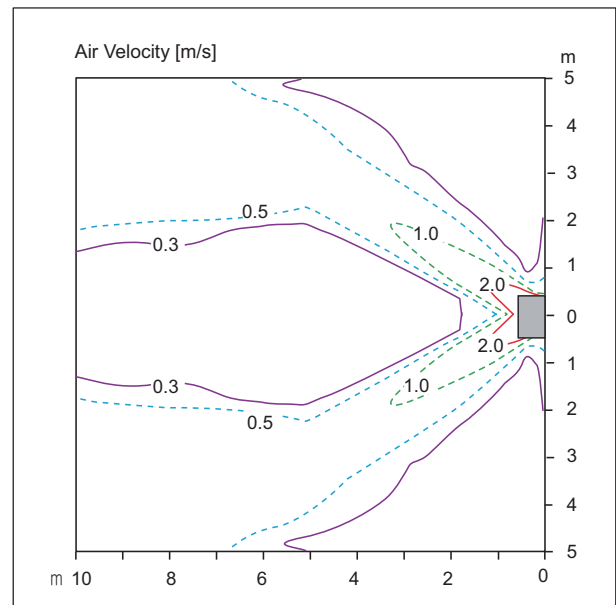
- Vertical Louver : Center
- Fan speed : Super High

#### Top View

Discharge angle: 45°



- Vertical Louver : Center
- Vertical Vane : 0°
- Fan speed : Super High
- Air speed 0.3m/s Range : 20.0m



- Vertical Louver : Left & Right
- Vertical Vane : 50°
- Fan speed : Super High

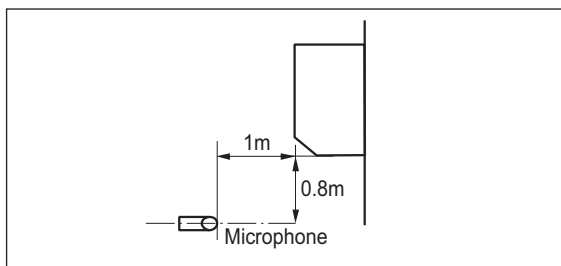
### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### Overall

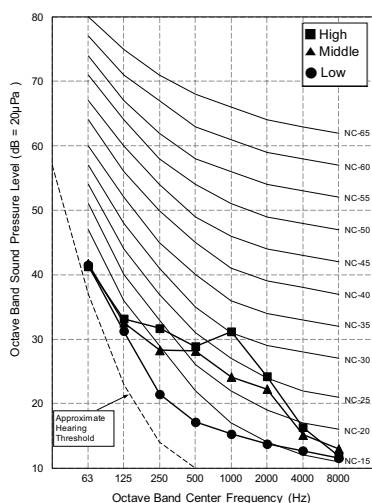


#### Note

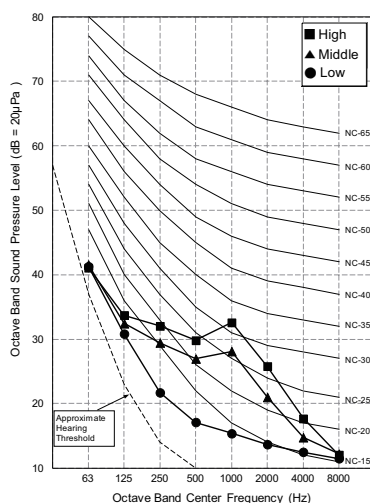
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
S3NM09JASZA [AC09SQ NSJ]	41	35	27
S3NM12JASZA [AC12SQ NSJ]	41	35	27
S3NM18KLSZA [AC18SQ NSK]	44	39	34

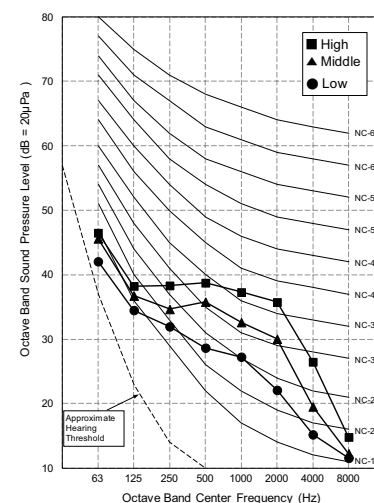
S3NM09JASZA [AC09SQ NSJ]



S3NM12JASZA [AC12SQ NSJ]



S3NM18KLSZA [AC18SQ NSK]





## 7. Sound levels

### 7.2 Sound power level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to “Standard mode” value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

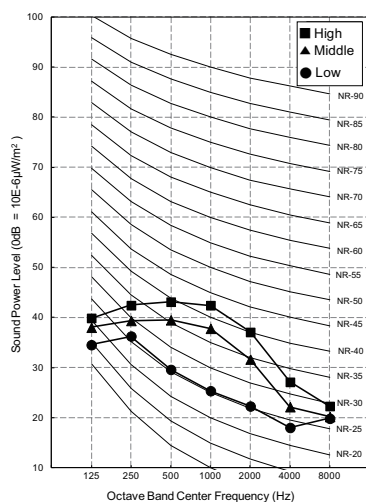
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

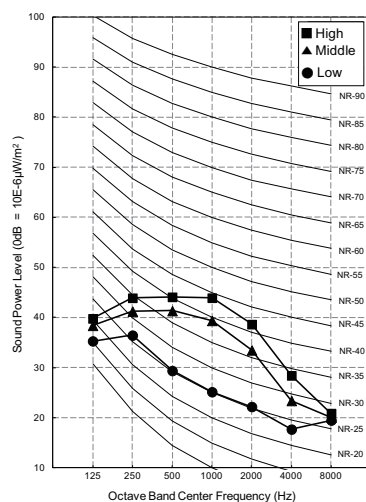
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power Levels [dB(A)]
S3NM09JASZA [AC09SQ NSJ]	59
S3NM12JASZA [AC12SQ NSJ]	59
S3NM18KLSZA [AC18SQ NSK]	60

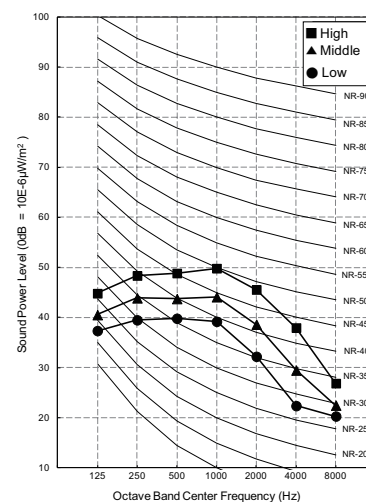
S3NM09JASZA [AC09SQ NSJ]



S3NM12JASZA [AC12SQ NSJ]



S3NM18KLSZA [AC18SQ NSK]

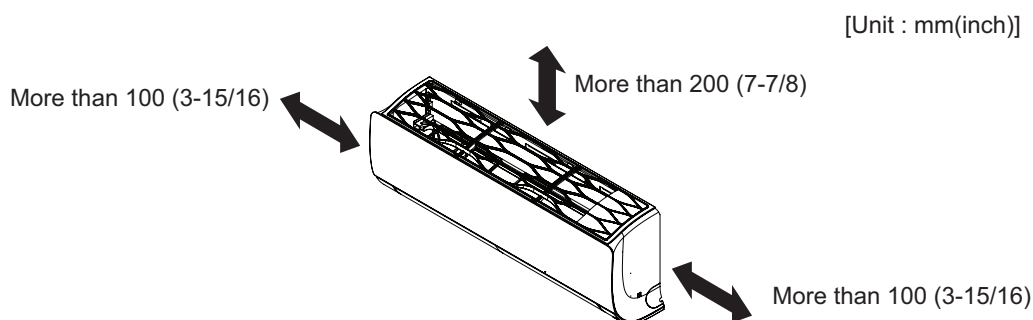


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient.
- There should not be any heat source or steam near the unit.

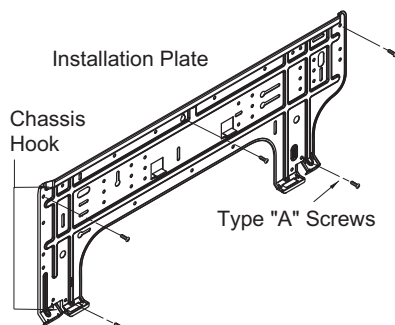


## 8. Installation

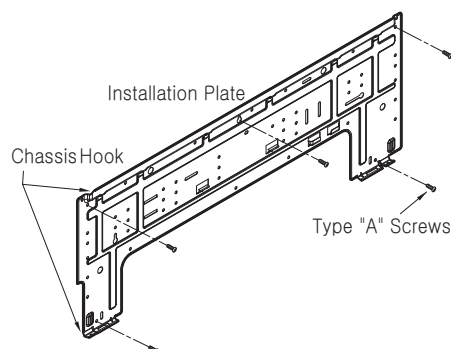
### ■ Fixing Installation Plate

- The wall you select should be strong and solid enough to prevent vibration.
  - Mount the installation plate on the wall with type "A" screws which are provided with product. (Refer to the Installation manual.) If mounting the unit on a concrete wall, use anchor bolts.
    - Mount the installation plate horizontally by aligning the centerline using Horizontal meter.
  - Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

**SJ Chassis**

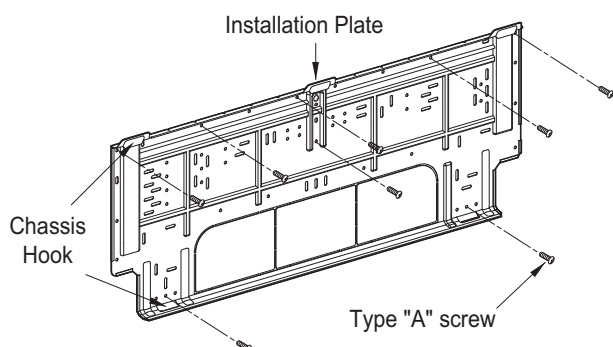


**SK Chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

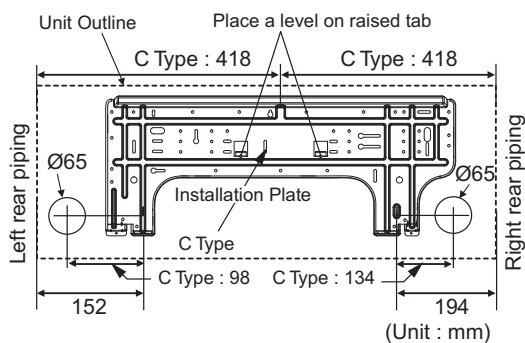
**SV Chassis**



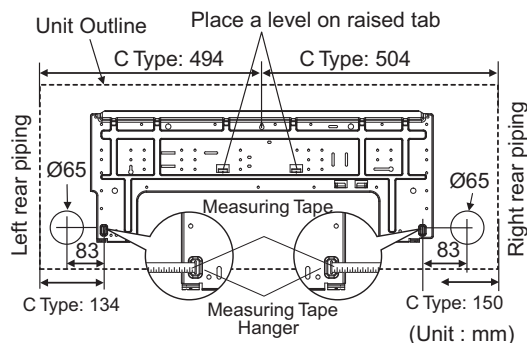
\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### ■ The lower left and the right side piping of Installation Plate

**SJ chassis**



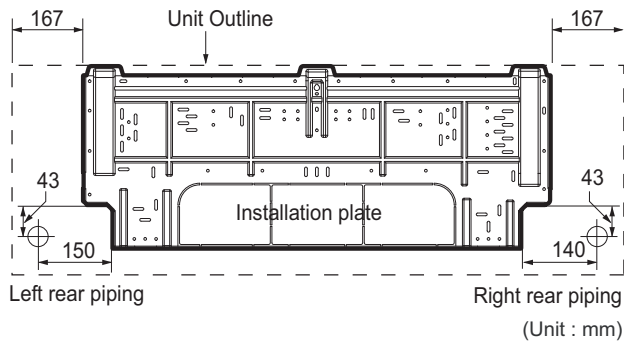
**SK chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

**SV chassis**



\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

### **CAUTION**

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

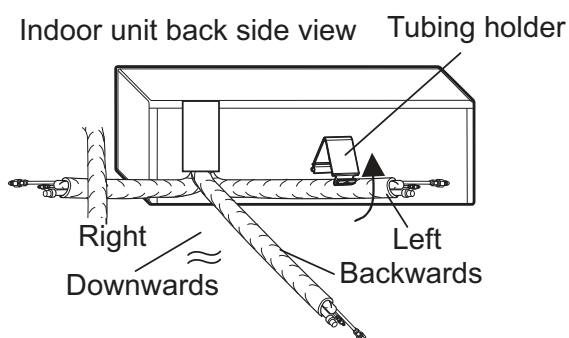
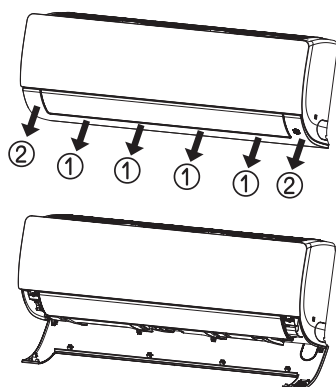
## 8. Installation

### 8.2 Connection of pipes and cables

#### 8.2.1 Preparing work for installation

##### ■ SJ/SK chassis

1. Pull the cover at the bottom of the indoor unit. Pull the cover ①→②.
2. Remove the chassis cover from the unit.
3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing.



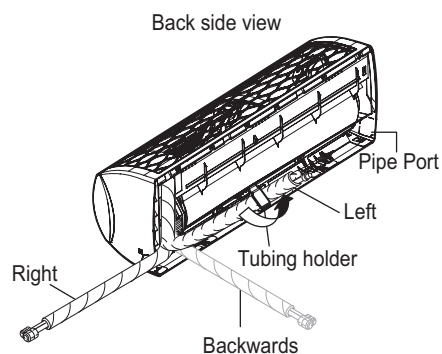
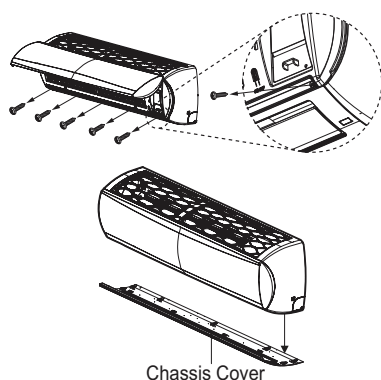
※ The feature can be changed according to type of model.

\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

##### ■ SV chassis

1. Open the panel of the indoor unit.
2. Remove the chassis cover from the unit by loosening 5 screws.
3. Pull back the tubing holder.
4. Remove pipe port cover and position the piping.

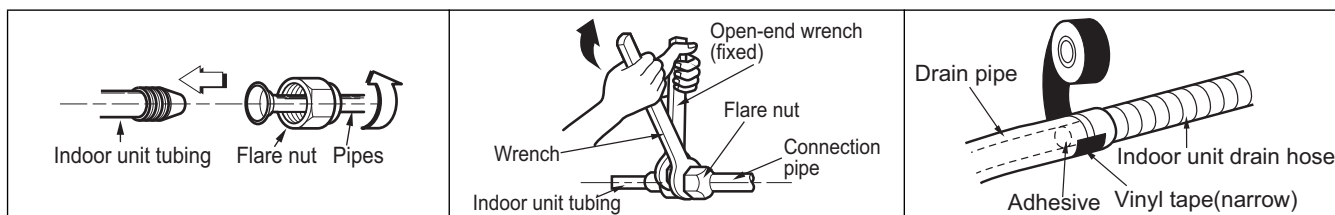


\* The feature can be changed according to type of model.

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

## 8. Installation

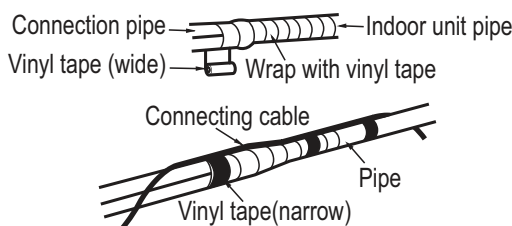
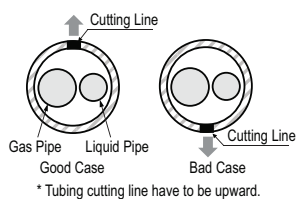
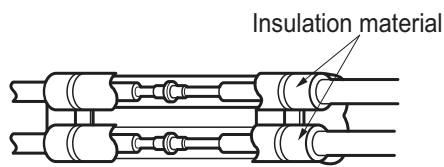
### ■ Connecting the installation pipe and drain hose



1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

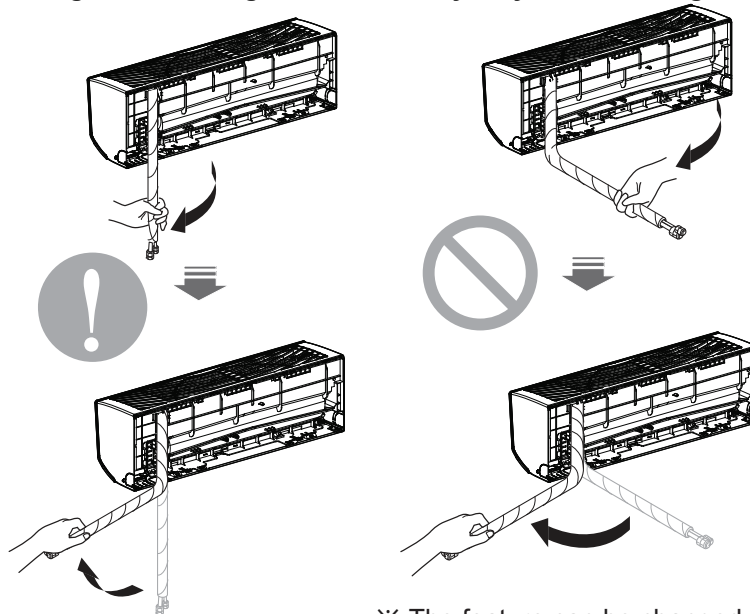
If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

\* Foamed polyethylene or equivalent is recommended.

## 8. Installation

### ⚠ CAUTION

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.
- Following bending case from right to left directly may cause damage to the tubing.



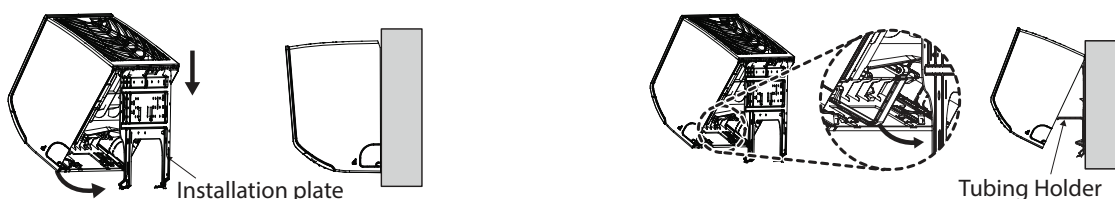
※ The feature can be changed according to type

- Installation Information. For right piping. Follow the instruction above.

### 8.2.2 Installation of Indoor Unit

#### ■ Seat the indoor unit on the installation plate

1. Hook the indoor unit onto the upper portion of the installation plate.(engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall.

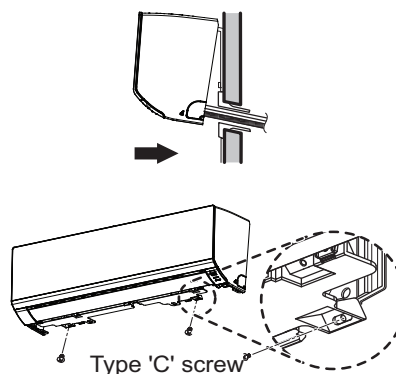


\* The feature can be changed according to type of model.

## 8. Installation

### 8.2.3 Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover. (SJ/SK chassis) Recover the chassis cover in Original place. (SV chassis)



\* The feature can be changed according to type of model.

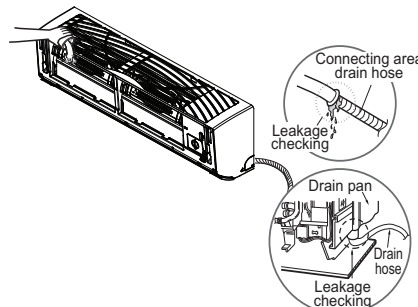
#### **CAUTION**

- The indoor unit can be dropped from the wall, the indoor unit is not screwed correct position on the install plate.
- To avoid the gap between the indoor unit and wall , screw the indoor unit to the install plate correctly.

### 8.2.4 Checking the Drainage

#### ◆ To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.



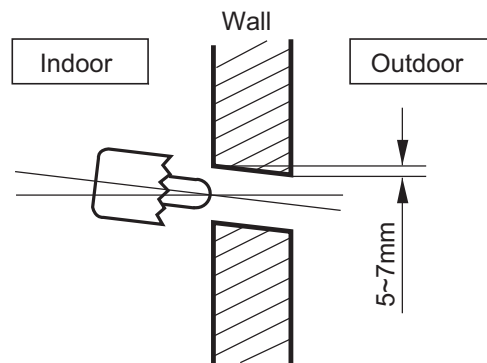
\* The feature can be changed according to type of model.



## 8. Installation

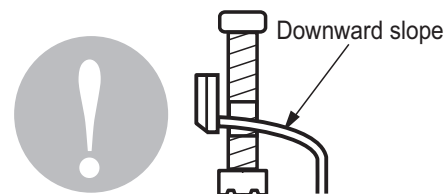
### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing$  70mm hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

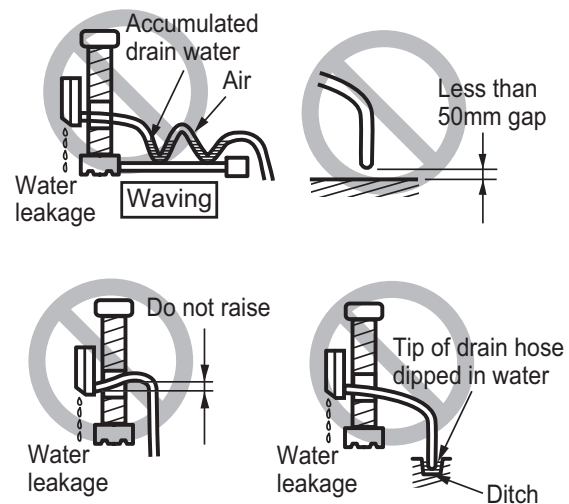


### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

## 8. Installation

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### 8.3 Wiring the cable to the indoor units

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

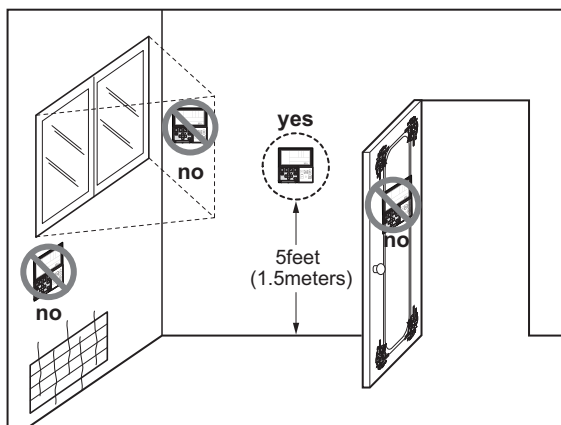
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **Ceiling Mounted cassette 1-way**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZMNW09GTUA0 [MT09R NU1] ZMNW12GTUA0 [MT11R NU1]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	Auto
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	O
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	O
	Jet cool/heat	O / X
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	O
	Electric heater	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	X
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZMNW09GTUA0 [MT09R NU1] ZMNW12GTUA0 [MT11R NU1]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

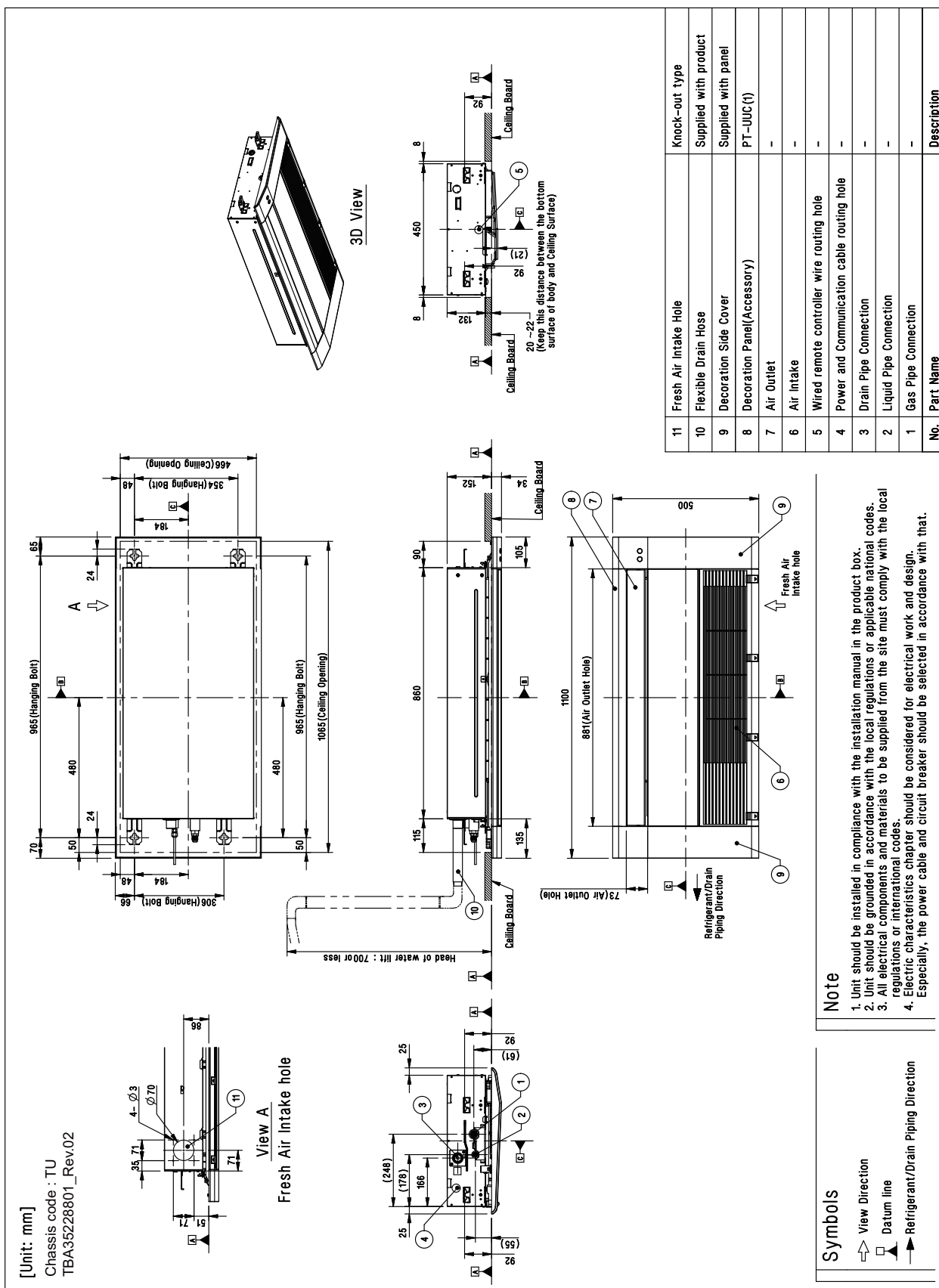
Model Name				ZMNW09GTUA0 [MT09R NU1]	ZMNW12GTUA0 [MT11R NU1]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input			W x No.	20 × 1	20 × 1
Running Current			A	0.2	0.2
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	860 × 132 × 450	860 × 132 × 450
		W x H x D	inch	33-27/32 x 5-3/16 x 17-23/32	33-27/32 x 5-3/16 x 17-23/32
Net Weight	Body		kg (lbs)	11.7 (25.8)	11.7 (25.8)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 12 x 18) x 1	(2 x 12 x 18) x 1
	Face Area		m <sup>2</sup> (ft <sup>2</sup> )	0.18 (1.90)	0.18 (1.90)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m <sup>3</sup> /min	7.5 / 7.3 / 6.8	8.1 / 7.4 / 7.0
		H / M / L	ft <sup>3</sup> /min	265 / 258 / 240	286 / 261 / 247
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	20 x 1	20 x 1
Sound Pressure Level		H / M / L	dB(A)	36 / 34 / 32	37 / 36 / 33
Sound Power Level		Rated	dB(A)	54	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain (O.D. / I.D.)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Power and Communication Cable (included Earth)			No. x mm <sup>2</sup> (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UUC1	PT-UUC1
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	1,100 × 34 × 500	1,100 × 34 × 500
		W x H x D	inch	43-5/16 x 1-11/32 x 19-11/16	43-5/16 x 1-11/32 x 19-11/16
	Net weight		kg (lbs)	4.4(9.7)	4.4(9.7)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

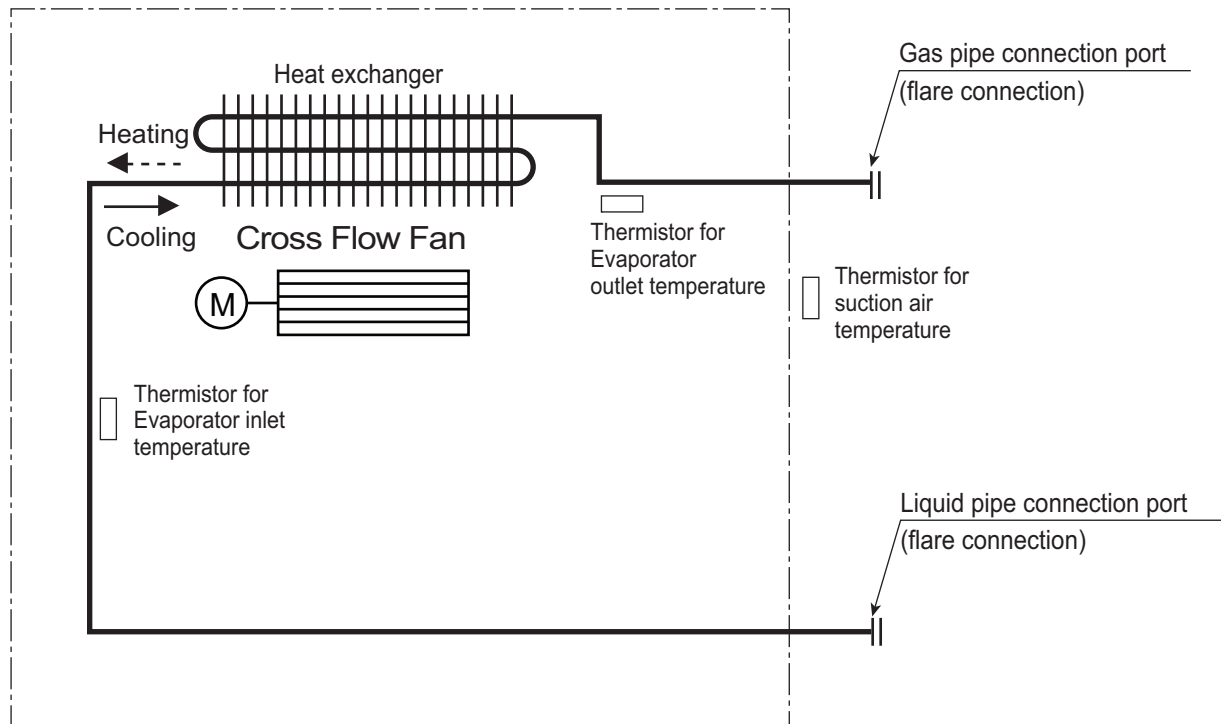
### 3. Dimensions

## ZMNW09GTUA0 [MT09R NU1] / ZMNW12GTUA0 [MT11R NU1]





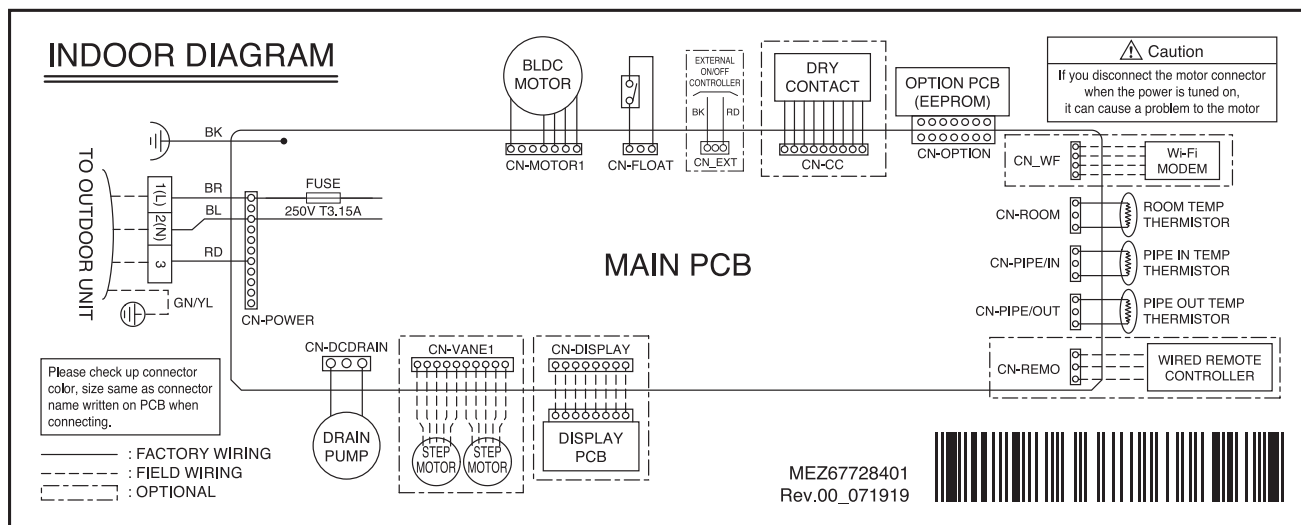
## 4. Piping diagrams



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE/IN
Thermistor for evaporator outlet temperature	CN-PIPE/OUT

## 5. Wiring Diagrams

### Models: ZMNW09GTUA0 [MT09R NU1], ZMNW12GTUA0 [MT11R NU1]



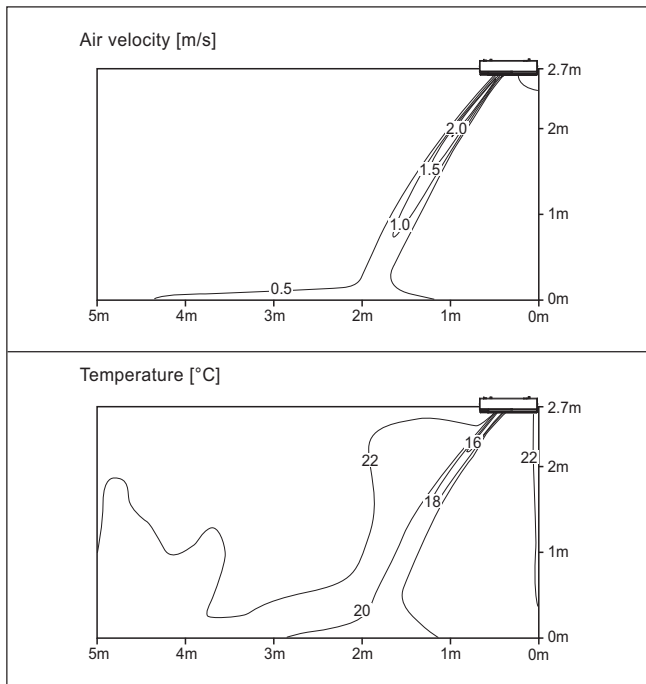
\* Refer to "List of functions" for remote controller related functions.

## 6. Air flow and temperature distributions (reference data)

### ■ Model : ZMNW09GTUA0 [MT09R NU1]

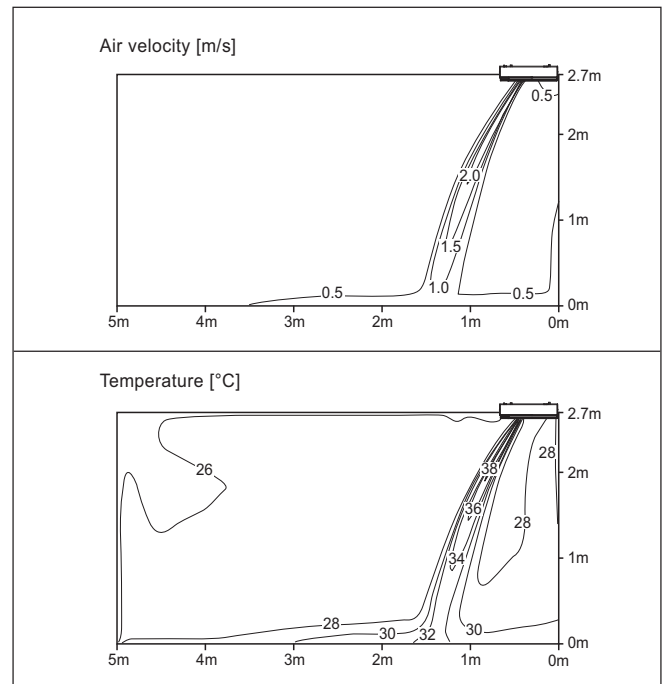
#### Cooling

Discharge angle: 50°



#### Heating

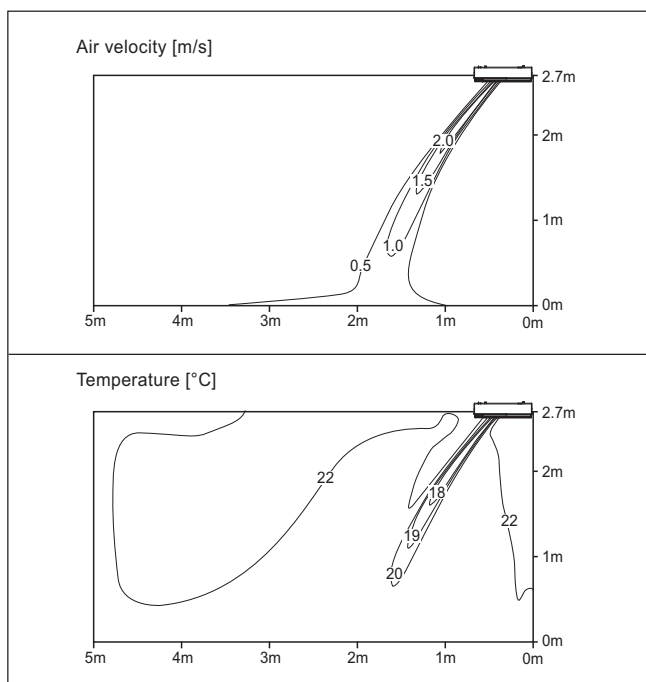
Discharge angle: 60°



### ■ Model : ZMNW12GTUA0 [MT11R NU1]

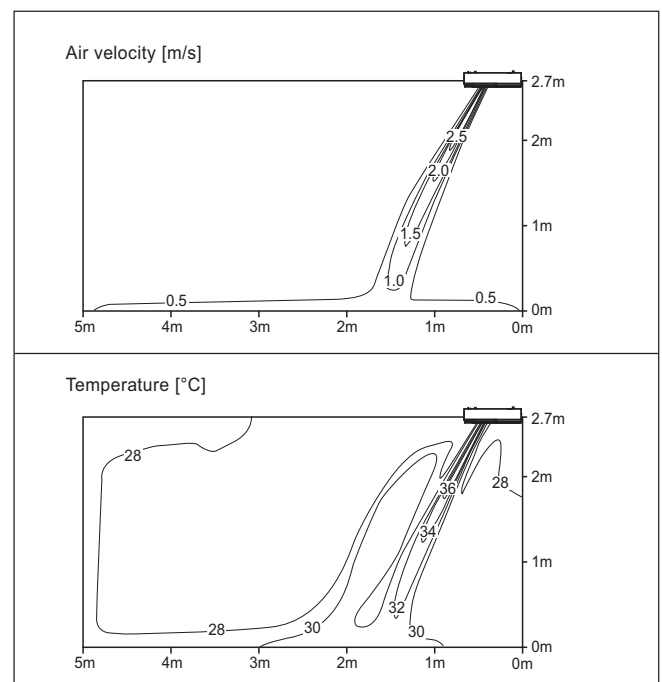
#### Cooling

Discharge angle: 50°



#### Heating

Discharge angle: 60°



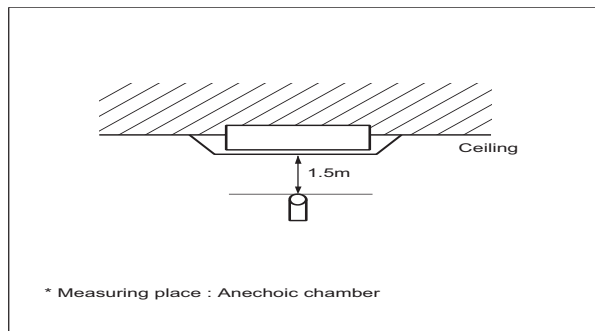
#### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound levels

### 7.1 Sound pressure level

#### Overall

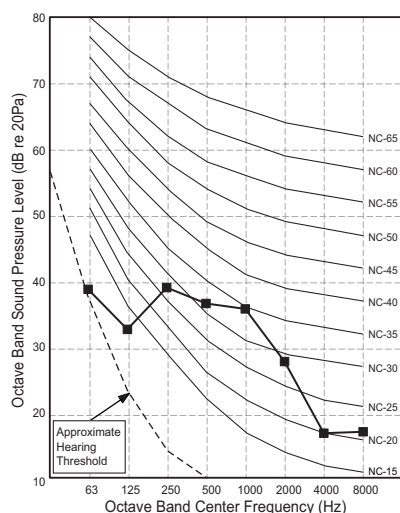


#### Note

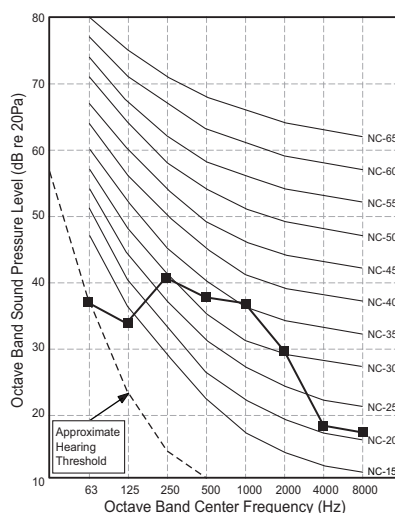
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZMNW09GTUA0 [MT09R NU1]	36	34	32
ZMNW12GTUA0 [MT11R NU1]	37	36	33

**ZMNW09GTUA0 [MT09R NU1]**



**ZMNW12GTUA0 [MT11R NU1]**



## 7. Sound levels

### 7.2 Sound power level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

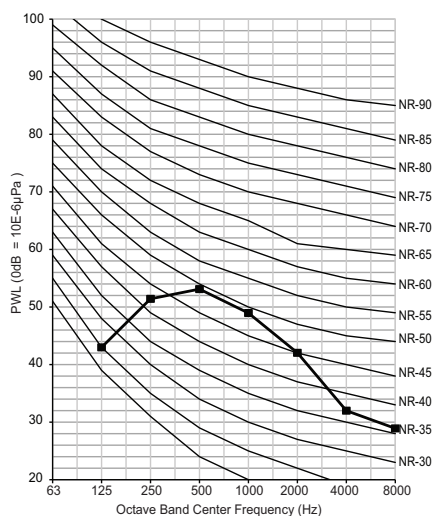
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

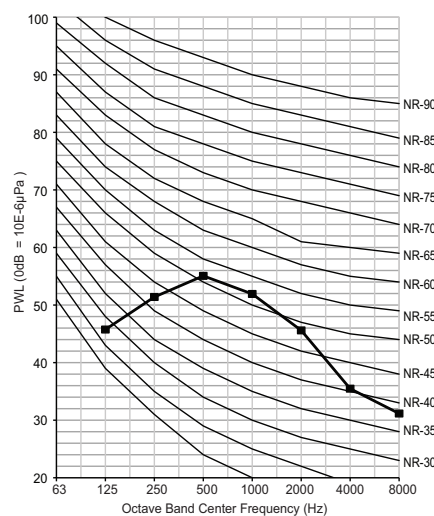
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
ZMNW09GTUA0 [MT09R NU1]	54
ZMNW12GTUA0 [MT11R NU1]	57

**ZMNW09GTUA0 [MT09R NU1]**



**ZMNW12GTUA0 [MT11R NU1]**

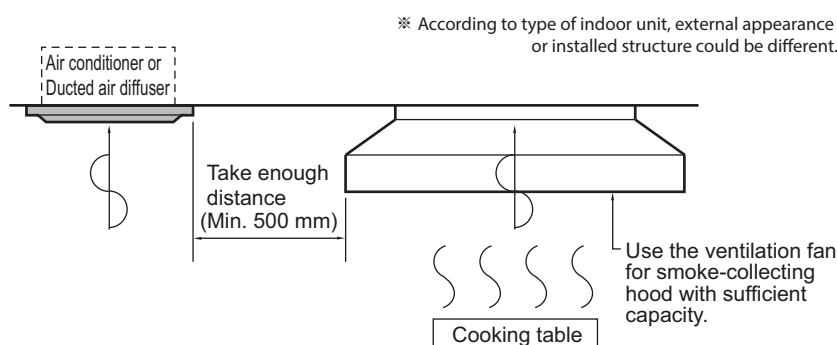


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.

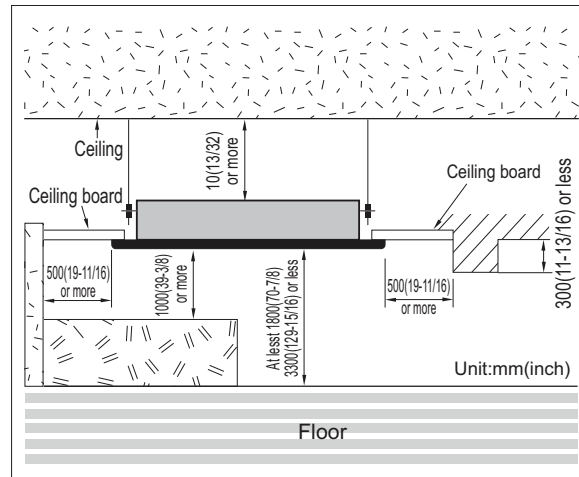


2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

## 8. Installation

### ⚠ CAUTION

- If the temperature rise above 30°C or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.

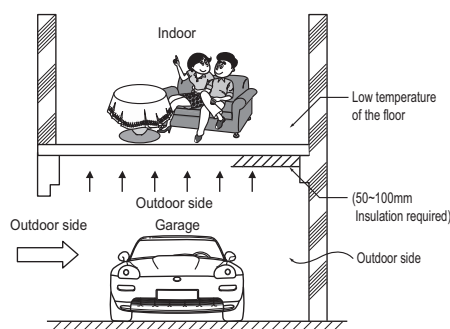
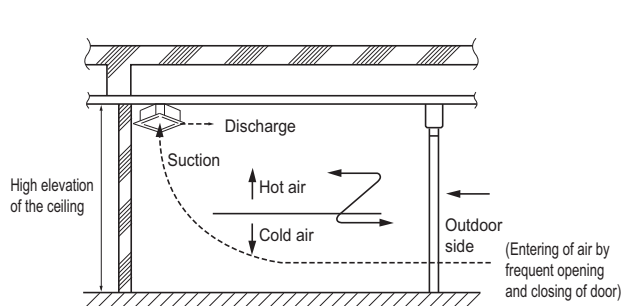


## 8. Installation

### 8.2 Precautions regarding cassette indoor unit installation

#### ◆ Main points about the indoor installation

- In general commercial places and offices though the height of the ceiling is 2.7 m, the ceiling height could be over 3 m.
- In such cases because of the temperature difference with the floor the heating effect can fall down.
- Countermeasure method
  1. Air conditioner should be able to operate in high ceiling operation mode.
  2. Plan to install the circulator.
  3. The air discharge port should be made to give more airflow to the down floor directions.
  4. The gate or exit of the building is protected by dual door system to minimize inflow of outdoor air.



#### ◆ In case the floor or surfaces is contact with the outdoor air directly

- If the floor of air conditioned room contact with the outside air, like the store room or garage, the floor temperature will be decreased and users can have a cold feeling in the feet.
- In such places where the feet comes in direct contact with floors will give a cold feeling to the foot.

#### ⚠ CAUTION

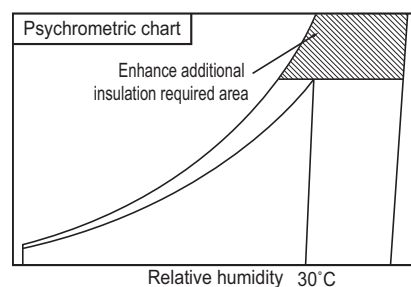
- In case there is a cold air intake,
  - » The duct surface may have some dew drops. So a insulation on the duct is a must.(Insulation material: a glass wool of thickness 25 mm will be appropriate.)

#### ◆ Countermeasure method

1. Use the carpet on the floor.  
(compared to the tiles the carpet over it will have a 3 degree rise in temperature)
2. Insulating the floor.
3. Floor heating.

#### ◆ In case of high temperature or humidity between the false ceiling and ceiling slab

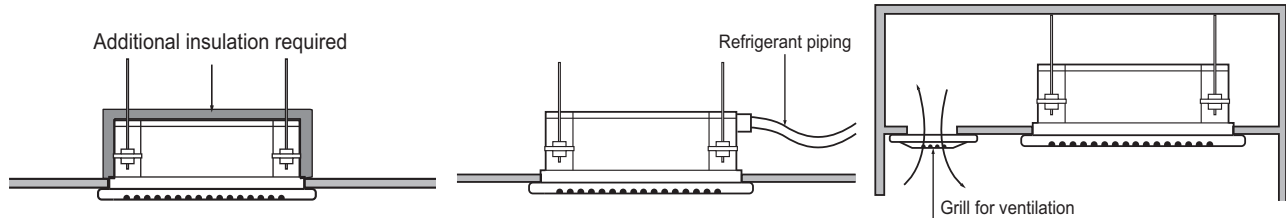
- In case of places having the temperature and humidity of the surrounding water sources(sea, river etc.)
- In case the steam is generated between the false ceiling and the ceiling slab due to some nearby by steam source.
- In case of temperature of 30 degree and humidity above 80%, the units body as well as the piping insulation should be strengthened. Refer to the psychrometric chart.





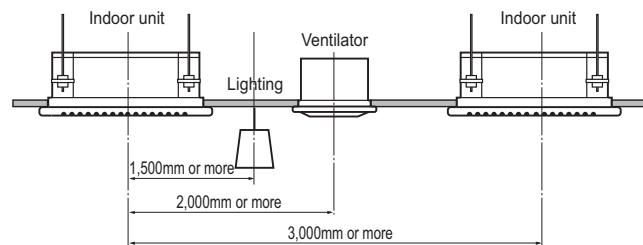
## 8. Installation

- Countermeasure method
  - Indoor unit: Insulate the unit body with some insulation like glass wool at least 10 mm in thickness.
  - Refrigerant piping: Increase the piping insulation thickness with thickness above 20 mm.
  - Others: Inside the ceiling near the air tight seal places. (To escape of the humidity inside false ceiling)



\* According to type of indoor unit, external appearance could be different.

### ◆ In case of multiple indoor cassette units (recommended)



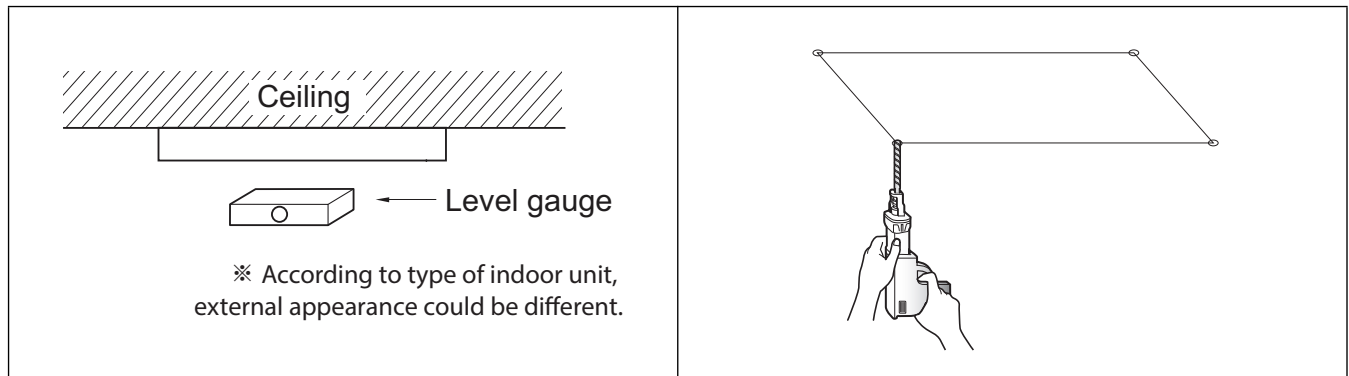
※ According to type of indoor unit, external appearance could be different.

## 8. Installation

### 8.3 Ceiling opening dimensions and hanging bolt location

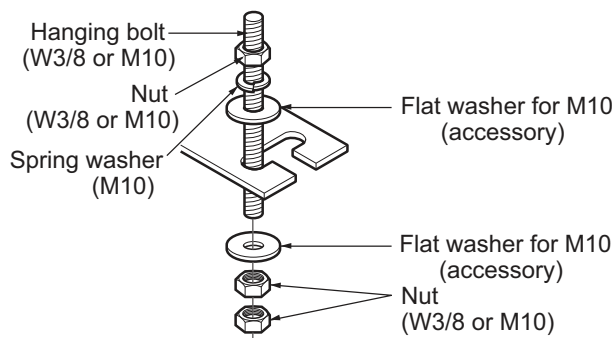
#### ⚠ CAUTION

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation

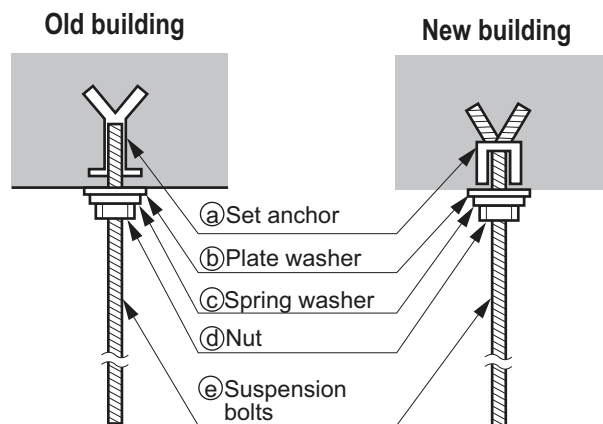


- The following parts are local purchasing.

1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### CAUTION

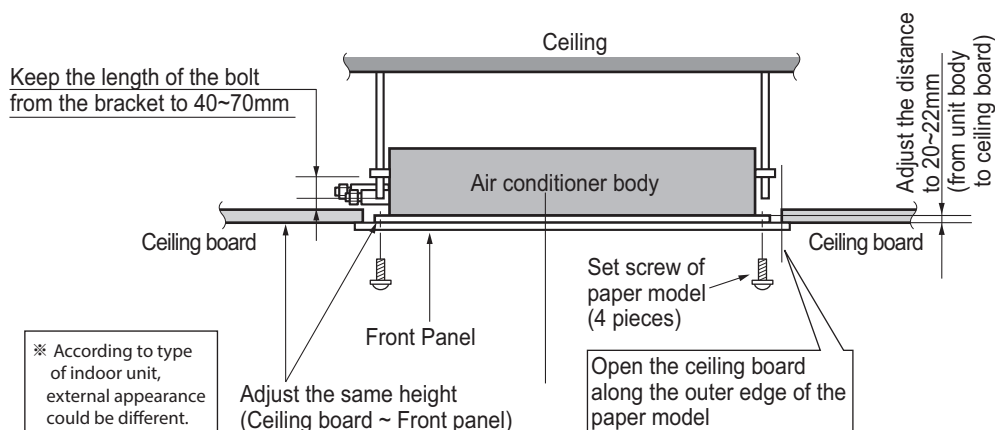
- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)



### ◆ Ceiling opening and Hanging Bolt dimension

TU Chassis	TT Chassis
<p>Unit : mm</p>	<p>Unit : mm</p>

### ◆ Installation Structure guide



## 8. Installation

---

### 8.4 Wiring Connection

#### 8.4.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.4.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.4.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

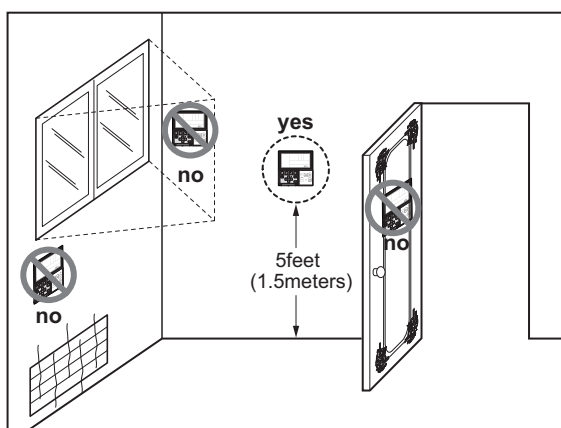
### **! WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.4.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

## 8. Installation

### 8.5 Installation of Decoration Panel

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

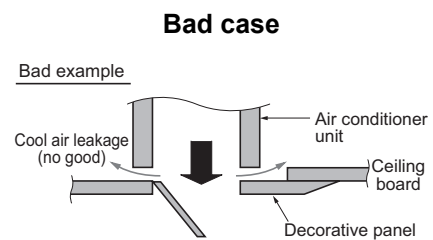
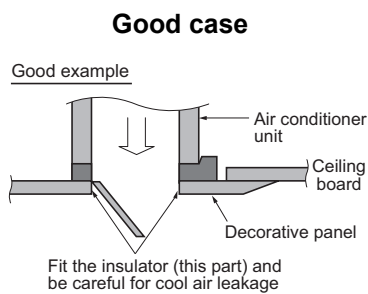
1. Open the air outlet vane, and extract side covers.
2. Remove the air inlet panel from the decoration panel.
3. Hook decoration panel to indoor unit, using hooks attached at the backside of both side of decoration panel.
4. Arrange wires not to get caught between decoration panel and indoor unit.
5. Screw the fixing screws. (TU Chassis : 6 screws / TT Chassis : 7 screws)
6. Connect the vane motor connector, display connector.
7. Install the air inlet panel (including the air filter) and side covers.

#### Notice

For more details, refer to the product or panel installation manual.

#### ! CAUTION

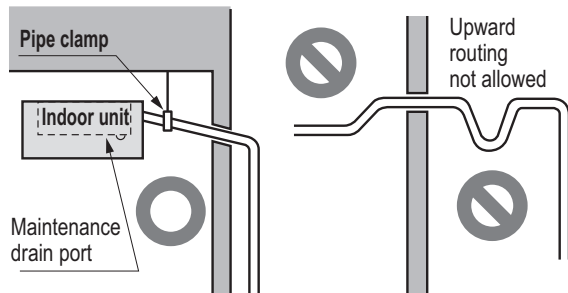
- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



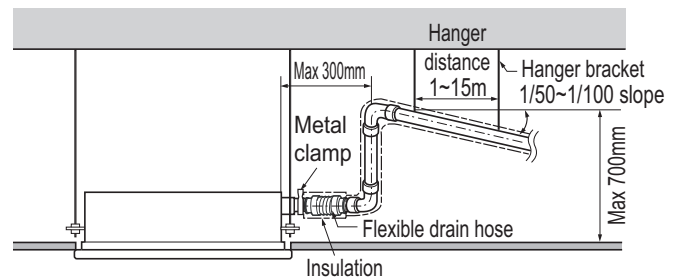
## 8.6 Indoor Unit Drain Piping

### 8.6.1 Drain piping of indoor unit with drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
  - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.

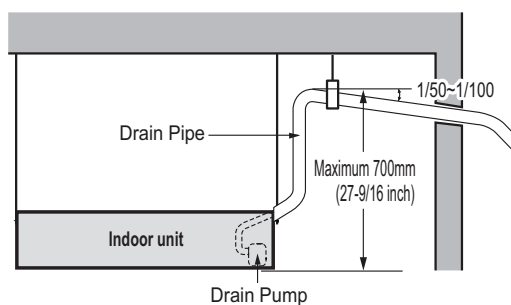


※ According to type of indoor unit, external appearance could be different.

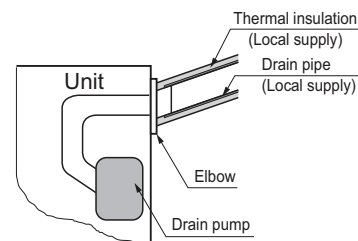


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



※ According to type of indoor unit, external appearance could be different.

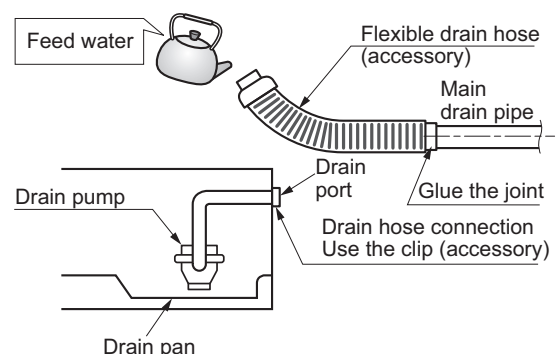


### 8.6.2 Method of Drainage test

### ◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.

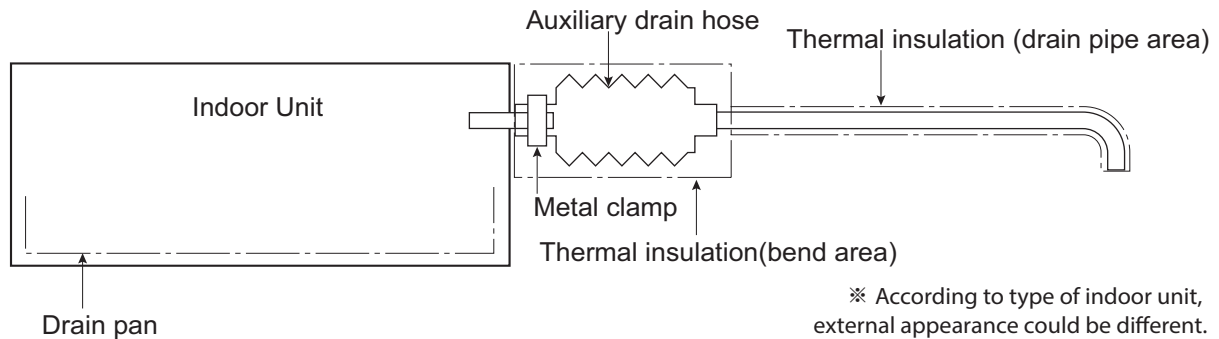


※ According to type of indoor unit, external appearance could be different.

## 8. Installation

### 8.6.3 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.

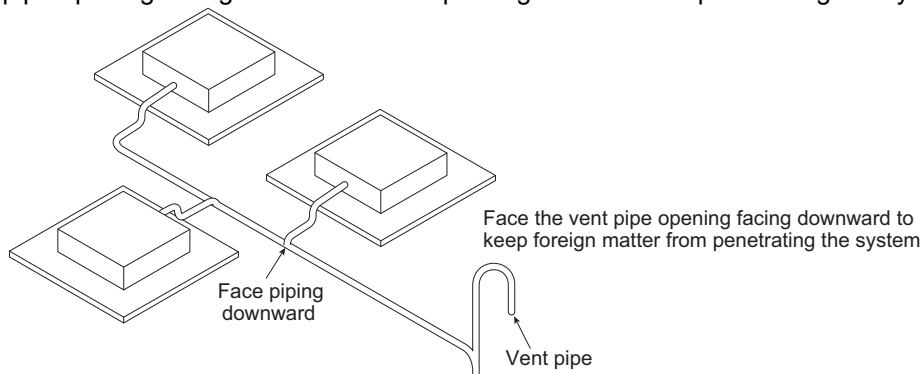


#### ⚠ CAUTION

- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

### 8.6.4 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.





# **MULTI/SINGLE**

Indoor unit

## **Ceiling Mounted cassette 4-way**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZMNW05GTRA0 [MT06R NR0] ZMNW07GTRA0 [MT08R NR0]
Air flow	Air supply outlet	4
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	X
	Jet cool/heat	O / X
	Swirl wind	O
	Refresh Mode***	X
	Smart Mode***	X
	Indirect Wind	X
	Direct wind	X
	Triple filter (Deodorizing)	X
Air purifying	Air purifier (Plasma)	PTPKQ0
	Air purifier (Ionizer)	X
	Allergy Safe filter	O
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	X
	Electric heater	O
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	X
	Auto cleaning	O
	Auto operation(artificial intelligence)	O
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	X
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	X
	Human Detecting function***	X
	Floor Detecting function***	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZMNW05GTRA0 [MT06R NR0] ZMNW07GTRA0 [MT08R NR0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

# 1. List of functions

## ◆ List of function

Category	Functions	ZTNW09GRLA1 [CT09F NR0] ZTNW12GRLA1 [CT12F NR0] ZTNW18GQLA1 [CT18F NQ0]
Air flow	Air supply outlet	4
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	X
	Jet cool/heat	O / O
	Swirl wind	O
	Refresh Mode***	X
	Smart Mode***	X
	Indirect Wind	X
	Direct wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	O (Accessory)
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	X
	Human Detecting function***	X
	Floor Detecting function***	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

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4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZTNW09GRLA1 [CT09F NR0] ZTNW12GRLA1 [CT12F NR0] ZTNW18GRLA1 [CT18F NQ0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

Model Name			Unit	ZMNW05GTRA0 [MT06R NR0]	ZMNW07GTRA0 [MT08R NR0]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Exterior	Color (RAL Code)		-	Morning Fog (9001)	Morning Fog (9001)
Dimensions		W x H x D	mm	570 × 214 × 570	570 × 214 × 570
Weight	Net		kg	11.7	11.7
	Shipping		kg	14.8	14.8
Heat Exchanger	Rows x Columns x FPI		-	1 x 8 x 18	1 x 8 x 18
	Face Area		m²	0.21	0.21
Fan Type				3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	7.5 / 6.0 / 5.0	7.5 / 6.0 / 5.0
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	43 x 1	43 x 1
	Power Input	Min./ Nom./ Max	W	10 / 20 / 20	10 / 20 / 20
	FLA (Full Load Ampere)		A	0.4	0.4
Dehumidification Rate			ℓ/h	-	-
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	31 / 27 / 24	31 / 27 / 24
Sound Power Level	Cooling	Rated	dB(A)	48	48
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75
Decoration Panel	Model Name			PT-QCHW0	PT-QCHW0
	Color(RAL)			Morning Fog(9001)	Morning Fog(9001)
	Dimensions	W x H x D	mm	620 × 34 × 620	620 × 34 × 620
	Net Weight		kg	3.0	3.0
	Shipping Weight		kg	4.1	4.1

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name			Unit	ZTNW09GRLA1 [CT09F NR0]	ZTNW12GRLA1 [CT12F NR0]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	H / M / L		W	26 / 22 / 19	28 / 24 / 20
Running Current		H / M / L	A	0.31 / 0.29 / 0.27	0.32 / 0.30 / 0.28
		Max.	A	0.40	0.40
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	570 × 214 × 570	570 × 214 × 570
Weight	Net		kg	12.4	12.4
	Shipping		kg	15.6	15.6
Heat Exchanger	Rows x Columns x FPI			(2 x 8 x 18) x 1	(2 x 8 x 18) x 1
	Face Area		m²	0.22	0.22
Fan Type				3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	8.5 / 7.0 / 6.0	9.5 / 8.0 / 7.0
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	43 x 1	43 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	36 / 33 / 30	38 / 35 / 32
	Heating	H / M / L	dB(A)	36 / 33 / 30	38 / 35 / 32
Sound Power Level	Cooling	Rated	dB(A)	52	52
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75
Decoration Panel	Model Name			PT-QAGW0	PT-QAGW0
	Color (RAL)			White (9003)	White (9003)
	Dimensions	W x H x D	mm	620 × 34 × 620	620 × 34 × 620
	Net Weight		kg	3.0	3.0
	Shipping Weight		kg	4.1	4.1

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation (Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name			Unit	ZTNW18GQLA1 [CT18F NQ0]
Power Supply			V , Ø , Hz	220-240, 1, 50
				220, 1, 60
Power Input		H / M / L	W	30 / 26 / 22
Running Current		H / M / L	A	0.33 / 0.31 / 0.29
		Max.	A	0.40
Exterior	Color		-	Steel Gray
Dimensions		W x H x D	mm	570 × 256 × 570
Weight	Net		kg	13.9
	Shipping		kg	16.9
Heat Exchanger	Rows x Columns x FPI			(2 x 10 x 18) x 1
	Face Area		m²	0.28
Fan Type				3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	13.0 / 12.0 / 11.0
Fan Motor	Type			BLDC
	Drive			Internal
	Output		W x No.	43 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)
	Gas Side		mm (inch)	Ø 12.7 (1/2)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 25.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	41 / 39 / 37
	Heating	H / M / L	dB(A)	41 / 39 / 37
Sound Power Level	Cooling	Rated	dB(A)	57
	Heating	Rated	dB(A)	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75
Decoration Panel	Model Name			PT-QAGW0
	Color (RAL)			White (9003)
	Dimensions	W x H x D	mm	620 × 34 × 620
	Net Weight		kg	3.0
	Shipping Weight		kg	4.1

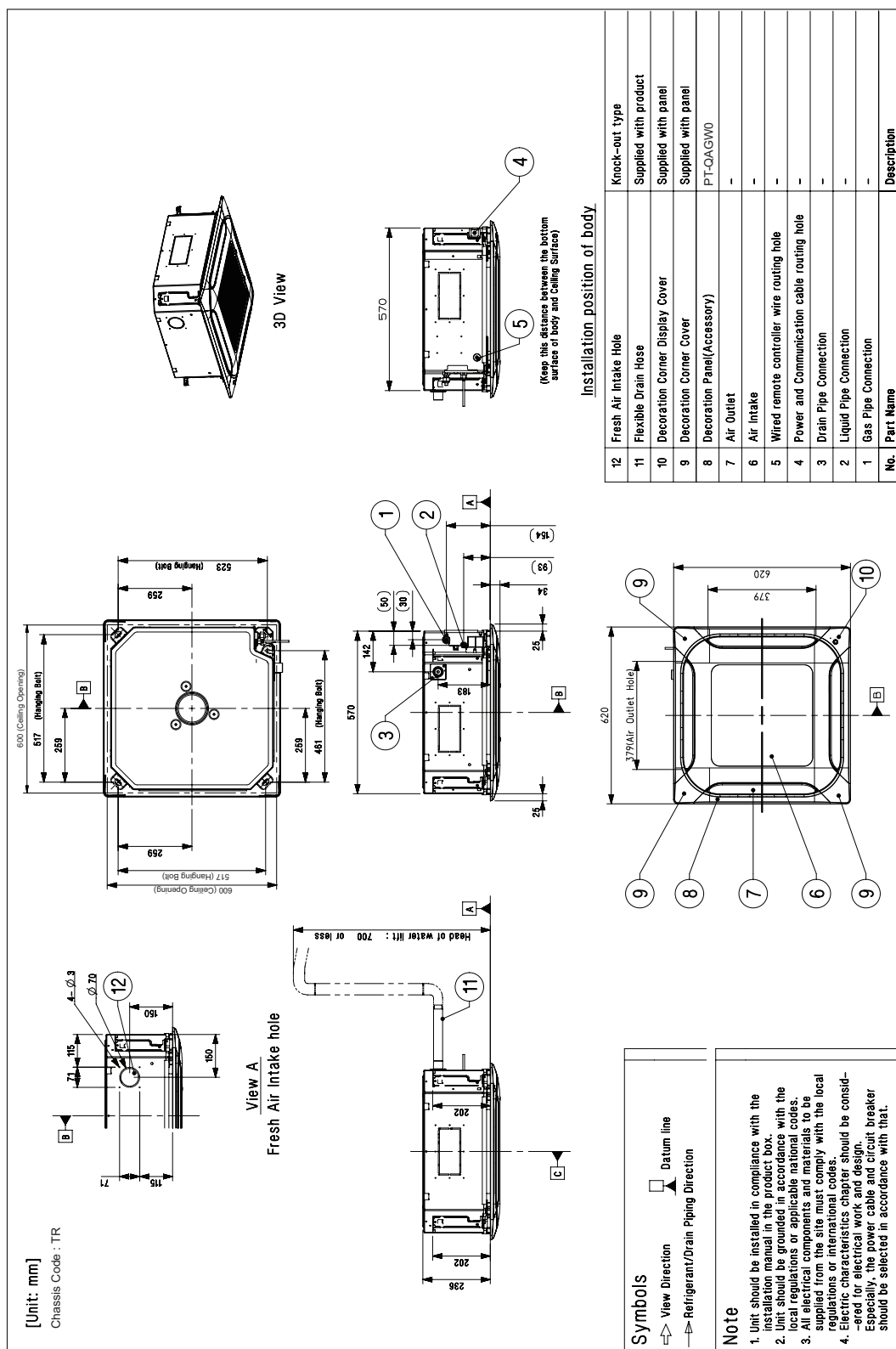
### Note

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2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

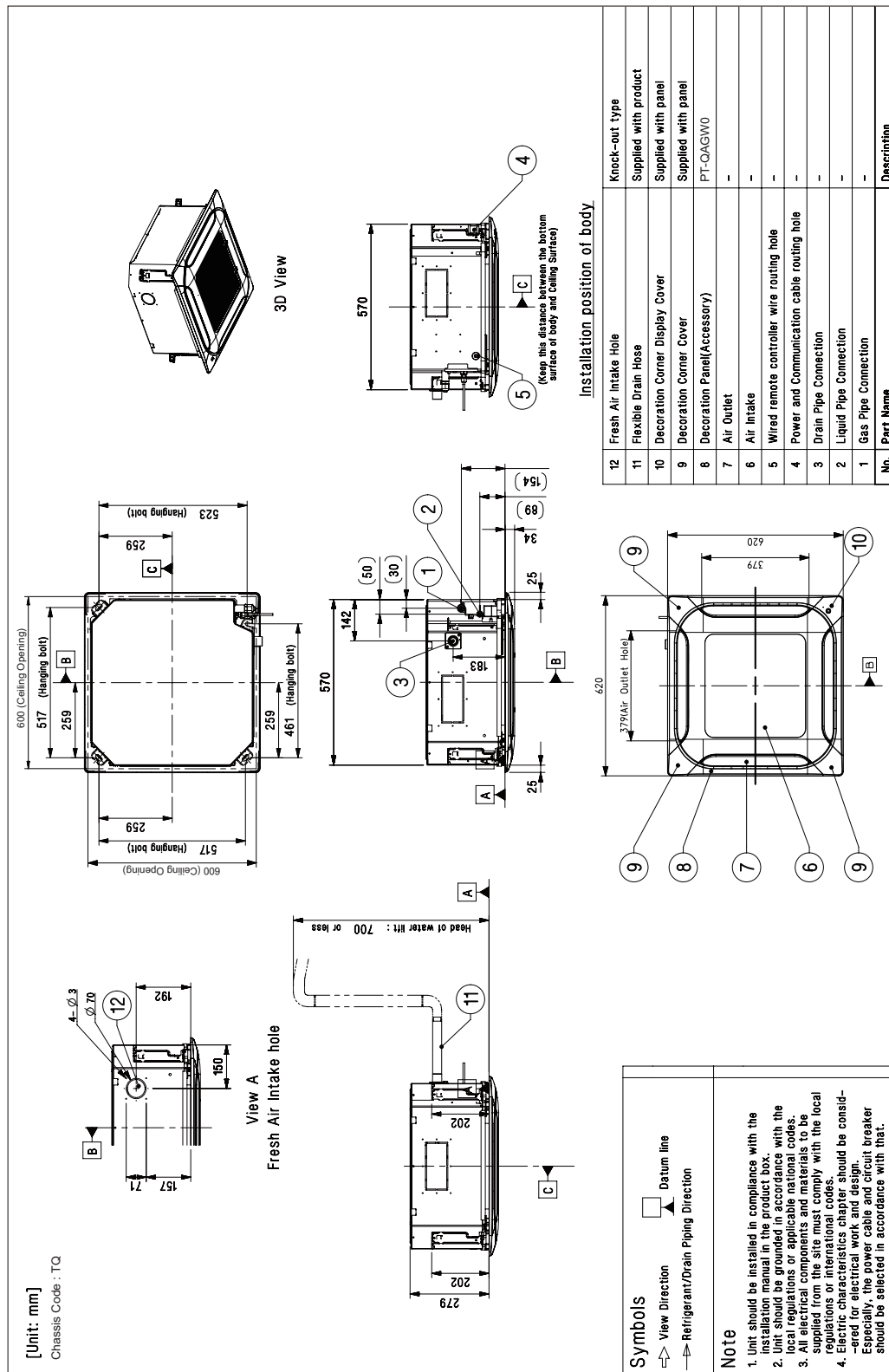


### 3. Dimensions

■ ZMNW05GTRA0 [MT06R NR0] / ZMNW07GTRA0 [MT08R NR0]  
ZTNW09GRLA1 [CT09F NR0] / ZTNW12GRLA1 [CT12F NR0]

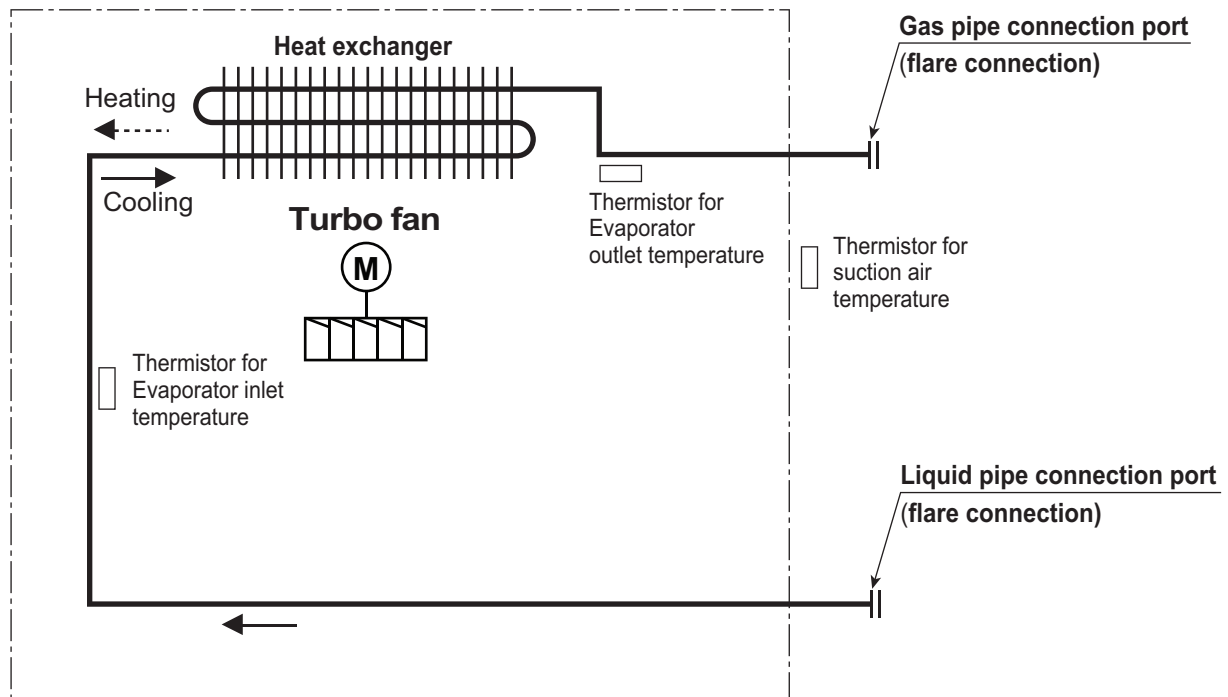


■ ZTNW18GQLA1 [CT18F NQ0]



## 4. Piping Diagrams

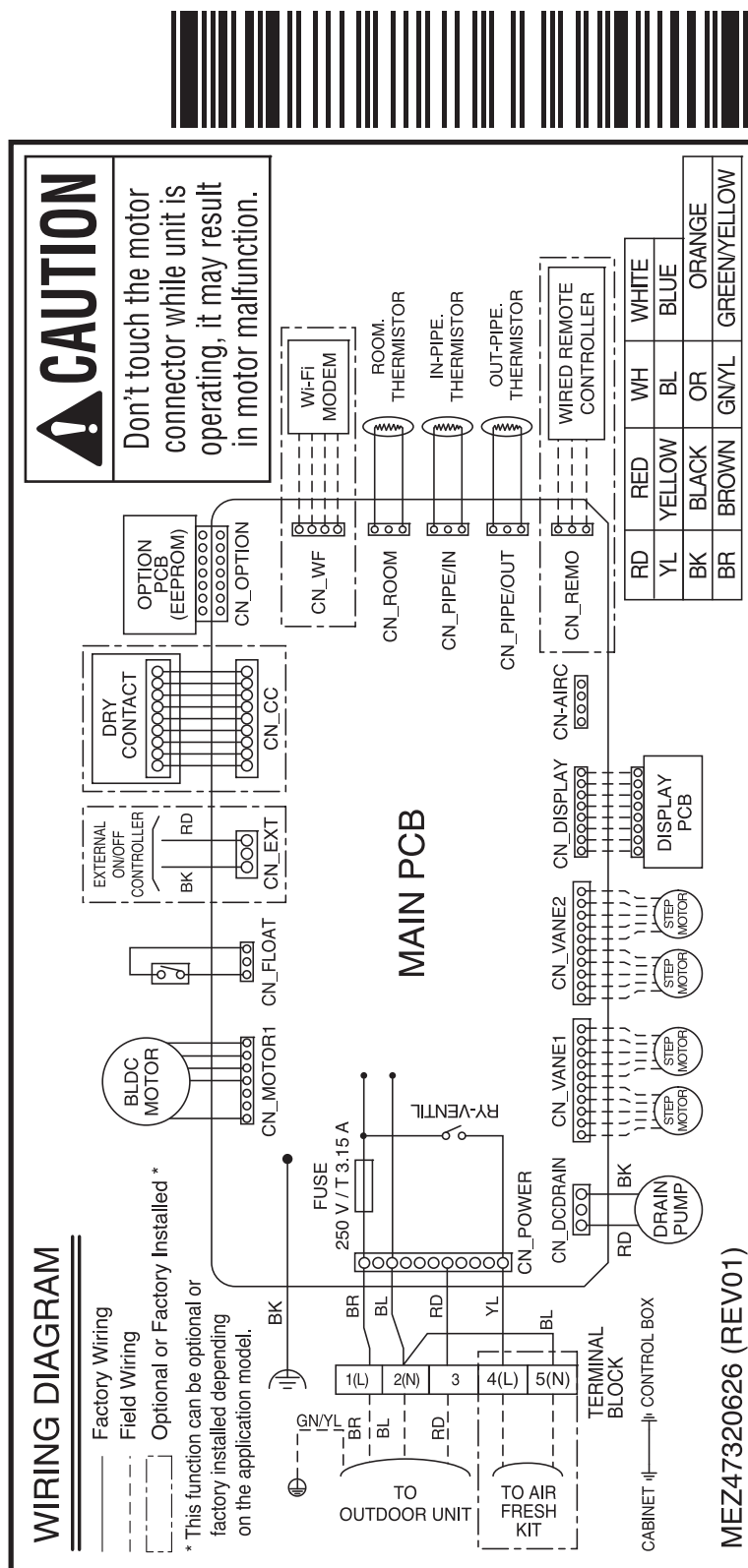
- ZMNW05GTRA0 [MT06R NR0] / ZMNW07GTRA0 [MT08R NR0]  
 ZTNW09GRLA1 [CT09F NR0] / ZTNW12GRLA1 [CT12F NR0]  
 ZTNW18GQLA1 [CT18F NQ0]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT

## 5. Wiring Diagrams

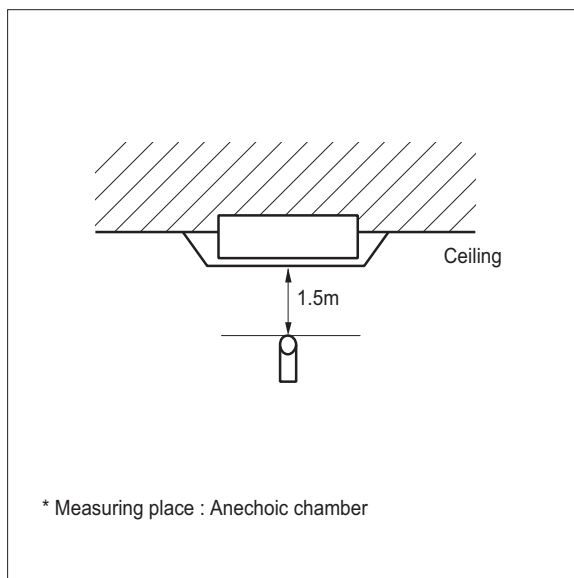
- ZMNW05GTRA0 [MT06R NR0] / ZMNW07GTRA0 [MT08R NR0]  
ZTNW09GRLA1 [CT09F NR0] / ZTNW12GRLA1 [CT12F NR0]  
ZTNW18GQLA1 [CT18F NQ0]



## 6. Sound levels

### 6.1 Sound Pressure Level

#### Overall

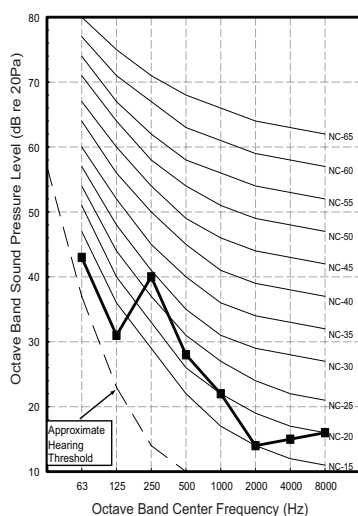


#### Note

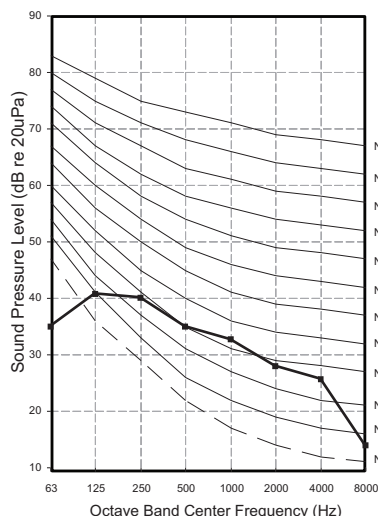
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZMNW05GTRA0 [MT06R NR0]	31	27	24
ZMNW07GTRA0 [MT08R NR0]	31	27	24
ZTNW09GRLA1 [CT09F NR0]	36	33	30
ZTNW12GRLA1 [CT12F NR0]	38	35	32
ZTNW18GQLA1 [CT18F NQ0]	41	39	37

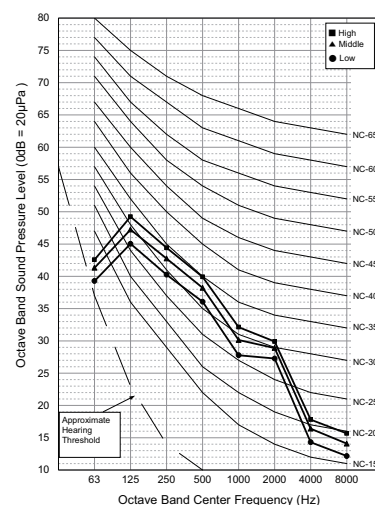
**ZMNW05GTRA0 [MT06R NR0]  
ZMNW07GTRA0 [MT08R NR0]**



**ZTNW09GRLA1 [CT09F NR0]  
ZTNW12GRLA1 [CT12F NR0]**



**ZTNW18GQLA1 [CT18F NQ0]**



## 6. Sound levels

### 6.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

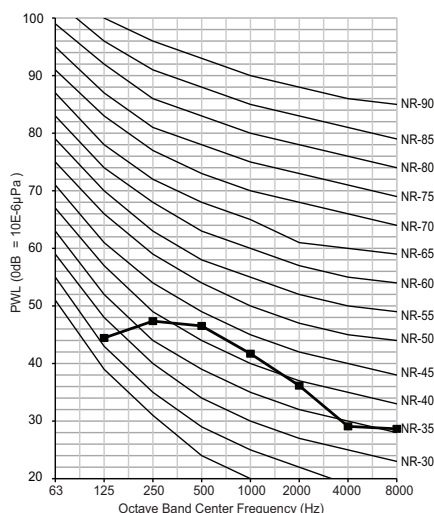
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>

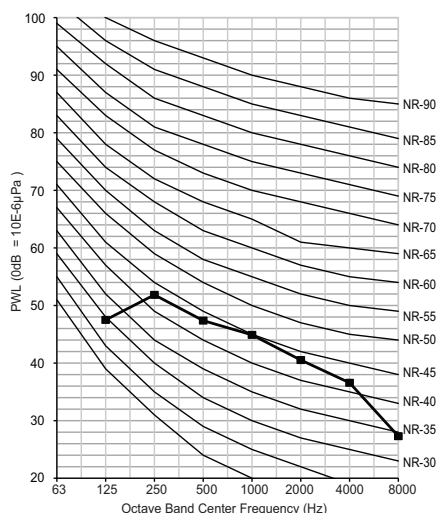
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
	Cooling
ZMNW05GTRA0 [MT06R NR0]	48
ZMNW07GTRA0 [MT08R NR0]	48
ZTNW09GRLA1 [CT09F NR0]	52
ZTNW12GRLA1 [CT12F NR0]	52
ZTNW18GQLA1 [CT18F NQ0]	57

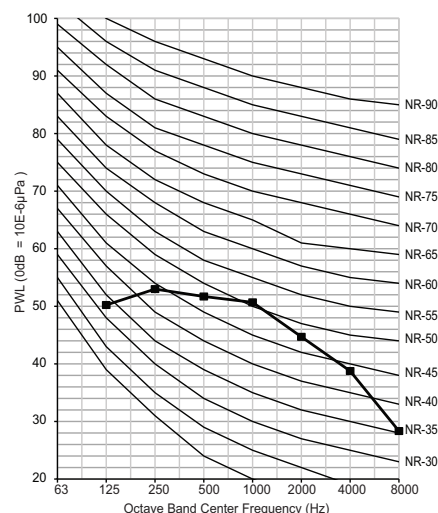
**ZMNW05GTRA0 [MT06R NR0]  
ZMNW07GTRA0 [MT08R NR0]  
ZTNW09GRLA1 [CT09F NR0]**



**ZTNW12GRLA1 [CT12F NR0]**



**ZTNW18GQLA1 [CT18F NQ0]**

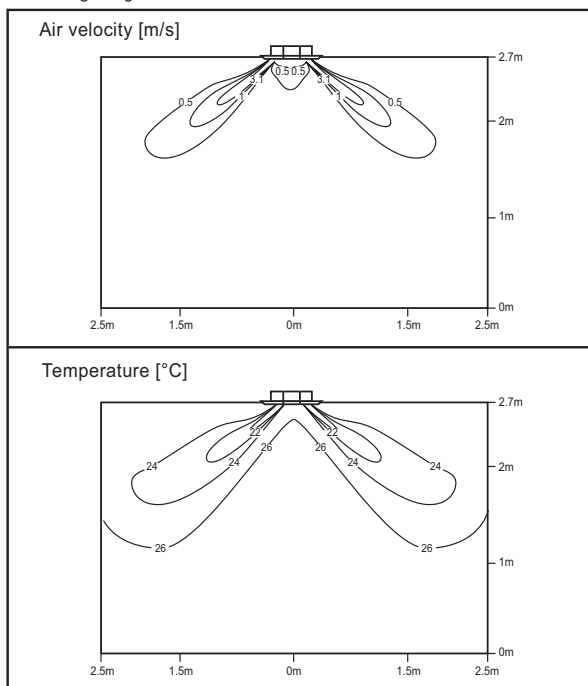


## 7. Air flow and temperature distributions (reference data)

### ■ ZMNW05GTRA0 [MT06R NR0] / ZMNW07GTRA0 [MT08R NR0]

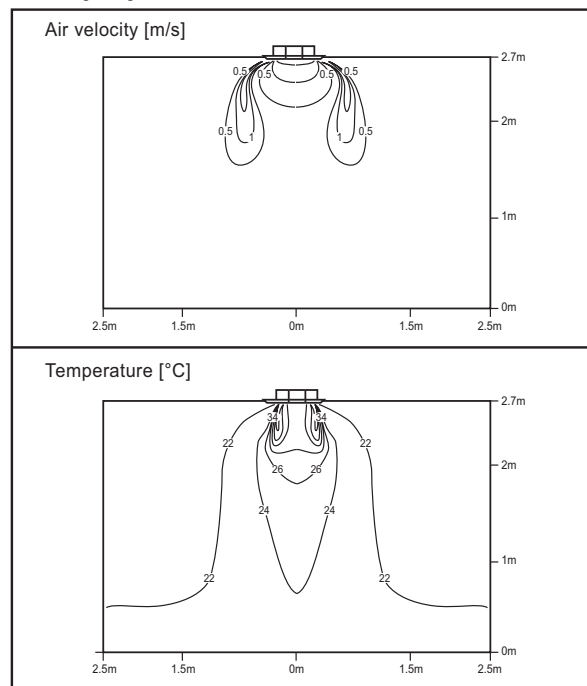
#### Cooling

Discharge angle: 40°



#### Heating

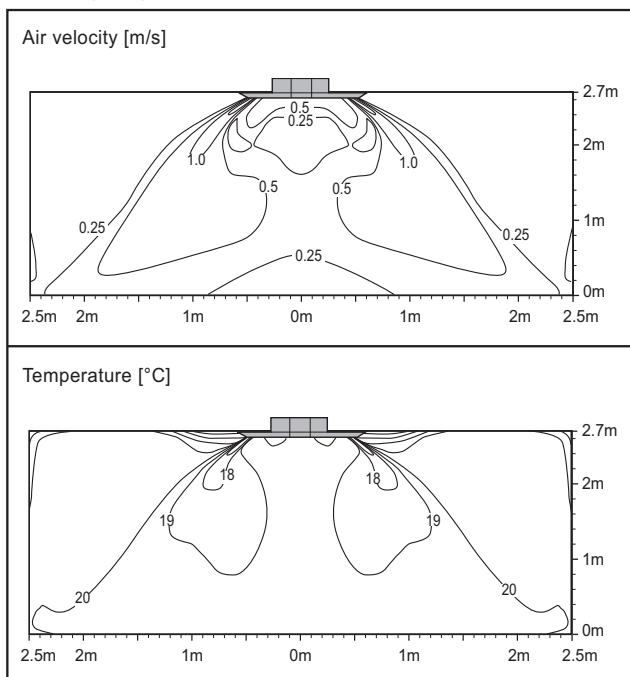
Discharge angle: 50°



### ■ ZTNW09GRLA1 [CT09F NR0]

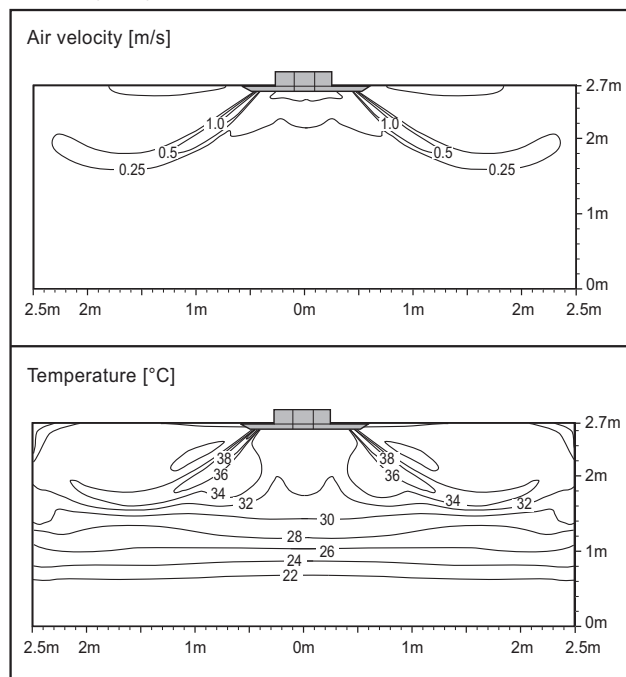
#### Cooling

Discharge angle: 40°



#### Heating

Discharge angle: 50°



#### Note

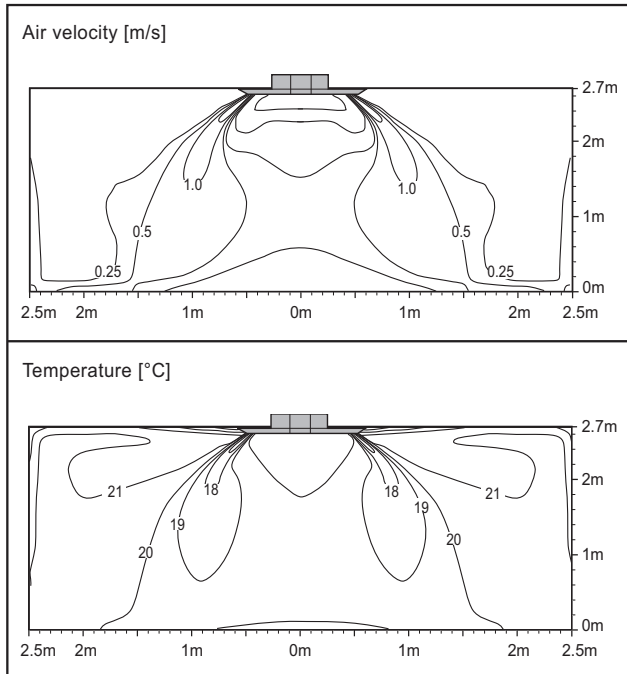
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Air flow and temperature distributions (reference data)

### ■ ZTNW12GRLA1 [CT12F NR0]

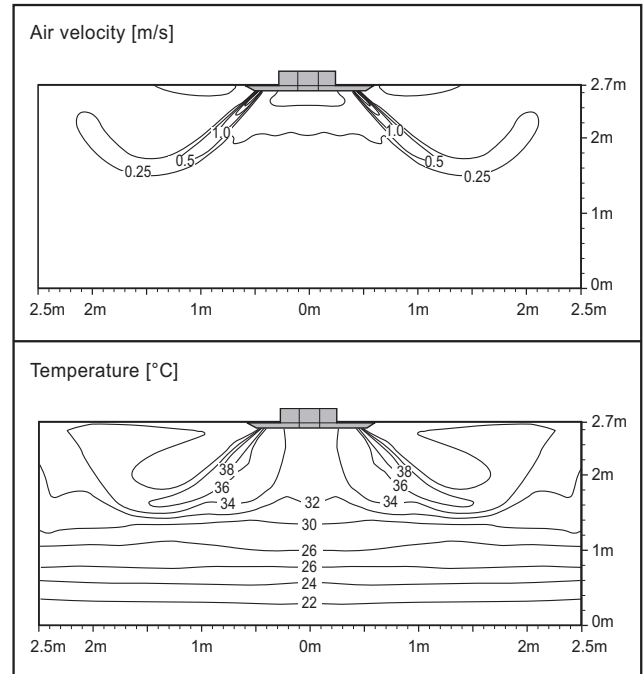
#### Cooling

Discharge angle: 40°



#### Heating

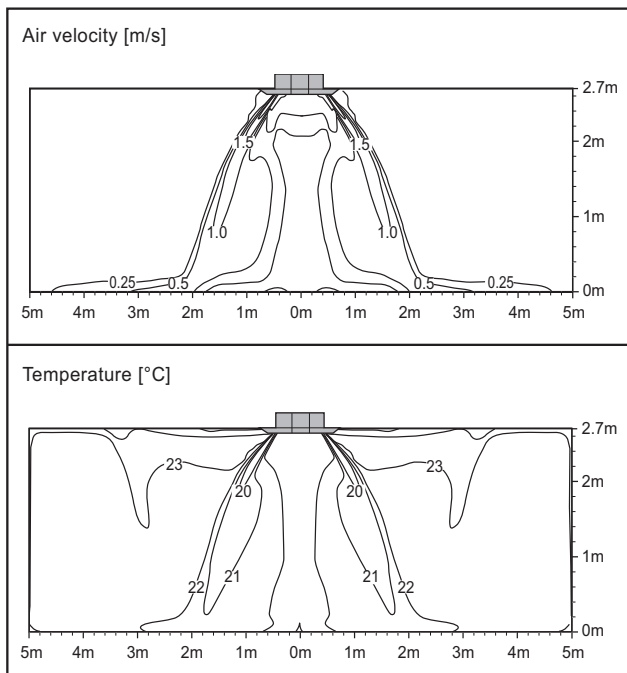
Discharge angle: 50°



### ■ ZTNW18GQLA1 [CT18F NQ0]

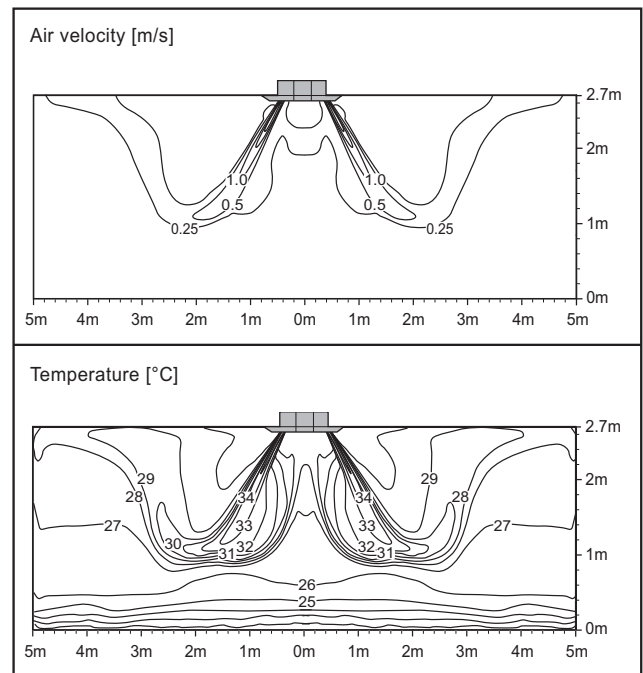
#### Cooling

Discharge angle: 40°



#### Heating

Discharge angle: 50°



#### Note

- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

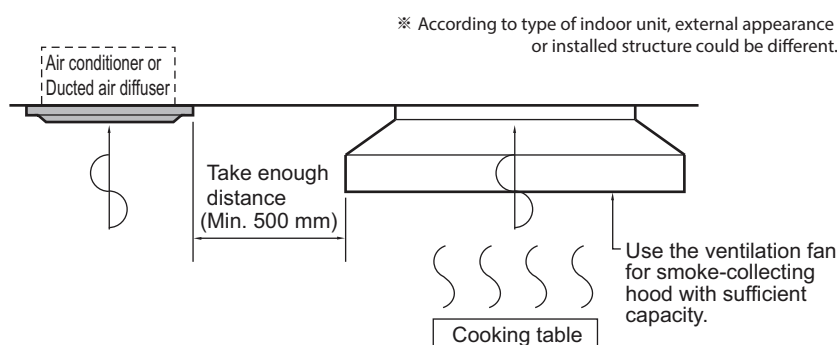


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

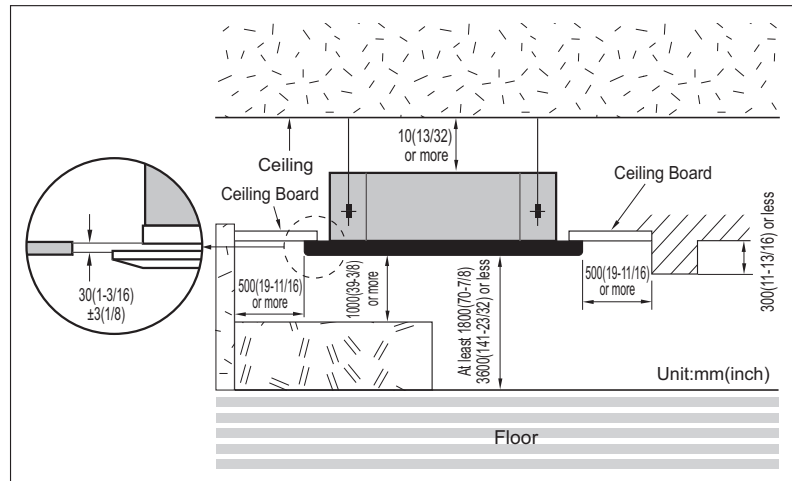
## 8. Installation

### ⚠ CAUTION

- If the temperature rise above 30 °C or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.

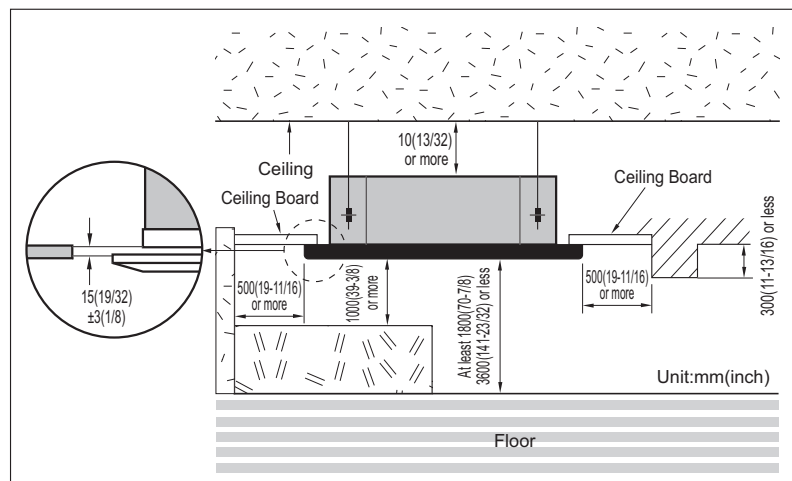
#### TQ/TR Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



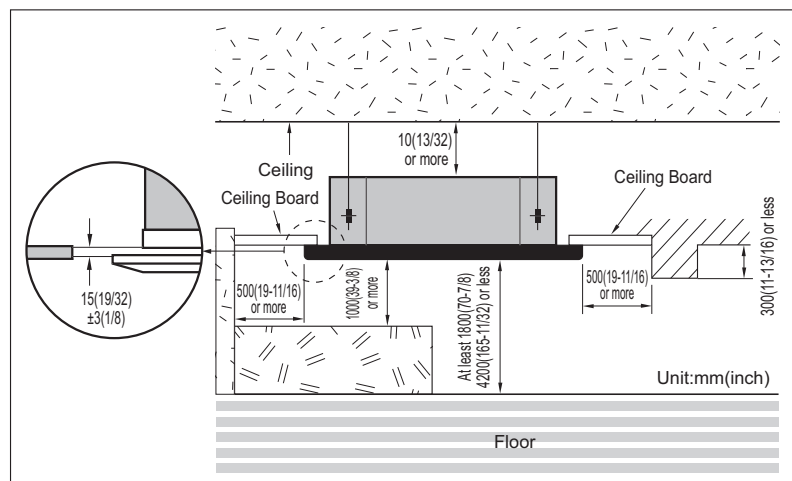
#### TP/TP-B Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



#### TM/TM-A/TN Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

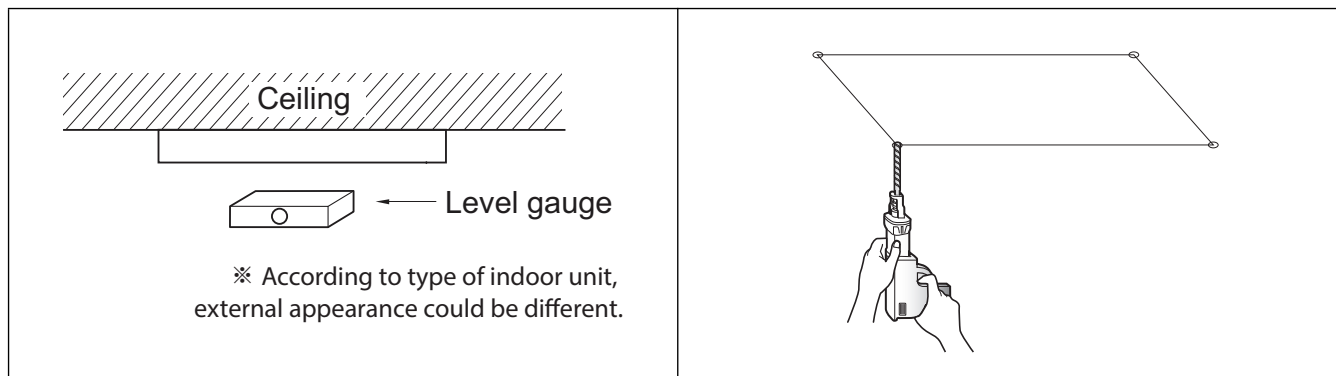


## 8. Installation

### 8.2 Ceiling opening dimensions and hanging bolt location

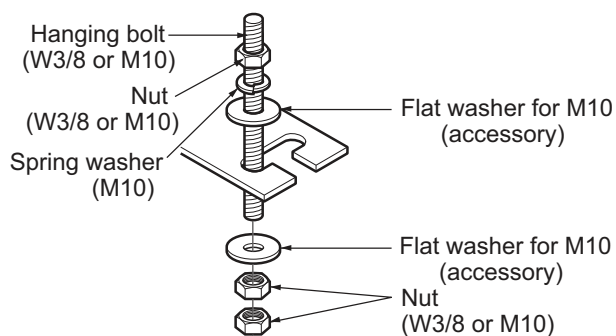
#### ⚠ CAUTION

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation



- The following parts are local purchasing.

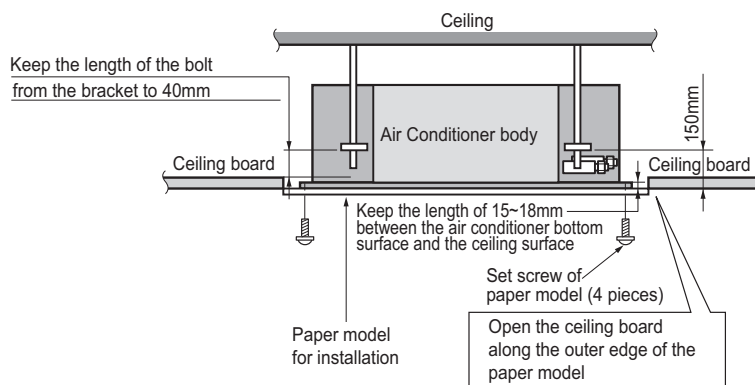
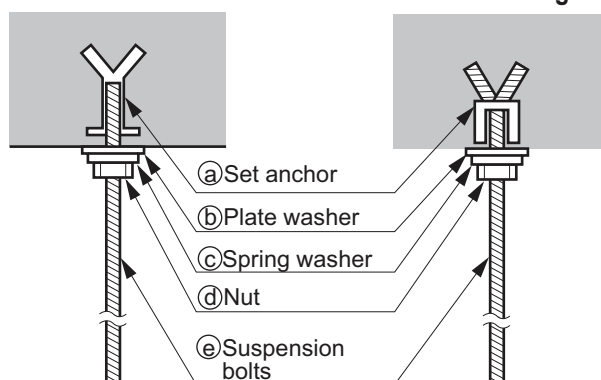
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### CAUTION

- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)

Old building

New building



TQ/TR Chassis		TM/TM-A/TN/TP/TP-B Chassis
Panel Dimensions [Unit : mm]		
700 x 700	620 x 620	950 x 950

## 8. Installation

---

### 8.3 Connecting Cables between Indoor Unit and Outdoor Unit

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

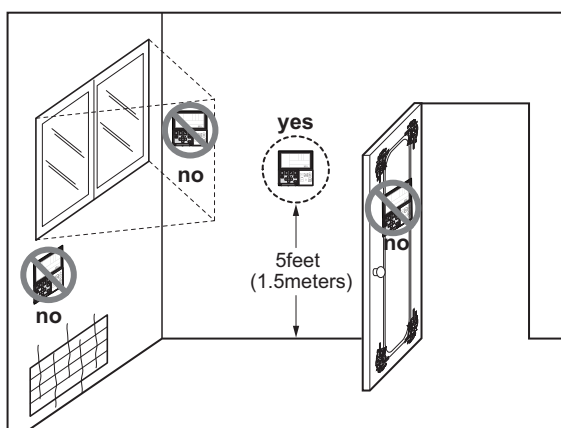
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

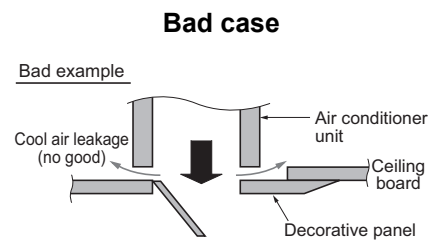
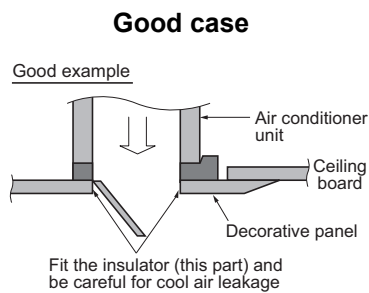
## 8. Installation

### 8.4 Installation of Decoration Panel

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

#### CAUTION

- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



## 8. Installation

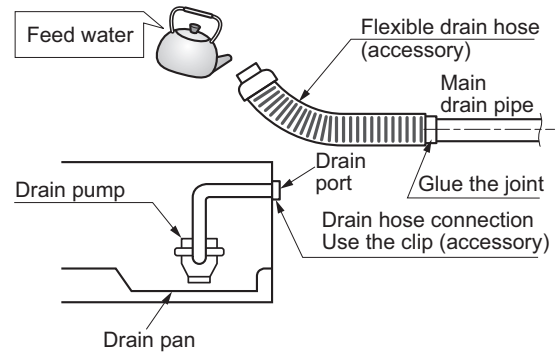
### 8.5 Indoor Unit Drain Piping

#### 8.5.1 Method of Drainage test

##### ◆ Drainage test of indoor unit with drain pump

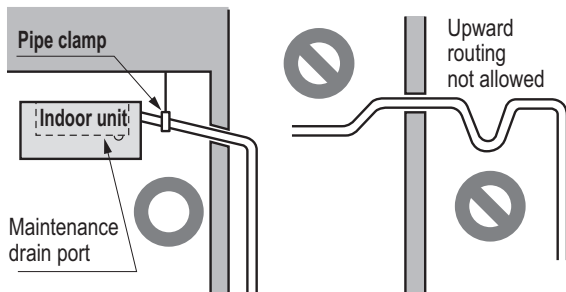
Use the following procedure to test the drain pump operation.

1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.

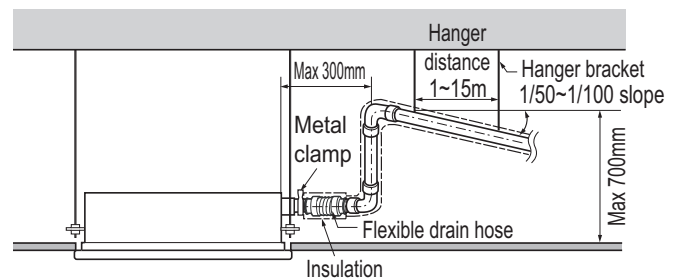


#### 8.5.2 Drain piping of indoor unit with drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
  - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.

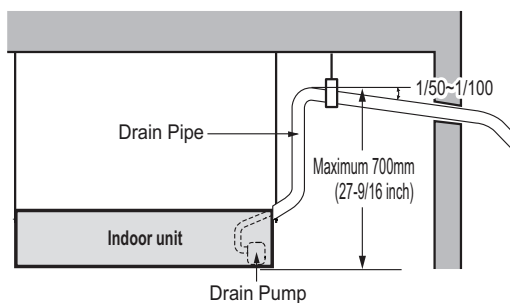


※ According to type of indoor unit, external appearance could be different.

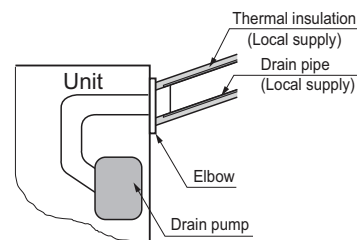


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



※ According to type of indoor unit, external appearance could be different.

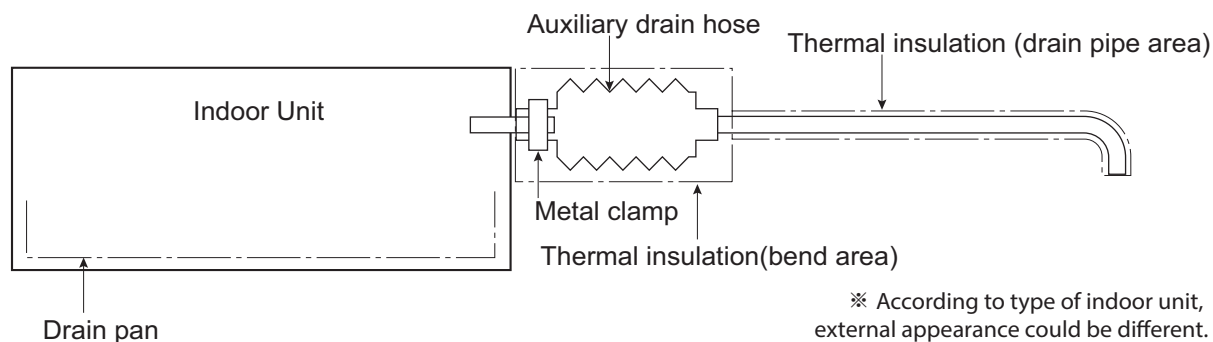




## 8. Installation

### 8.5.3 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.

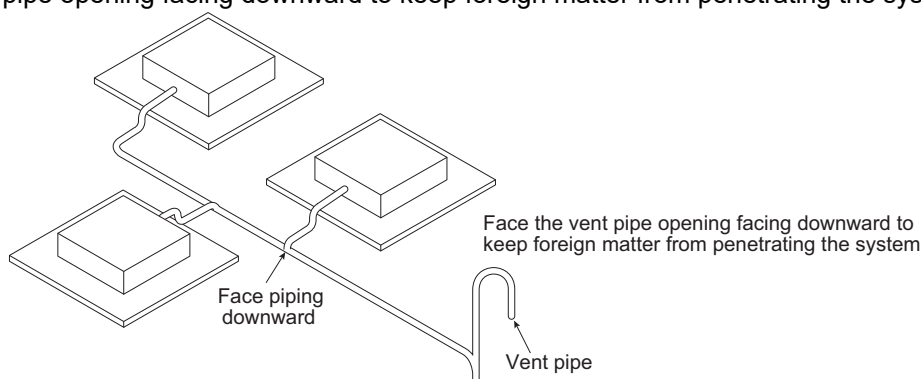


#### ⚠ CAUTION

- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

### 8.5.4 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



# **MULTI/SINGLE**

Indoor unit

## **Ceiling Mounted cassette (Dual Vane 4-Way)**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZTNW24GBLA1 [CT24F NB0] ZTNW30GBLA1 [UT30F NB0] ZTNW36GALA1 [UT36F NA0] ZTNW42GALA1 [UT42F NA0] ZTNW48GALA1 [UT48F NA0] ZTNW60GALA1 [UT60F NA0]
Air flow	Air supply outlet	4
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	X
	Jet cool/heat	O / O
	Swirl wind	O
	Refresh Mode***	O
	Smart Mode***	O
	Indirect Wind	O
	Direct wind	O
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	O
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZTNW24GBLA1 [CT24F NB0] ZTNW30GBLA1 [UT30F NB0] ZTNW36GALA1 [UT36F NA0] ZTNW42GALA1 [UT42F NA0] ZTNW48GALA1 [UT48F NA0] ZTNW60GALA1 [UT60F NA0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	X
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	O

### Note

1. O: Possible, X: Impossible, -: Not applicable, Embedded: Included with product.
2. \*: Some advanced functions controlled by individual controller cannot be operated.
3. \*\*: It could not be operated some functions.
4. \*\*\*: Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## ◆ Panel(Accessory)

Model Name			PT-AAGW0	PT-AFGW0	PT-AEGW0
Description	-		Standard Panel	Premium Panel	Elevation Grille
Exterior Color	-		White	White	White
RAL	-		9003	9003	9003
Dual Vane	-		O	O	O
Dimensions (W x H x D)	Net	mm	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950
	Shipping	mm	1,006 x 102 x 1,006	1,006 x 102 x 1,006	1,192 x 104 x 1,020
Weight	Net	kg	7.1	7.2	8.5
	Shipping	kg	9.3	9.4	11.6
Function & Accessory	Wi-Fi (Default)	-	X	X	X
	Air Cleaning Kit (Default)	-	X	X	X
	Elevation Grille	-	X	X	O
	Floor Detection Sensor*	-	X	O	X
	Human Detection Sensor*	-	PTVSAA0	PTVSAA0	PTVSAA0

### Note

- \*: This functions need to connect to the RS3 wired remote controller(Standard III).

## 2. Specifications

Model Name			Unit	ZTNW24GBLA1 [CT24F NB0]	ZTNW30GBLA1 [UT30F NB0]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input		H / M / L	W	36 / 26 / 21	40 / 33 / 26
Running Current		H / M / L	A	0.50 / 0.46 / 0.44	0.52 / 0.49 / 0.46
		Max.	A	0.70	0.70
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	840 × 204 × 840	840 × 204 × 840
Weight	Net		kg	21.1	21.1
	Shipping		kg	26.5	26.5
Heat Exchanger	Rows x Columns x FPI			(3 × 8 × 21) x 1	(3 × 8 × 21) x 1
	Face Area		m²	0.33	0.33
Fan Type				3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	17.0 / 15.0 / 13.0	19.0 / 17.0 / 15.5
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	50.25 x 1	50.25 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	38 / 36 / 34	40.0 / 37.0 / 35.0
	Heating	H / M / L	dB(A)	38 / 36 / 34	40.0 / 37.0 / 35.0
Sound Power Level	Cooling	Rated	dB(A)	53	57
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name			Unit	ZTNW36GALA1 [UT36F NA0]	ZTNW42GALA1 [UT42F NA0]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	60 / 50 / 45	60 / 50 / 45
Running Current		H / M / L	A	0.62 / 0.58 / 0.55	0.62 / 0.58 / 0.55
		Max.	A	1.00	1.00
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	840 × 288 × 840	840 × 288 × 840
Weight	Net		kg	25.3	25.3
	Shipping		kg	30.7	30.7
Heat Exchanger	Rows x Columns x FPI			3 x 12 x 21	3 x 12 x 21
	Face Area		m²	0.49	0.49
Fan Type				3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	27.5 / 25.0 / 22.5	27.5 / 25.0 / 22.5
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	136 x 1	136 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32 / 25	Ø 32 / 25
Sound Pressure Level	Cooling	H / M / L	dB(A)	44 / 42 / 41	44 / 42 / 41
	Heating	H / M / L	dB(A)	44 / 42 / 41	44 / 42 / 41
Sound Power Level	Cooling	Rated	dB(A)	61	61
	Heating	Rated	dB(A)	-	61
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

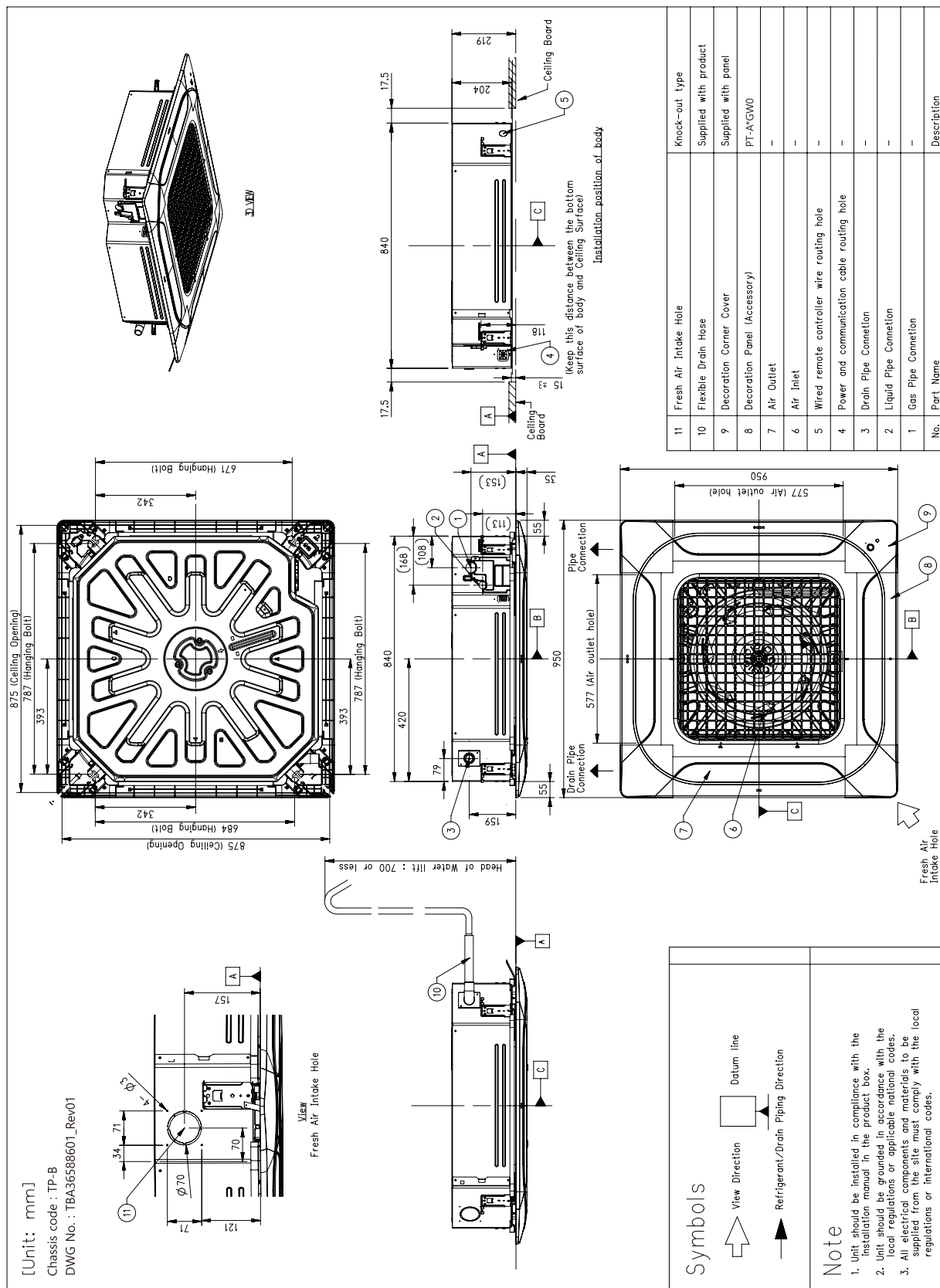
Model Name			Unit	ZTNW48GALA1 [UT48F NA0]	ZTNW60GALA1 [UT60F NA0]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	80 / 60 / 50	80 / 60 / 50
Running Current		H / M / L	A	0.71 / 0.62 / 0.58	0.71 / 0.62 / 0.58
		Max.	A	1.00	1.00
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	840 × 288 × 840	840 × 288 × 840
Weight	Net		kg	25.3	25.3
	Shipping		kg	30.7	30.7
Heat Exchanger	Rows x Columns x FPI			3 x 12 x 21	3 x 12 x 21
	Face Area		m²	0.49	0.49
Fan Type				3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	30.0 / 27.5 / 25.0	30.0 / 27.5 / 25.0
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	136 x 1	136 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32 / 25	Ø 32 / 25
Sound Pressure Level	Cooling	H / M / L	dB(A)	46 / 44 / 42	46 / 44 / 42
	Heating	H / M / L	dB(A)	46 / 44 / 42	46 / 44 / 42
Sound Power Level	Cooling	Rated	dB(A)	62	62
	Heating	Rated	dB(A)	63	63
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

### 3. Dimensions

#### ■ ZTNW24GBLA1 [CT24F NB0] / ZTNW30GBLA1 [UT30F NB0]



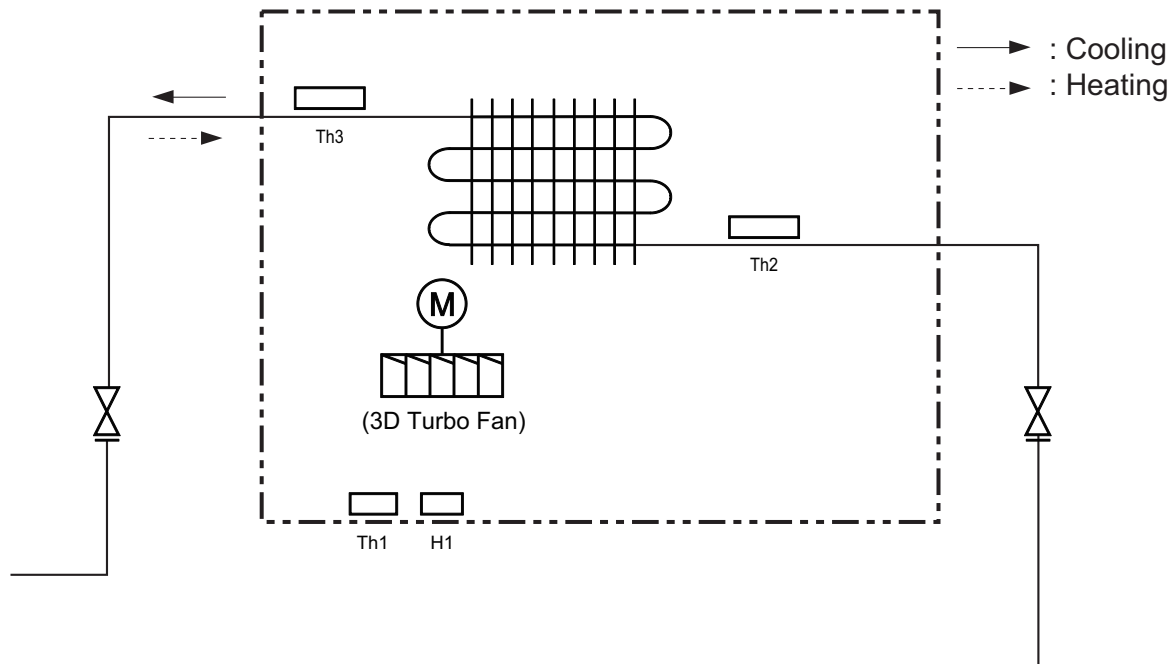


■ ZTNW36GALA1 [UT36F NA0] / ZTNW42GALA1 [UT42F NA0]  
ZTNW48GALA1 [UT48F NA0] / ZTNW60GALA1 [UT60F NA0]



## 4. Piping Diagrams

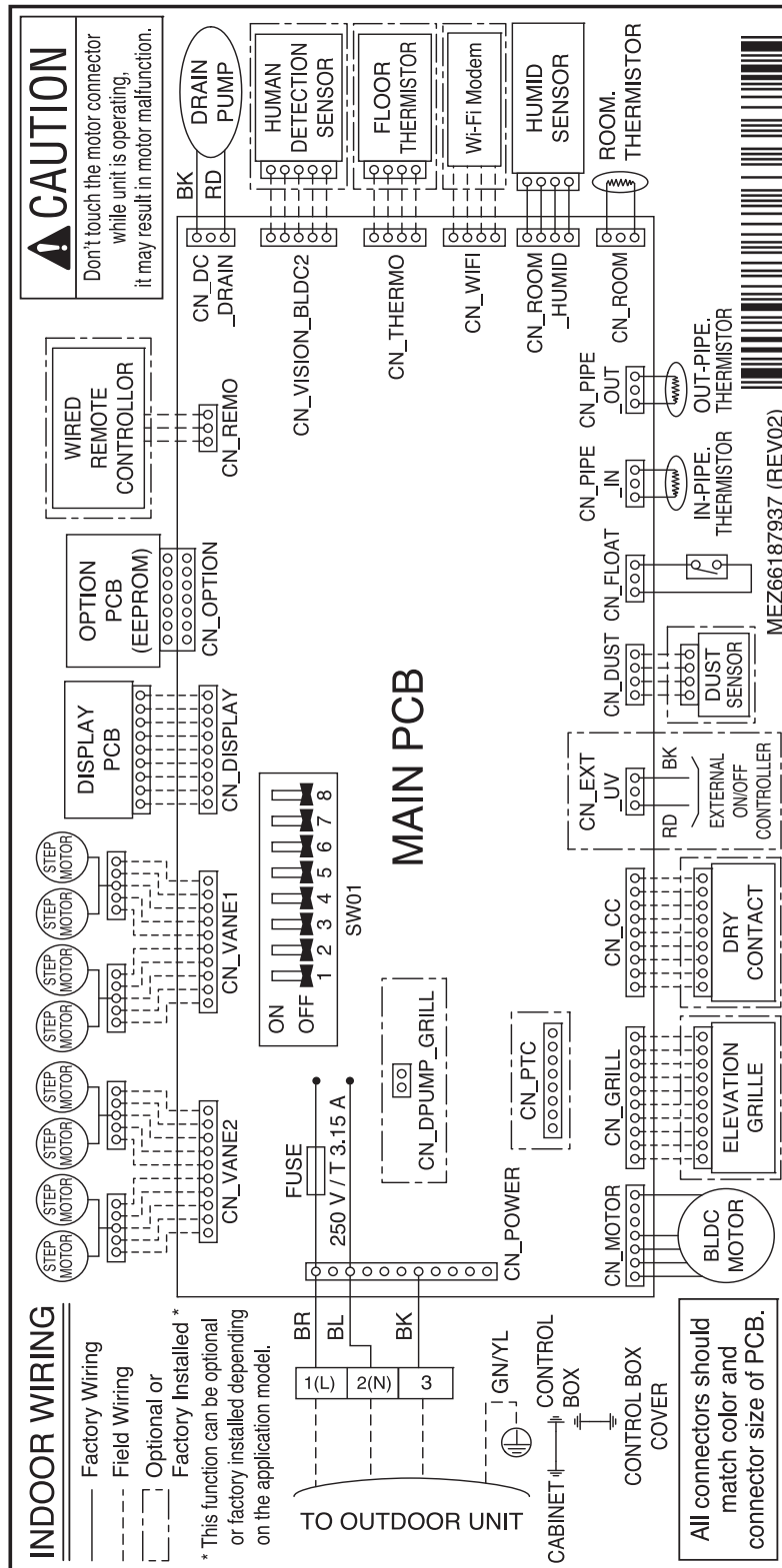
- ZTNW24GBLA1 [CT24F NB0] / ZTNW30GBLA1 [UT30F NB0]  
 ZTNW36GALA1 [UT36F NA0] / ZTNW42GALA1 [UT42F NA0]  
 ZTNW48GALA1 [UT48F NA0] / ZTNW60GALA1 [UT60F NA0]



LOC.	Description	PCB Connector
Th1	Thermistor for Indoor air temperature	CN_ROOM
Th2	Thermistor for evaporator inlet temperature	CN_PIPE_IN
Th3	Thermistor for evaporator outlet temperature	CN_PIPE_OUT
H1	Humid Sensor	CN_ROOM_HUMID

## 5. Wiring Diagrams

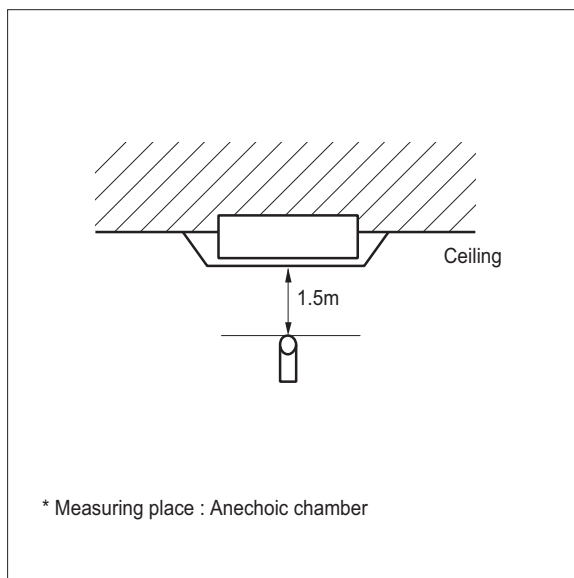
- ZTNW24GBLA1 [CT24F NB0] / ZTNW30GBLA1 [UT30F NB0]  
 ZTNW36GALA1 [UT36F NA0] / ZTNW42GALA1 [UT42F NA0]  
 ZTNW48GALA1 [UT48F NA0] / ZTNW60GALA1 [UT60F NA0]



## 6. Sound Levels

### 6.1 Sound Pressure Level

#### Overall

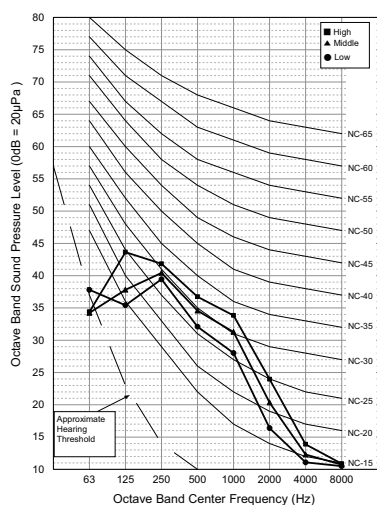


#### Note

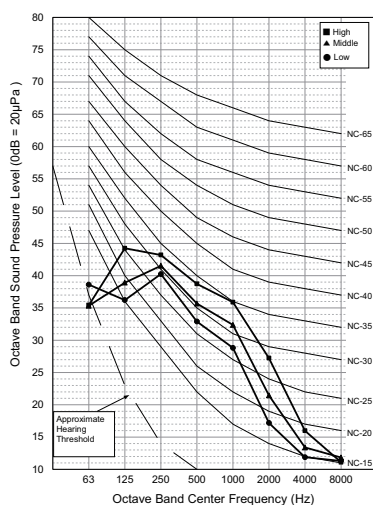
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZTNW24GBLA1 [CT24F NB0]	38	36	34
ZTNW30GBLA1 [UT30F NB0]	40	37	35
ZTNW36GALA1 [UT36F NA0] ZTNW42GALA1 [UT42F NA0]	44	42	41
ZTNW48GALA1 [UT48F NA0] ZTNW60GALA1 [UT60F NA0]	46	44	42

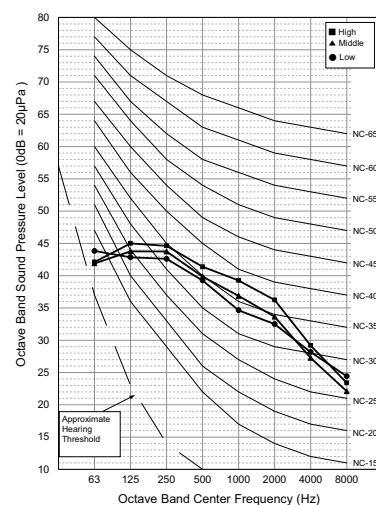
ZTNW24GBLA1 [CT24F NB0]



ZTNW30GBLA1 [UT30F NB0]

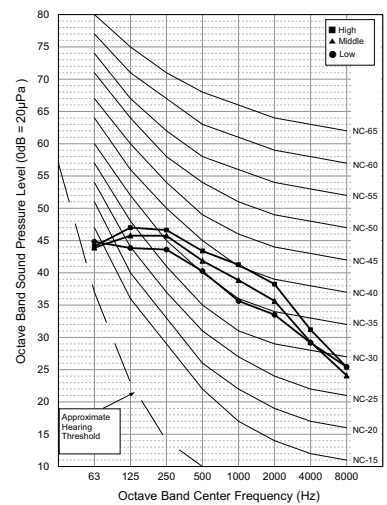


ZTNW36GALA1 [UT36F NA0]  
ZTNW42GALA1 [UT42F NA0]



# 6. Sound Levels

ZTNW48GALA1 [UT48F NA0]  
ZTNW60GALA1 [UT60F NA0]



## 6. Sound Levels

### 6.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

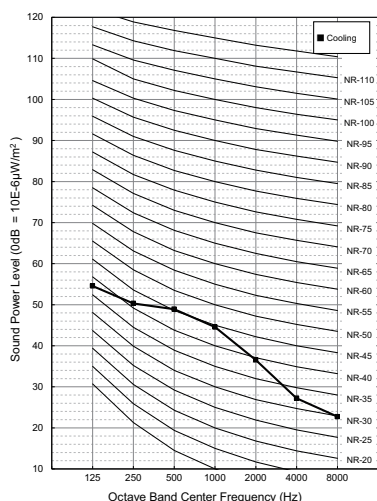
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>

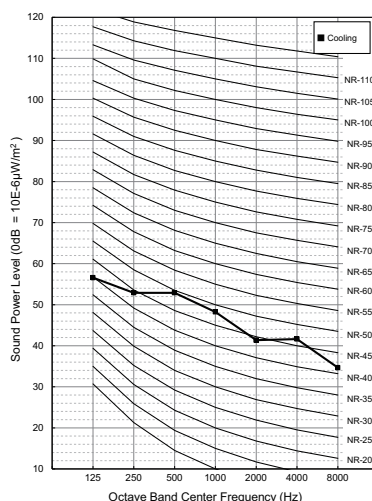
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
	Cooling
ZTNW24GBLA1 [CT24F NB0]	53
ZTNW30GBLA1 [UT30F NB0]	57
ZTNW36GALA1 [UT36F NA0] ZTNW42GALA1 [UT42F NA0]	61
ZTNW48GALA1 [UT48F NA0] ZTNW60GALA1 [UT60F NA0]	62

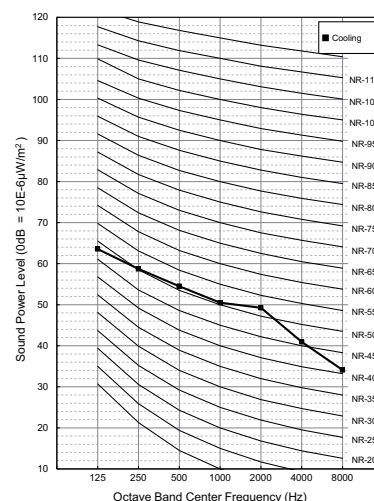
**ZTNW24GBLA1 [CT24F NB0]**



**ZTNW30GBLA1 [UT30F NB0]**

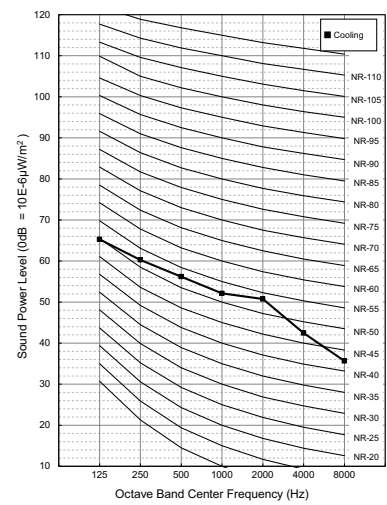


**ZTNW36GALA1 [UT36F NA0]  
ZTNW42GALA1 [UT42F NA0]**



# 6. Sound Levels

ZTNW48GALA1 [UT48F NA0]  
ZTNW60GALA1 [UT60F NA0]

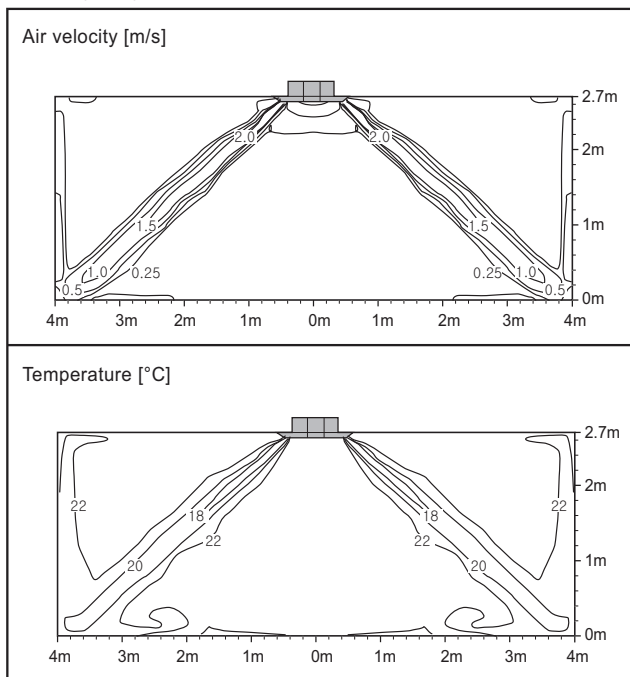


## 7. Air flow and temperature distributions (reference data)

### ■ ZTNW24GBLA1 [CT24F NB0]

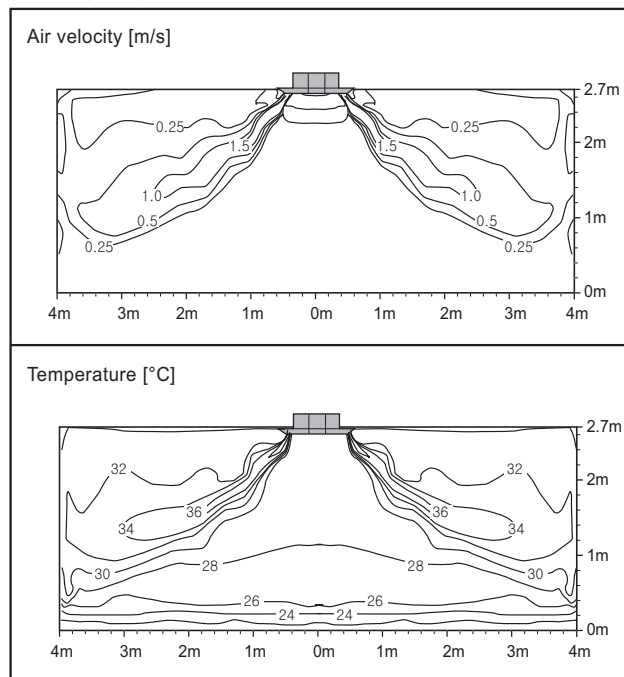
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

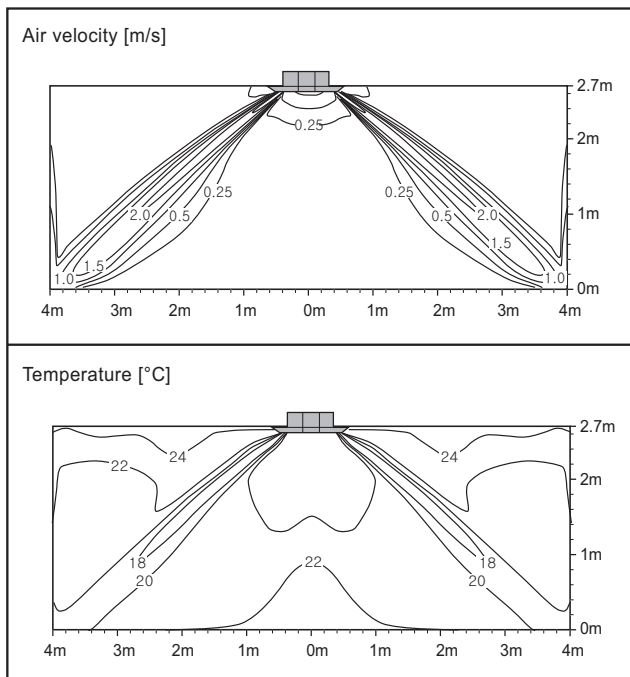
Discharge angle: Outer - 36°, Inner - 70°



### ■ ZTNW30GBLA1 [UT30F NB0]

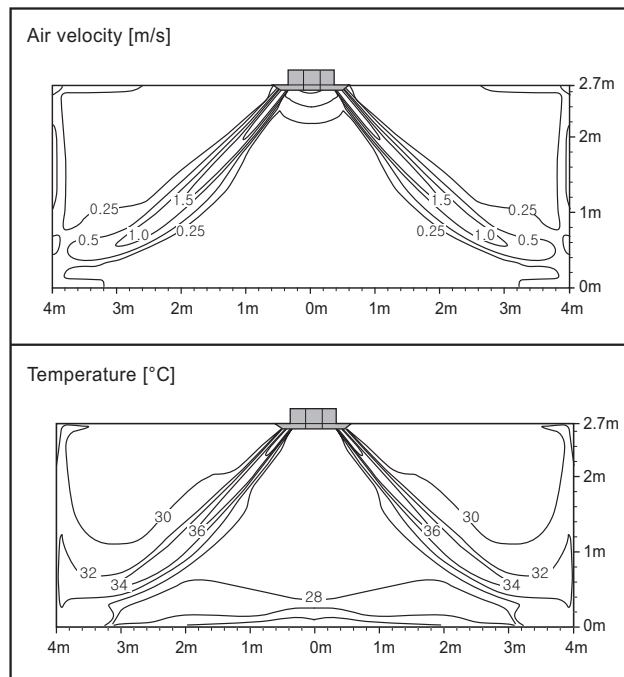
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

Discharge angle: Outer - 36°, Inner - 70°



#### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

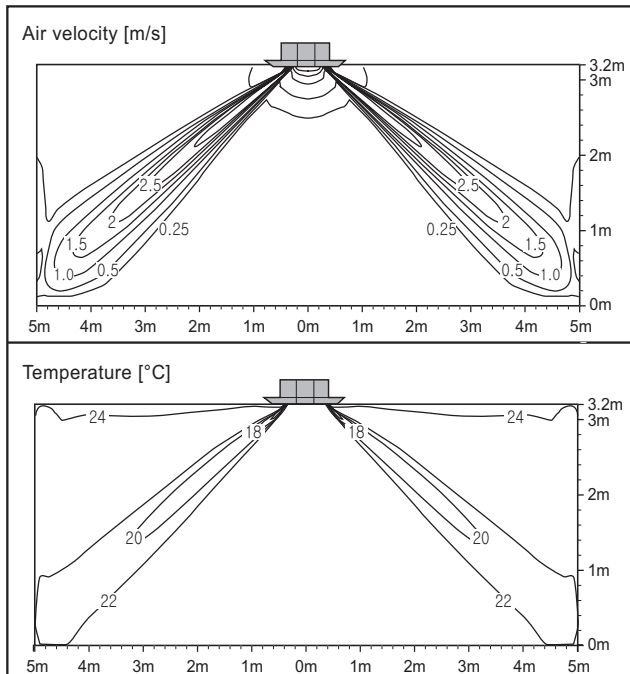


## 7. Air flow and temperature distributions (reference data)

### ■ ZTNW36GALA1 [UT36F NA0]

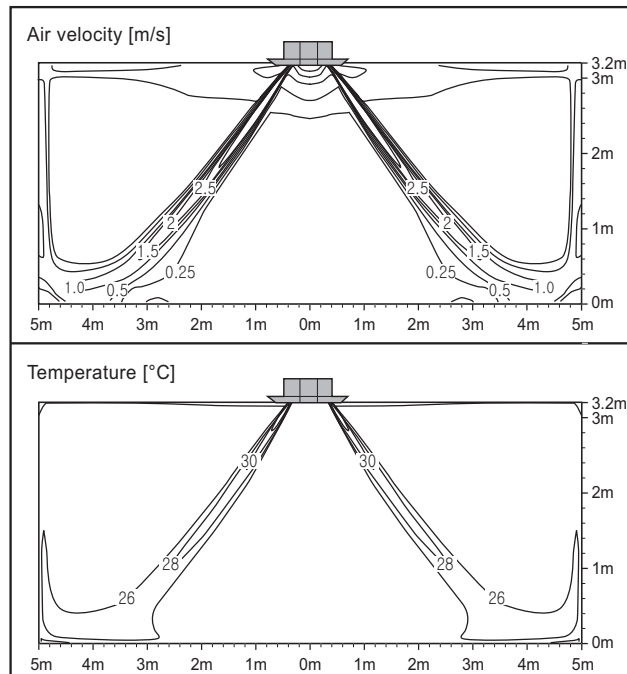
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

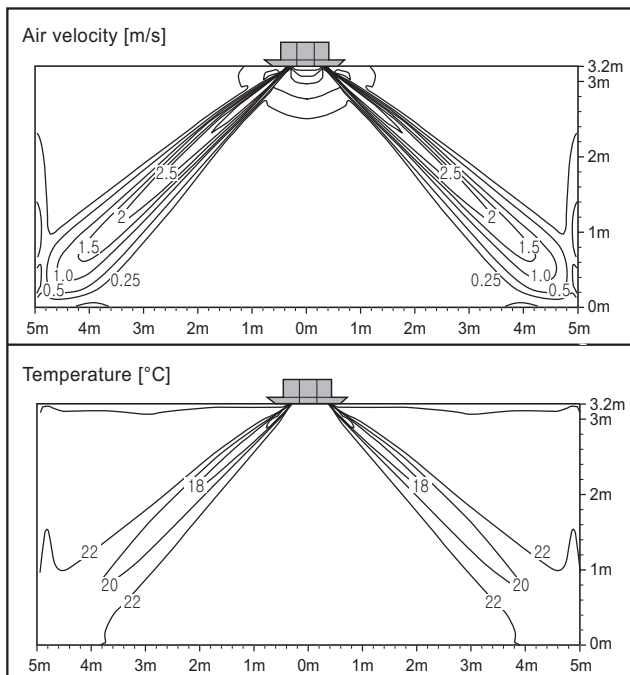
Discharge angle: Outer - 36°, Inner - 70°



### ■ ZTNW42GALA1 [UT42F NA0]

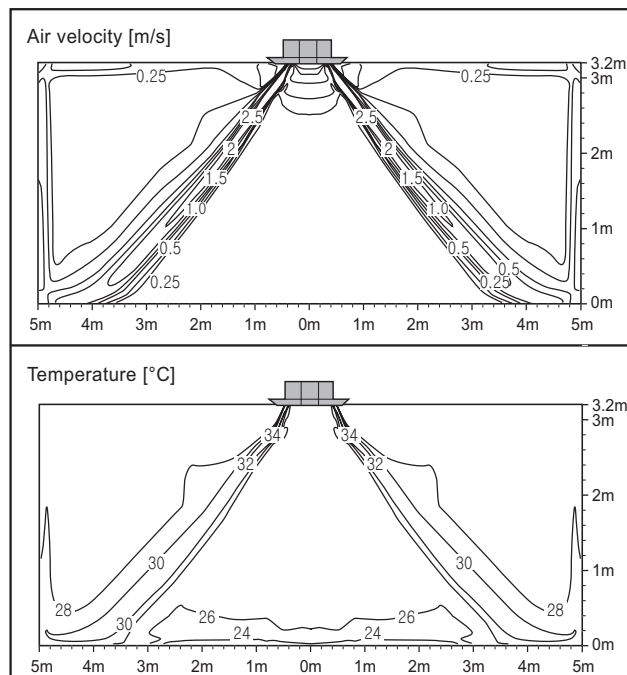
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

Discharge angle: Outer - 36°, Inner - 70°



#### Note

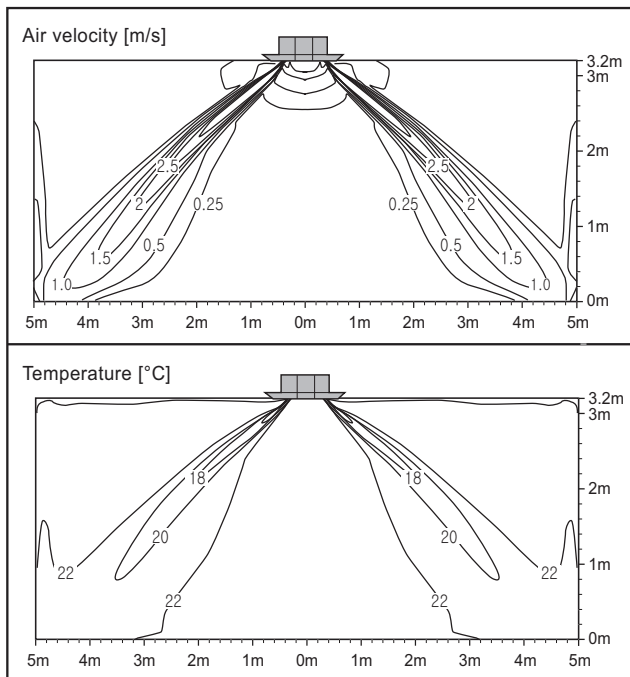
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Air flow and temperature distributions (reference data)

### ■ ZTNW48GALA1 [UT48F NA0]

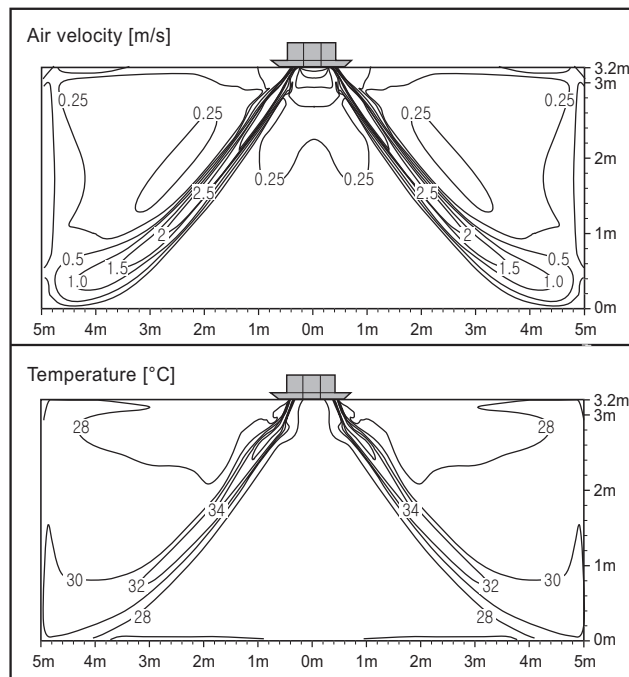
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

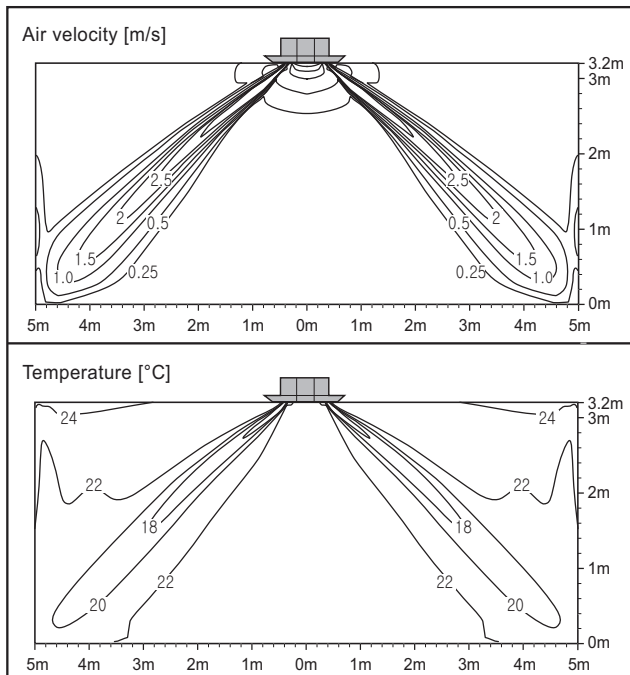
Discharge angle: Outer - 36°, Inner - 70°



### ■ ZTNW60GALA1 [UT60F NA0]

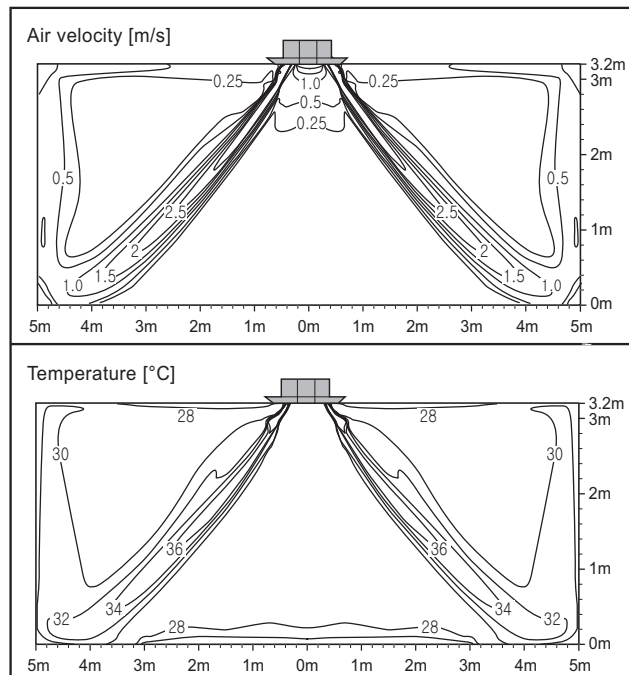
#### Cooling

Discharge angle: Outer - 30°, Inner - 67°



#### Heating

Discharge angle: Outer - 36°, Inner - 70°



#### Note

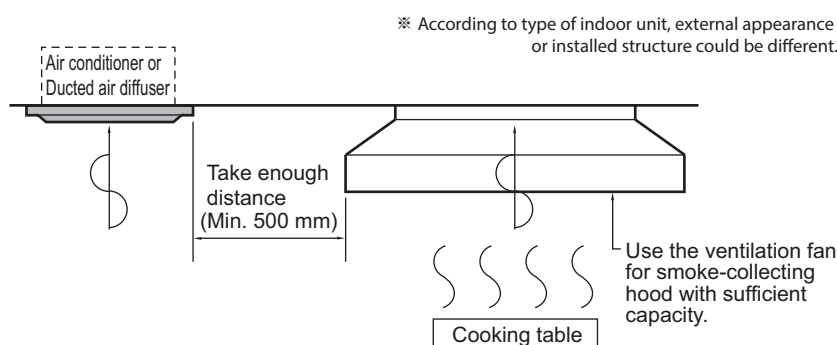
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

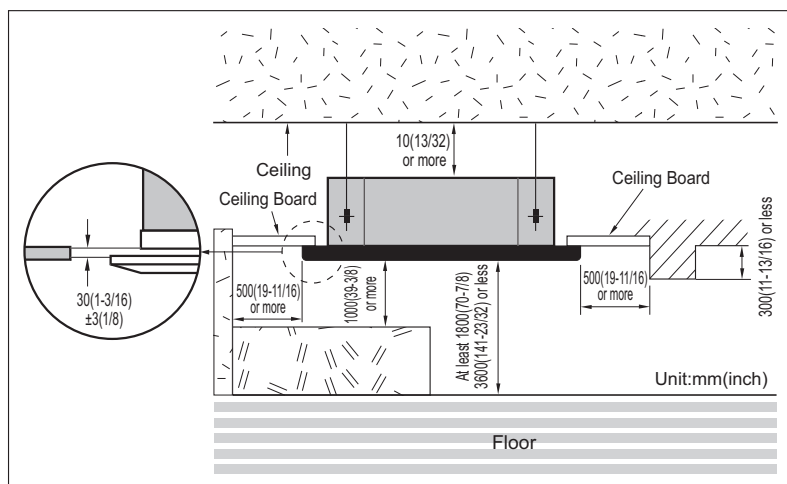
## 8. Installation

### ⚠ CAUTION

- If the temperature rise above 30 °C or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.

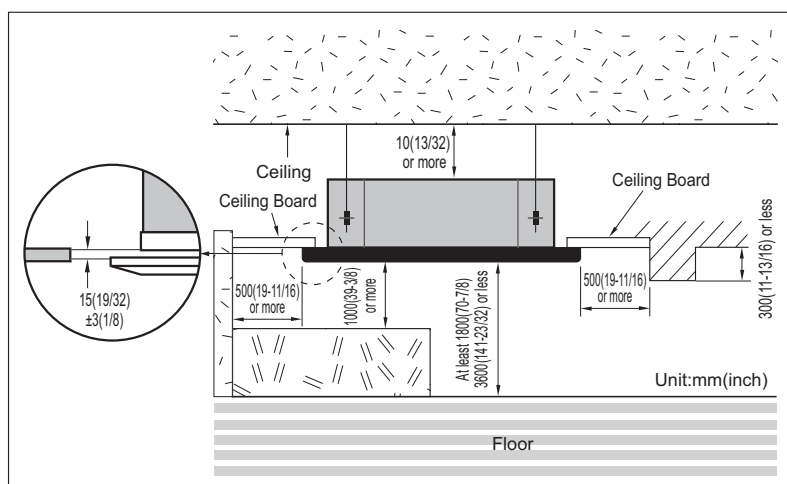
#### TQ/TR Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



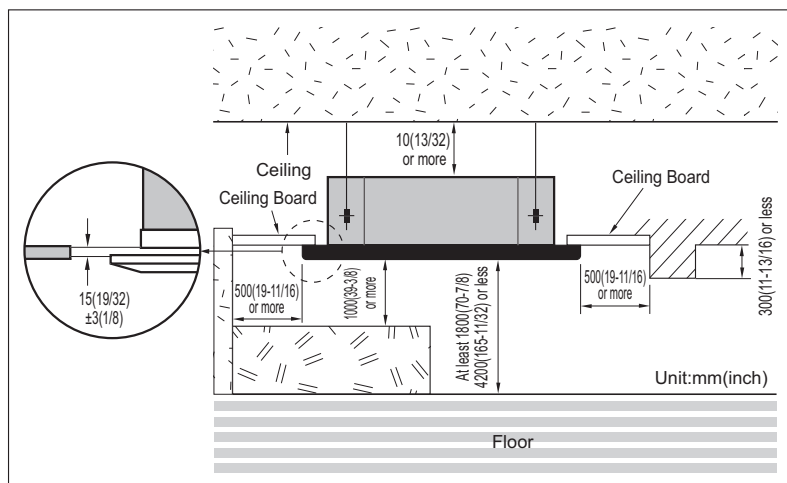
#### TP/TP-B Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



#### TM/TM-A/TN Chassis

\* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

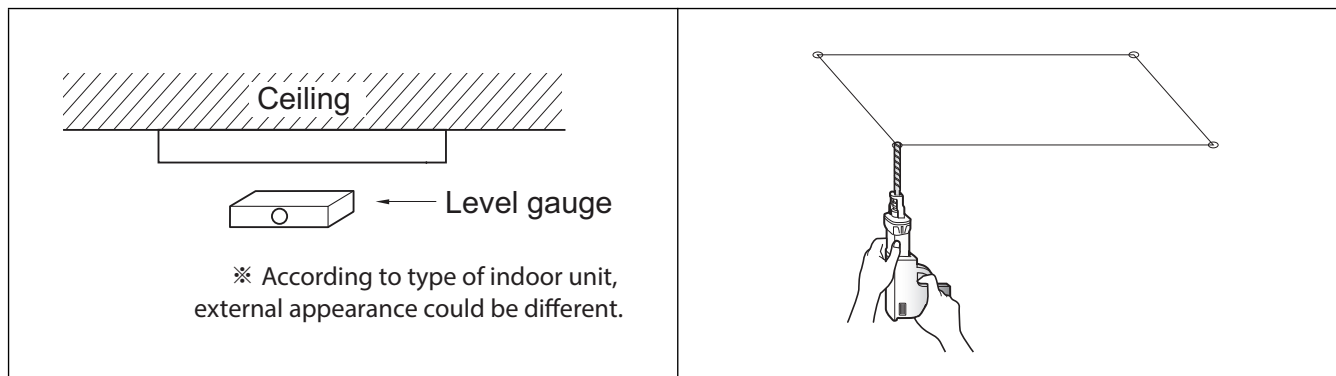


## 8. Installation

### 8.2 Ceiling opening dimensions and hanging bolt location

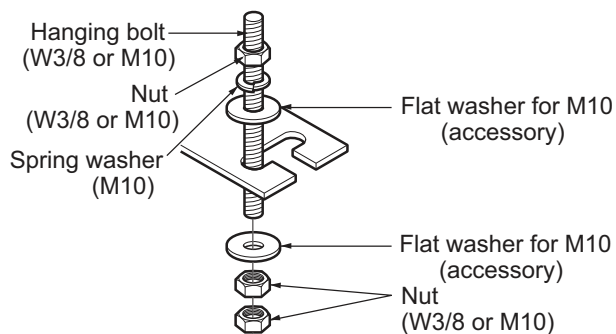
#### ⚠ CAUTION

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation



- The following parts are local purchasing.

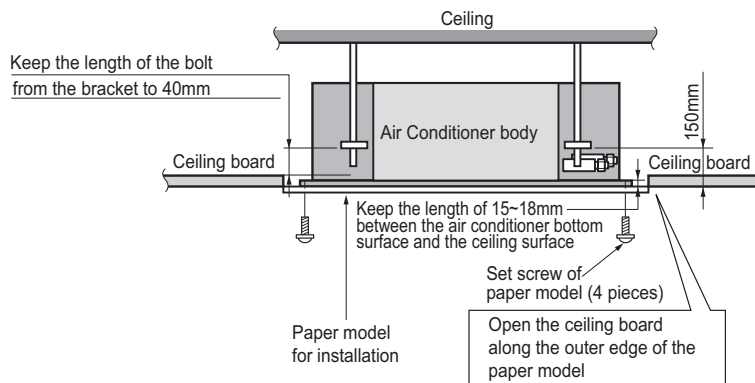
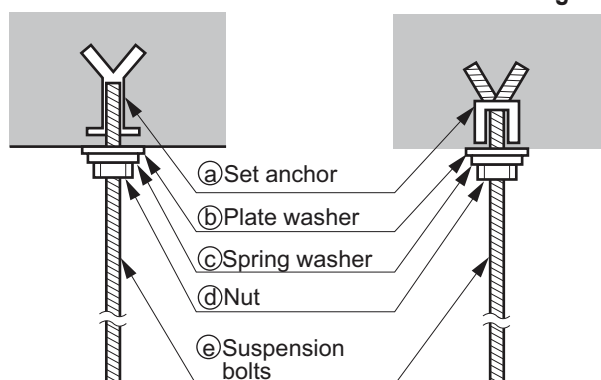
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### CAUTION

- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)

Old building

New building



TQ/TR Chassis		TM/TM-A/TN/TP/TP-B Chassis
Panel Dimensions [Unit : mm]		
700 x 700	620 x 620	950 x 950

## 8. Installation

### 8.3 Connecting Cables between Indoor Unit and Outdoor Unit

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

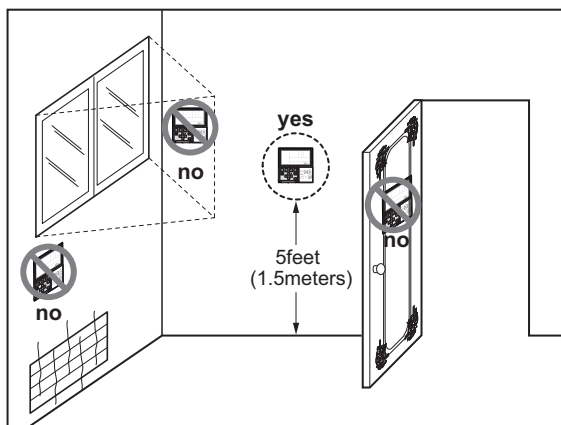
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wired Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)



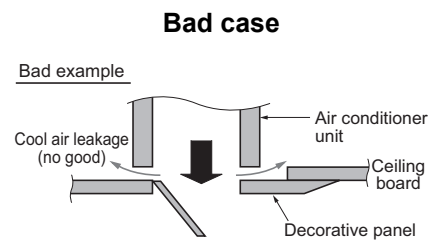
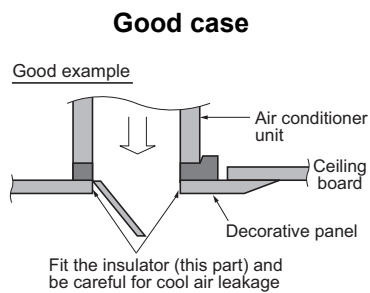
## 8. Installation

### 8.4 Installation of Decoration Panel

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

#### ! CAUTION

- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



## 8. Installation

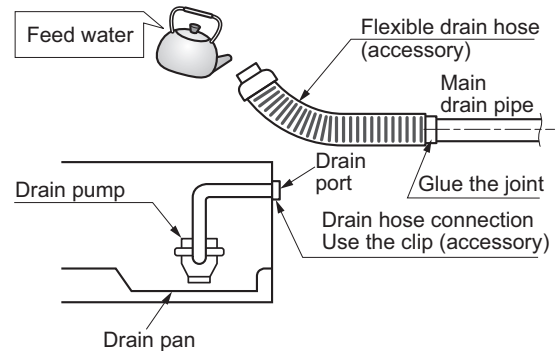
### 8.5 Indoor Unit Drain Piping

#### 8.5.1 Method of Drainage test

##### ◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

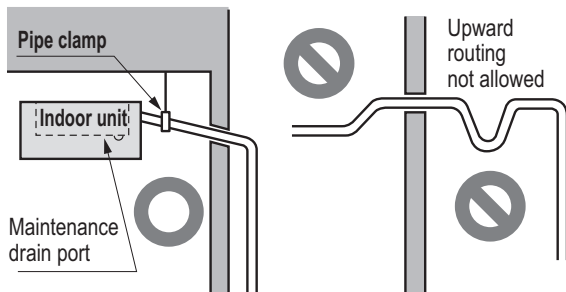
1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.



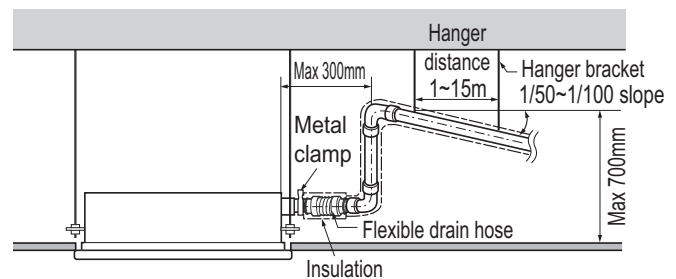
※ According to type of indoor unit, external appearance could be different.

#### 8.5.2 Drain piping of indoor unit with drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
  - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.

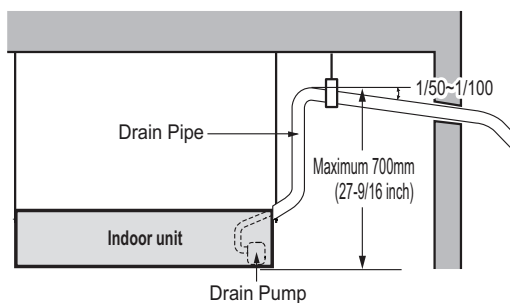


※ According to type of indoor unit, external appearance could be different.

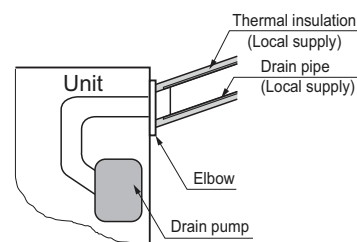


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



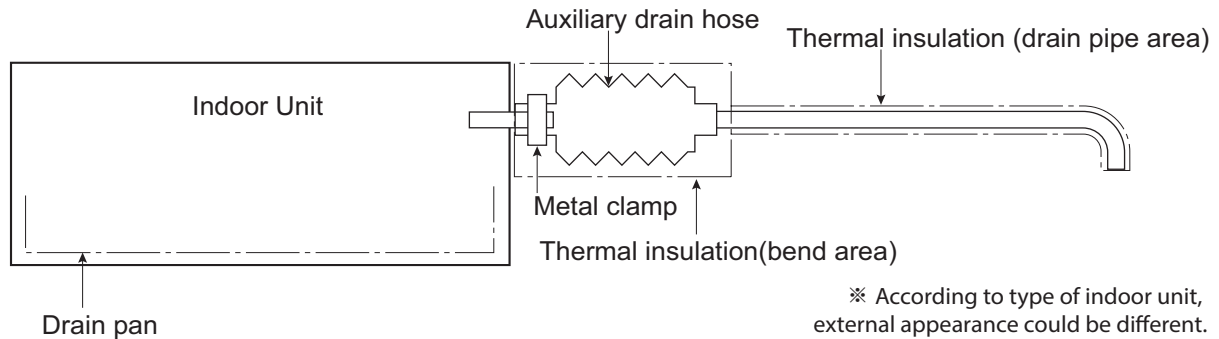
※ According to type of indoor unit, external appearance could be different.



## 8. Installation

### 8.5.3 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.

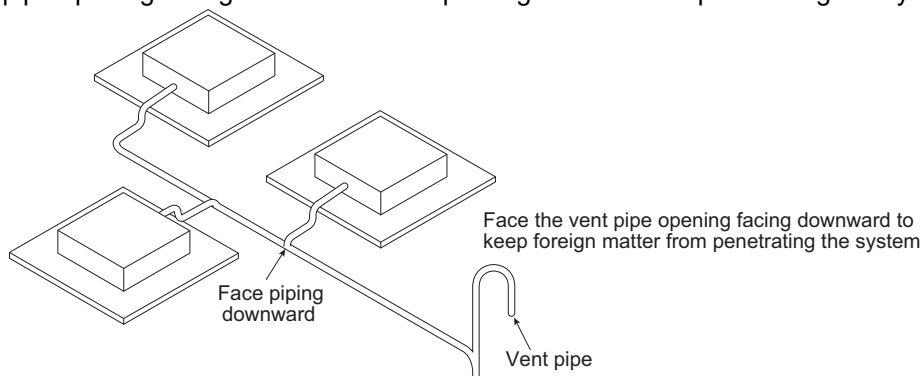


#### ⚠ CAUTION

- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

### 8.5.4 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



# **MULTI/SINGLE**

Indoor unit

## **Ceiling Concealed Duct - Middle Static Pressure**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.External static pressure & Air flow**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZBNW18GM1A1 [CM18F N10] ZBNW24GM1A1 [CM24F N10] ZBNW30GM1A1 [UM30F N10] ZBNW36GM2A1 [UM36F N20] ZBNW42GM2A1 [UM42F N20] ZBNW48GM3A1 [UM48F N30] ZBNW60GM3A1 [UM60F N30]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	X
	Auto swing (left & right)	X
	Auto swing (up & down)	X
	Airflow steps (fan/cool/heat)	3 / 3 / 3
	Chaos wind(auto wind)	X
	Jet cool/heat	X / X
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O (Accessory)
	E.S.P. control*	O
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	X
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZBNW18GM1A0 [CM18R N10] ZBNW24GM1A0 [CM24R N10] ZBNW30GM1A0 [UM30R N10] ZBNW36GM2A0 [UM36R N20] ZBNW42GM2A0 [UM42R N20] ZBNW48GM3A0 [UM48R N30] ZBNW60GM3A0 [UM60R N30]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O***
		PWLSSB21H	Heat Pump	O***
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	O
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X
	Drain Pump	ABDPG	-	O

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

Model Name			Unit	ZBNW18GM1A1 [CM18F N10]	ZBNW24GM1A1 [CM24F N10]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input		H / M / L	W	150 / 130 / 110	180 / 150 / 130
Running Current		H / M / L	A	0.85 / 0.76 / 0.67	0.98 / 0.85 / 0.76
		Max.	A	1.60	1.60
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	900 × 270 × 700	900 × 270 × 700
Net Weight			kg	24.6	24.6
Shipping Weight			kg	31.1	31.1
Heat Exchanger	Rows x Columns x FPI			2 x 13 x 18	2 x 13 x 18
	Face Area		m²	0.21	0.21
Fan Type				Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	16.5 / 14.5 / 13.0	18.0 / 16.5 / 14.5
External static pressure	High Mode_Factory Set		Pa (mmAq)	58.8 (6)	58.8 (6)
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	136.5 x 1	136.5 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.4 / 19.4	Ø 25.4 / 19.4
	Drain Pipe (Using Drain Pump)	O.D. / I.D.	mm	Ø 32 / 26	Ø 32 / 26
Sound Pressure Level	Cooling	H / M / L	dB(A)	34 / 32 / 30	35 / 34 / 32
	Heating	H / M / L	dB(A)	34 / 32 / 30	35 / 34 / 32
Sound Power Level	Cooling	Rated	dB(A)	59	60
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75
<b>Note</b>					
1. Due to our policy of innovation some specifications may be changed without notification.					
2. Wiring cable size must comply with the applicable local and national code. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.					
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB					
• Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.					

## 2. Specifications

Model Name			Unit	ZBNW30GM1A1 [UM30F N10]
Power Supply			V , Ø , Hz	220-240, 1, 50
				220, 1, 60
Power Input		H / M / L	W	220 / 200 / 180
Running Current		H / M / L	A	1.15 / 1.06 / 0.98
		Max.	A	1.60
Exterior	Color		-	Steel Gray
Dimensions		W x H x D	mm	900 × 270 × 700
Net Weight			kg	26.2
Shipping Weight			kg	32.0
Heat Exchanger	Rows x Columns x FPI			3 x 13 x 18
	Face Area		m²	0.21
Fan Type				Sirocco Fan
Air Flow Rate		H / M / L	m³/min	22.0 / 20.0 / 18 .0
External static pressure	High Mode_Factory Set		Pa (mmAq)	58.8 (6)
Fan Motor	Type			BLDC
	Drive			Internal
	Output		W x No.	136.5 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.4 / 19.4
	Drain Pipe (Using Drain Pump)	O.D. / I.D.	mm	Ø 32 / 26
Sound Pressure Level	Cooling	H / M / L	dB(A)	37 / 35 / 34
	Heating	H / M / L	dB(A)	37 / 35 / 34
Sound Power Level	Cooling	Rated	dB(A)	62
	Heating	Rated	dB(A)	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75
<b>Note</b>				
1. Due to our policy of innovation some specifications may be changed without notification.				
2. Wiring cable size must comply with the applicable local and national code. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.				
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).				
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.				
• Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB				
• Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB				
• Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.				



## 2. Specifications

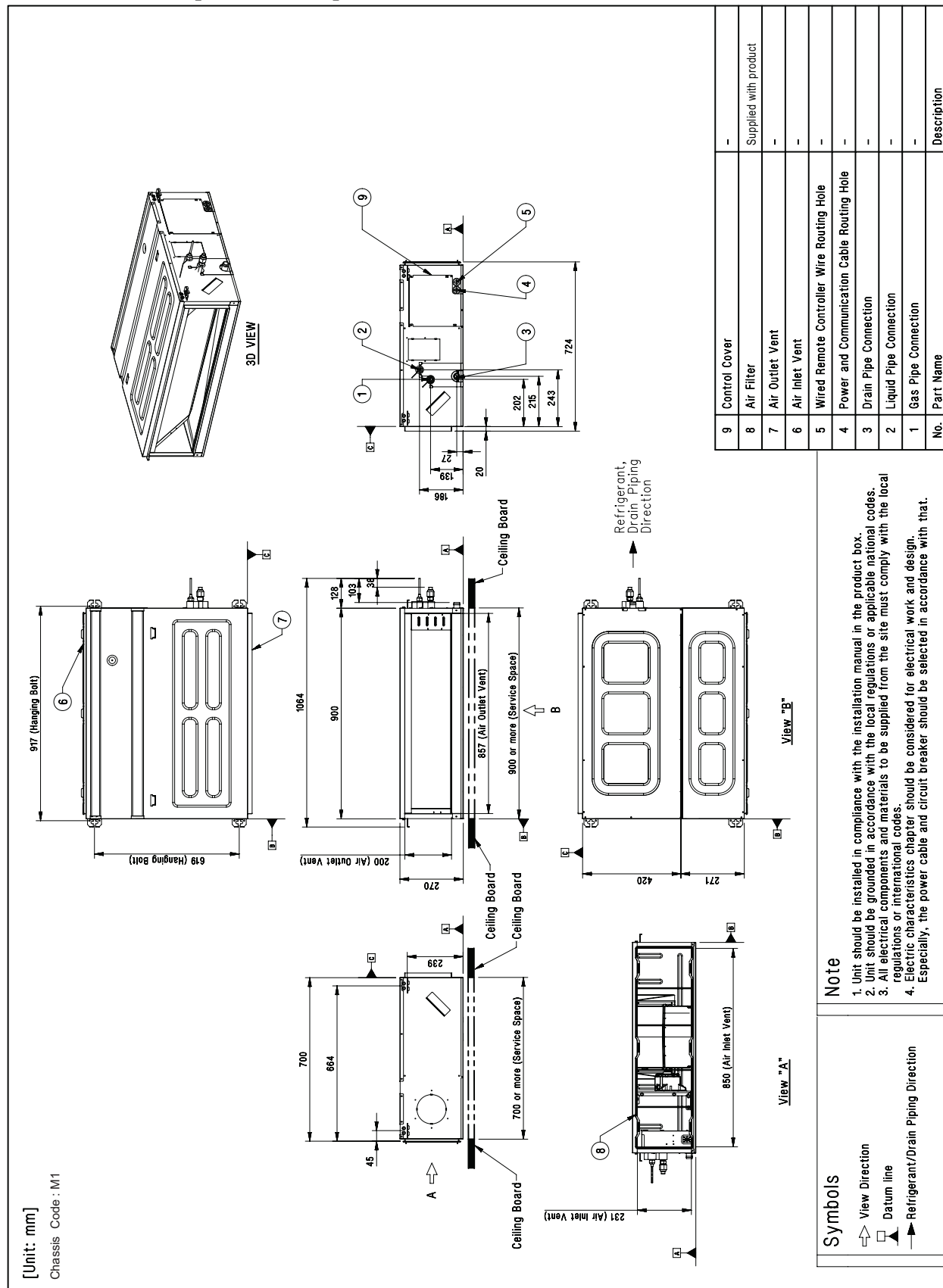
Model Name			Unit	ZBNW36GM2A1 [UM36F N20]	ZBNW42GM2A1 [UM42F N20]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	183 / 134 / 101	266 / 200 / 145
Running Current		H / M / L	A	0.79 / 0.58 / 0.43	1.15 / 0.86 / 0.63
		Max.	A	2.30	2.30
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	1,250 x 270 x 700	1,250 x 270 x 700
Net Weight			kg	38.5	38.5
Shipping Weight			kg	45.7	45.7
Heat Exchanger	Rows x Columns x FPI			3 x 13 x 18	3 x 13 x 18
	Face Area		m²	0.26	0.26
Fan Type				Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	32 / 28 / 24	38 / 33 / 28
External static pressure	High Mode_Factory Set		Pa (mmAq)	58.8 (6)	58.8 (6)
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	350 x 1	350 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.4 / 19.4	Ø 25.4 / 19.4
	Drain Pipe (Using Drain Pump)	O.D. / I.D.	mm	Ø 32 / 26	Ø 32 / 26
Sound Pressure Level	Cooling	H / M / L	dB(A)	36 / 34 / 33	36 / 34 / 33
	Heating	H / M / L	dB(A)	36 / 34 / 33	36 / 34 / 33
Sound Power Level	Cooling	Rated	dB(A)	60	62
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75
<b>Note</b>					
1. Due to our policy of innovation some specifications may be changed without notification.					
2. Wiring cable size must comply with the applicable local and national code. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.					
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB					
• Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.					

## 2. Specifications

Model Name			Unit	ZBNW48GM3A1 [UM48F N30]	ZBNW60GM3A1 [UM60F N30]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	242 / 159 / 124	342 / 287 / 242
Running Current		H / M / L	A	1.05 / 0.69 / 0.53	1.48 / 1.24 / 1.05
		Max.	A	2.50	2.50
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	1,250 × 360 × 700	1,250 × 360 × 700
Net Weight			kg	43.5	43.5
Shipping Weight			kg	51.2	51.2
Heat Exchanger	Rows x Columns x FPI			3 x 16 x 18	3 x 16 x 18
	Face Area		m²	0.32	0.32
Fan Type				Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	40 / 34 / 28	50 / 45 / 40
External static pressure	High Mode_Factory Set		Pa (mmAq)	58.8 (6)	58.8 (6)
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	400 x 1	400 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.4 / 19.4	Ø 25.4 / 19.4
	Drain Pipe (Using Drain Pump)	O.D. / I.D.	mm	Ø 32 / 26	Ø 32 / 26
Sound Pressure Level	Cooling	H / M / L	dB(A)	39 / 38 / 36	42 / 40 / 39
	Heating	H / M / L	dB(A)	39 / 38 / 36	42 / 40 / 39
Sound Power Level	Cooling	Rated	dB(A)	65	66
	Heating	Rated	dB(A)	65	66
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75
<b>Note</b>					
1. Due to our policy of innovation some specifications may be changed without notification.					
2. Wiring cable size must comply with the applicable local and national code. And “Electric characteristics” chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.					
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB					
• Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.					

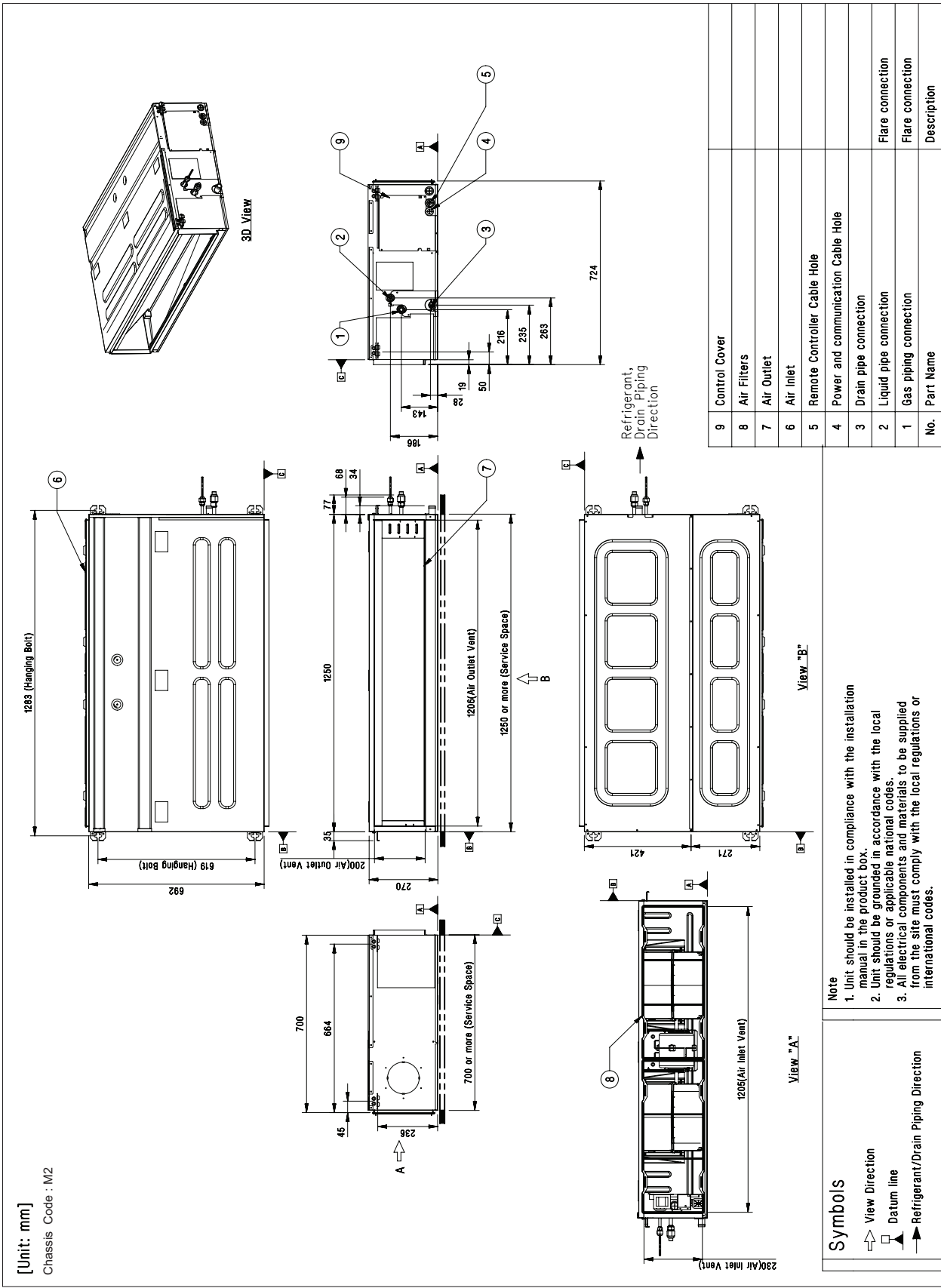
### 3. Dimensions

#### ■ ZBNW18GM1A1 [CM18F N10] / ZBNW24GM1A1 [CM24F N10] ZBNW30GM1A1 [UM30F N10]



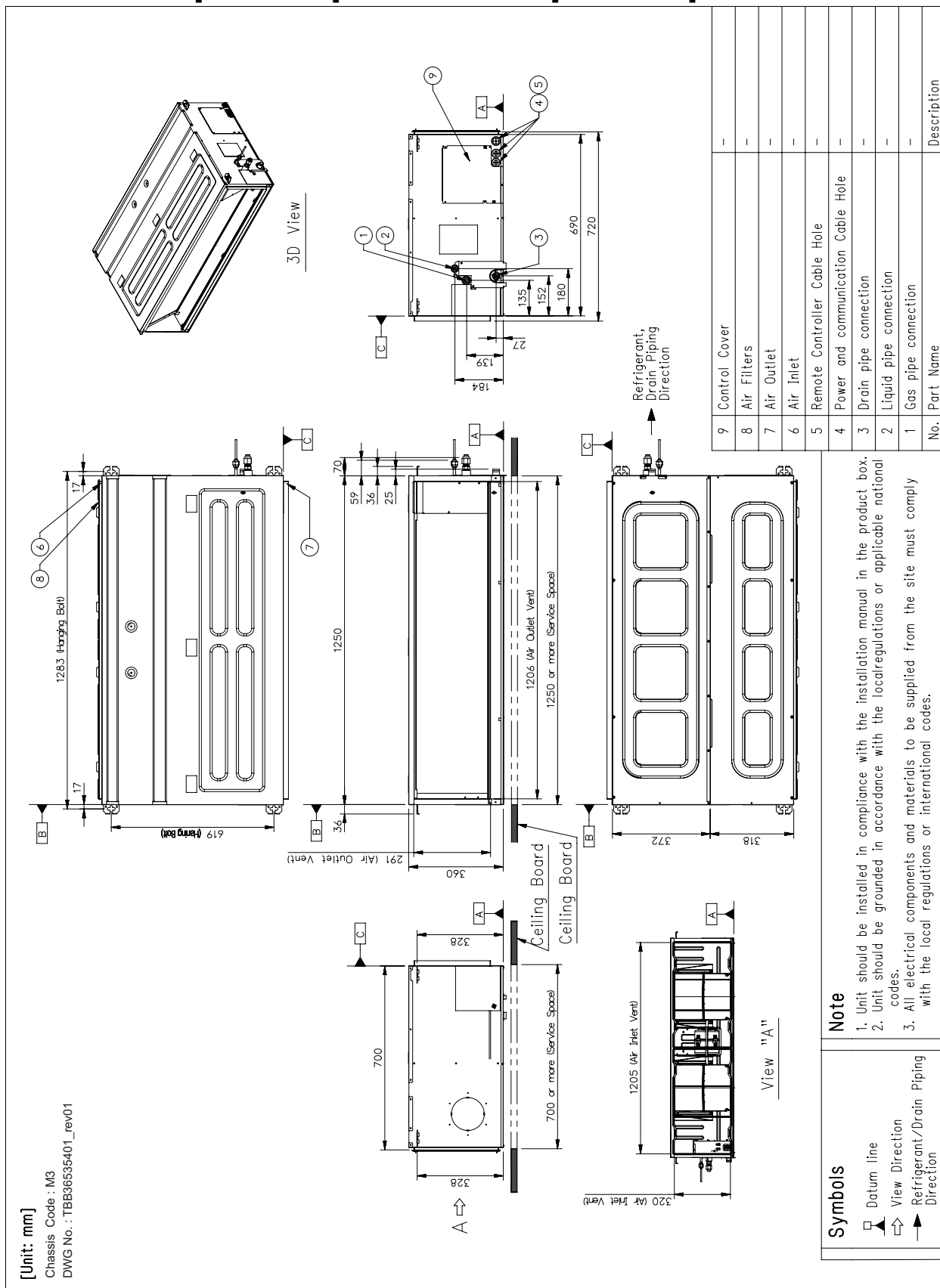
3. Dimensions

ZBNW36GM2A1 [UM36F N20] / ZBNW42GM2A1 [UM42F N20]



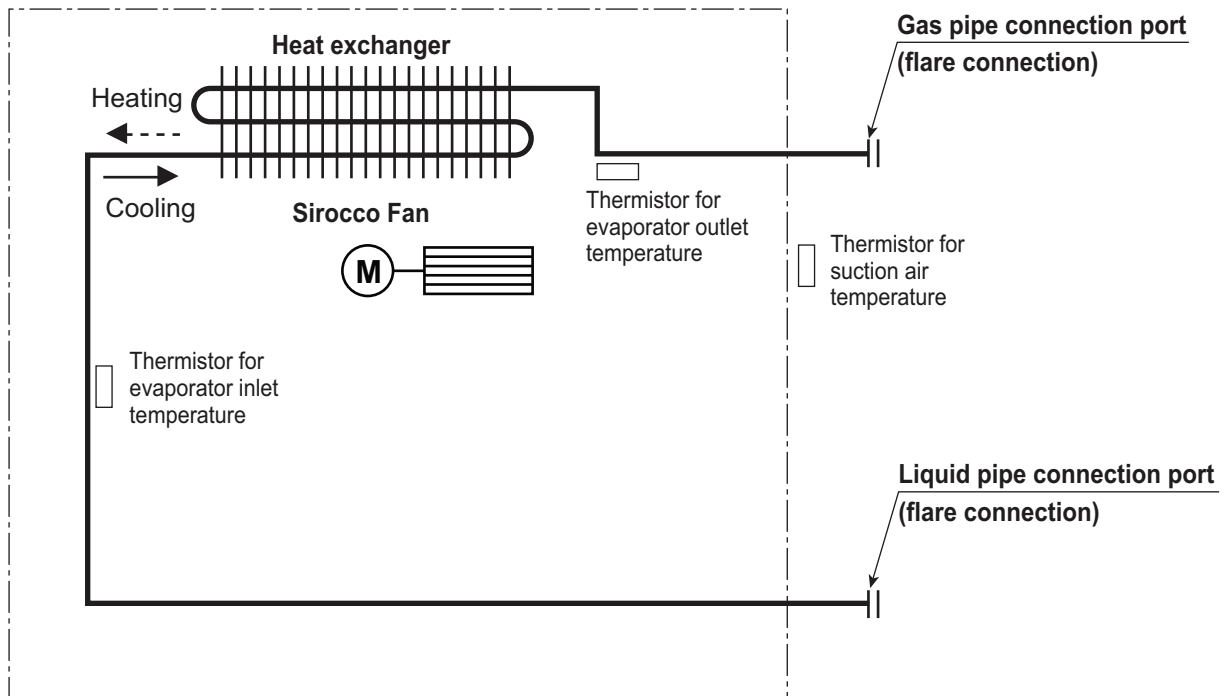
### 3. Dimensions

#### ■ ZBNW48GM3A1 [UM48F N30] / ZBNW60GM3A1 [UM60F N30]



## 4. Piping Diagrams

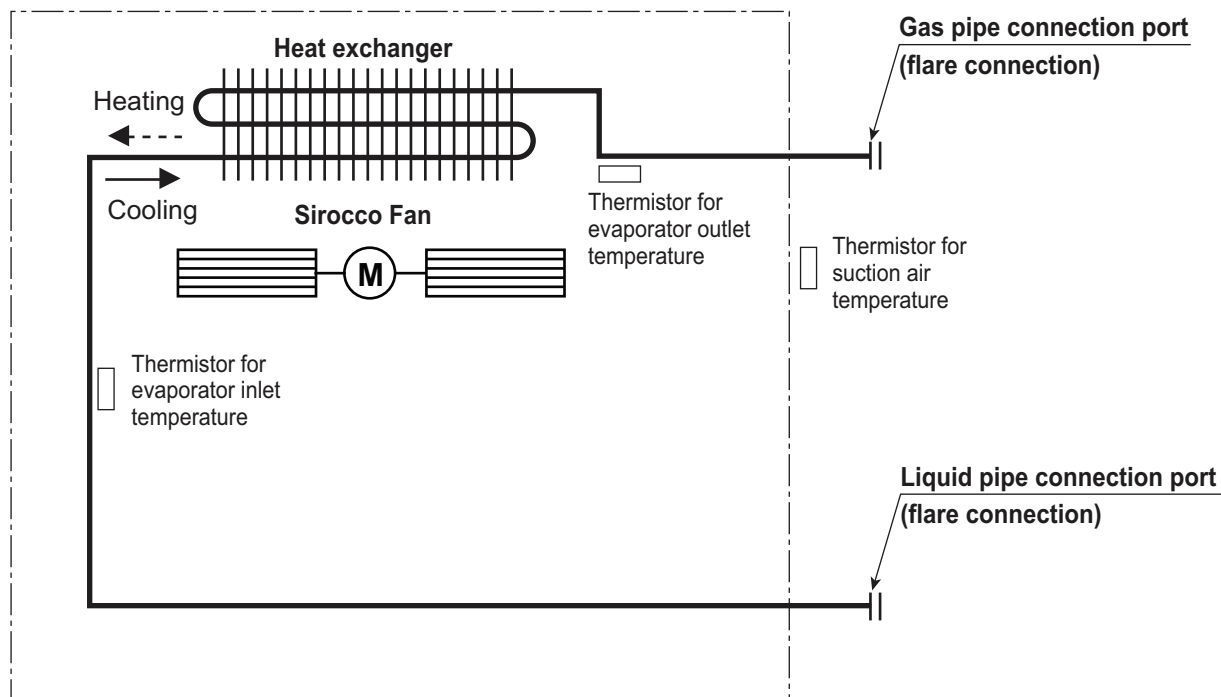
### ■ ZBNW18GM1A1 [CM18F N10] / ZBNW24GM1A1 [CM24F N10] ZBNW30GM1A1 [UM30F N10]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE_IN
Thermistor for evaporator outlet temperature	CN-PIPE_OUT

## 4. Piping Diagrams

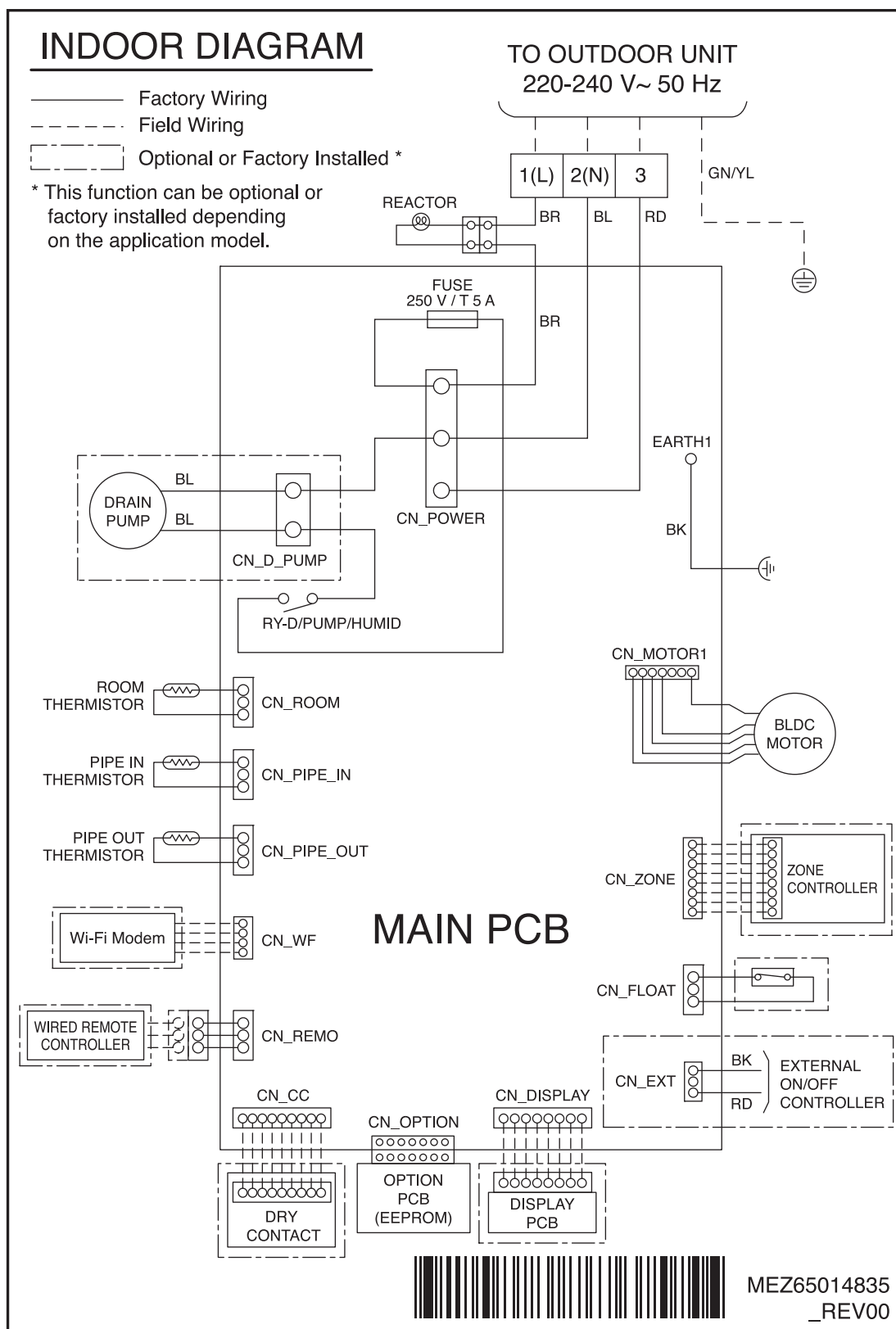
- ZBNW36GM2A1 [UM36F N20] / ZBNW42GM2A1 [UM42F N20]  
ZBNW48GM3A1 [UM48F N30] / ZBNW60GM3A1 [UM60F N30]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE_IN
Thermistor for evaporator outlet temperature	CN-PIPE_OUT

## 5. Wiring Diagrams

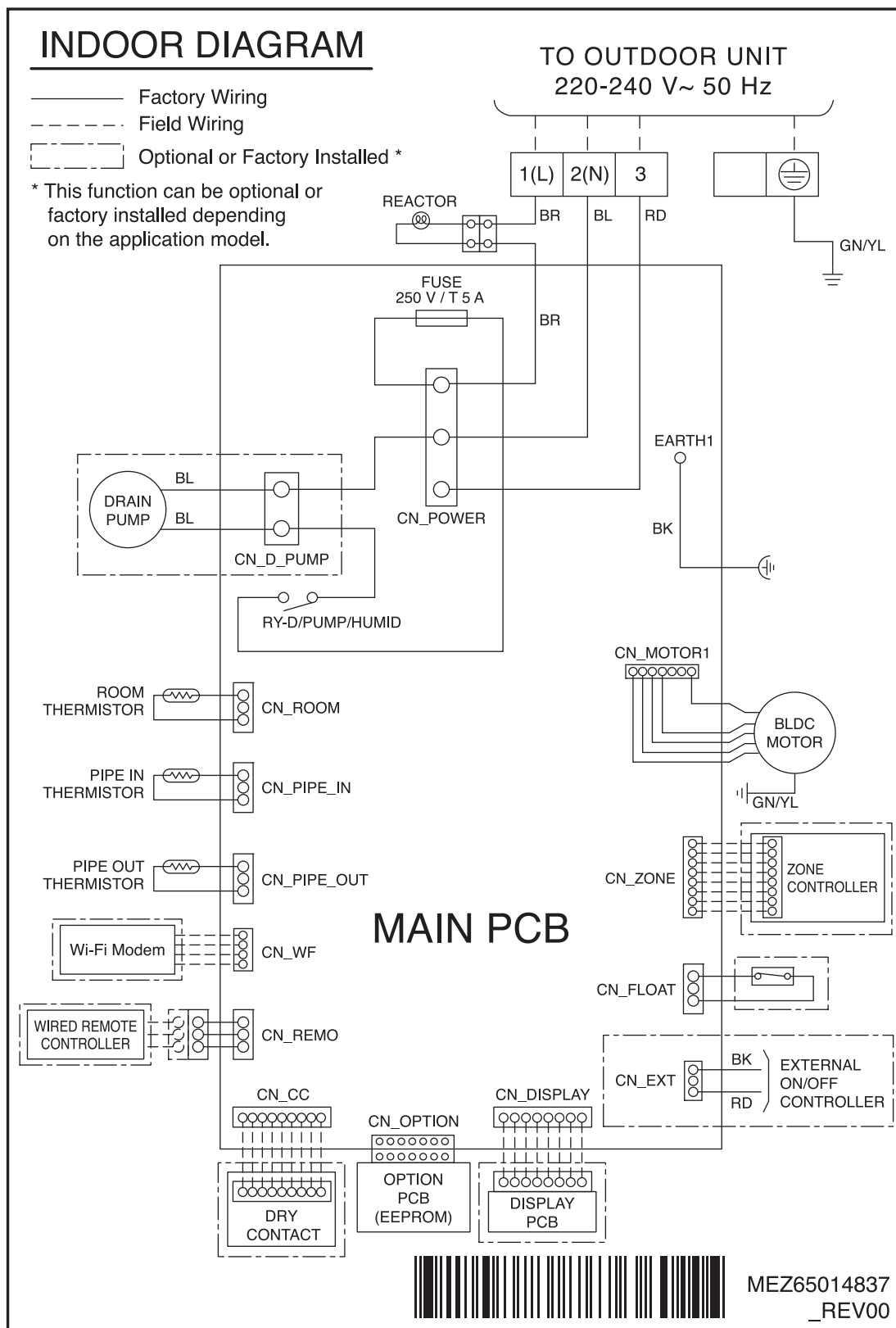
- ZBNW18GM1A1 [CM18F N10] / ZBNW24GM1A1 [CM24F N10]  
ZBNW30GM1A1 [UM30F N10]





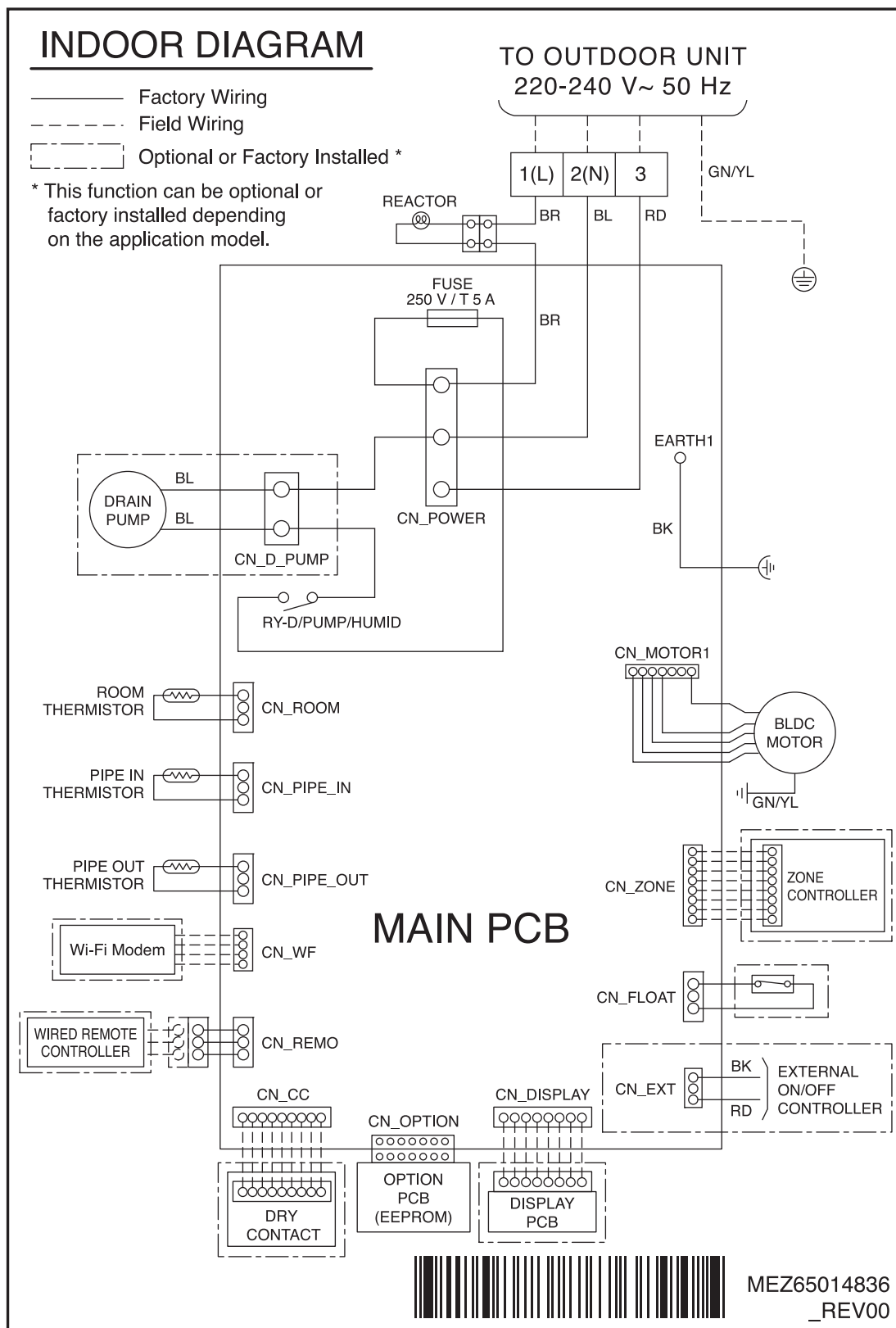
## 5. Wiring Diagrams

### ■ ZBNW36GM2A1 [UM36F N20] / ZBNW42GM2A1 [UM42F N20]



## 5. Wiring Diagrams

### ■ ZBNW48GM3A1 [UM48F N30] / ZBNW60GM3A1 [UM60F N30]



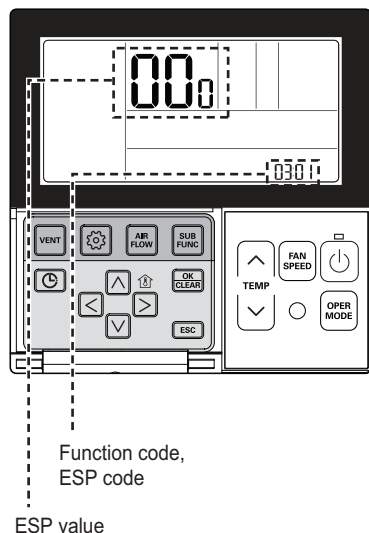
## 6. External Static Pressure & Air Flow

### ■ How to Set E.S.P. on the remote controller?

#### Wired Remote Controller (Standard II)

This is the function that decides the strength of the wind for each wind level and because this function is to make the installation easier.

- If you set ESP incorrectly, the air conditioner may malfunction.
- This setting must be carried out by a certificated-technician.



<p><b>1</b> If pressing  button long for 3 seconds, it enters into remote controller setter setup mode. - If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.</p>	<p><b>4</b> Move to ESP value setting by pressing  button. (It is 000 when delivering from the warehouse.)</p> <p>0301 000</p>
<p><b>2</b> If entering into ESP setup mode by using  button, it indicates as the picture below.</p>	<p><b>5</b> Press   button to setup ESP value. (It is possible to setup ESP value from 1 to 255, and 1 is the smallest and 255 is the biggest.)</p>
<p><b>3</b> Select ESP fan step by pressing   button. (01: very low, 02: low, 03: medium, 04: high, 05: very high)</p> <p>0301</p>	<p><b>6</b> Select ESP fan step again by using   button and setup ESP value, as No. 4 and 5, that corresponds each wind flow</p>
	<p><b>7</b> Press  button to save.</p>
	<p><b>8</b> Press  button to exit. * After setup, it automatically gets out of setup mode if there is no button input for 25 seconds. * When exiting without pressing set button, the manipulated value is not reflected.</p>

- When setting ESP value on the product without very weak wind or power wind function, it may not work.
- Please be careful not to change the ESP value for each fan step.
- It does not work to setup ESP value for very low/power step for some products.
- ESP value is available for specific range belongs to the product.

## 6. External Static Pressure & Air Flow

### Wired Remote Controller (Standard III)

Static pressure setting can be set only in the duct products. (It cannot be set in other products.)

- You can set the following setting values using [<,>(left/right)] button.

Installer	Back OK OK
Ceiling Height Selection	< LOW >
Static Pressure	< V-H >
RMC Master/Slave	< Master >
Override Master/Slave	< Slave >
Dry Contact Mode	< Auto >

Static pressure		Description	
		Variable / Fixed	ESP default value
Variable high static pressure	V-H	Variable	High static pressure(High)
Fixed high static pressure	F-H	Fixed	High static pressure(High)
Variable low static pressure	V-L	Variable	Low static pressure(Low)
Fixed low static pressure	F-L	Fixed	Low static pressure(Low)

- 2TH function's operation characteristics may be different for each product.

## 6. External Static Pressure & Air Flow

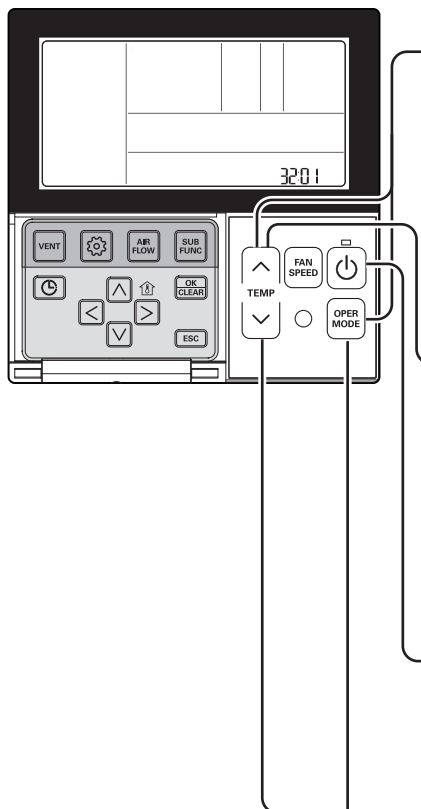
### ■ Installer Setting - Static Pressure Step Setting






#### Wired Remote Controller (Standard II)





This function is applied to only duct type. Setting this in other cases will cause malfunction.

This function is only available on some products.

This is the function that static pressure of the product is divided in 11 steps for setting.



- 1 When pressing the  button and  button simultaneously for more than 3 seconds, the system will be entered into the installer setting mode.  
- After entering into the installer setting mode, select the static pressure step setting code value by pressing the  button.  
\* Static pressure step setting code value : 32
- 2 Select the desired setting value with the temperature up(  ), down(  ) button.  

  
 Function Code   Existing condition  
 00: use static pressure (code 06) set value  
 01~ 11: static pressure step (code 32) set value
- 3 When pressing  button, currently established static pressure value will be set up.
- 4 When pressing the  button and  button simultaneously for more than 3 seconds after the setting has been completed, the setting mode will be released.  
- If there isn't any button input for more than 25 seconds, the installer setting mode will also be released.

- Static Pressure (Code 06) setting will not be used if Static Pressure Step (Code 32) setting is being used.
- For the static pressure value for each step, refer to the next page Table. 1

## 6. External Static Pressure & Air Flow

### Wired Remote Controller (Standard III)

It is the function to subdivide and set the product's static pressure to 11 stages.

- Change setting values using [**<**,**>**](left/right)] button.

Installer	Back  OK
Static Pressure Step	< Step 0 >
Guard Timer	< Step 0 >
Fan Speed In Cooling Thermal Off	< Low >
Primary Heater	< Not Use >
AC Fan Oper. Interlocked With Vent	< On >

Value
Step 0 ~ Step 11

#### ! NOTE

If Static pressure step setting is used, the Static pressure setting is not used.  
For the Static pressure step value for each stage, refer to the indoor unit product manual

## 6. External Static Pressure & Air Flow

■ Table 1

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			2(20)	2.5(25)	3(29)	4(39)	6(59)	8(78)	10(98)	12(118)	13(127)	14(137)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ZBNW18GM1A1 [CM18F N10]	LOW	13.0	73	74	77	88	93	103	111	117	120	125	128
	MID	14.5	76	77	86	91	97	107	114	121	125	128	131
	HIGH	16.5	86	87	90	94	103	110	118	125	128	131	134
ZBNW24GM1A1 [CM24F N10]	LOW	14.5	76	77	86	89	97	106	114	121	124	127	130
	MID	16.5	86	87	90	94	103	111	118	125	128	131	134
	HIGH	18.0	90	92	95	99	108	115	122	129	132	135	138

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			2.5(25)	4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ZBNW30GM1A1 [UM30F N10]	LOW	18.0	96	102	107	110	114	118	122	125	127	130	132
	MID	20.0	102	110	114	118	121	125	127	130	133	134	136
	HIGH	22.0	110	117	121	124	127	130	133	136	137	138	140

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ZBNW36GM2A1 [UM36F N20]	LOW	24.0	88	91	95	100	101	108	113	115	118	118	118
	MID	28.0	93	97	101	105	108	115	118	120	124	124	124
	HIGH	32.0	101	105	109	112	115	119	123	126	128	128	128
ZBNW48GM3A1 [UM48F N30]	LOW	28.0	74	76	79	82	89	92	94	96	99	102	107
	MID	34.0	78	82	84	89	94	96	98	101	104	106	112
	HIGH	40.0	83	89	92	94	98	100	102	105	108	110	116
ZBNW60GM3A1 [UM60F N30]	LOW	40.0	82	89	92	94	98	100	102	105	108	110	113
	MID	45.0	90	92	96	98	102	104	106	109	112	114	117
	HIGH	50.0	94	97	100	104	107	109	112	115	117	119	121

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	14(137)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ZBNW42GM2A1 [UM42F N20]	LOW	28.0	100	103	106	110	114	118	121	125	128	133	136
	MID	33.0	108	111	114	118	122	125	128	131	134	138	140
	HIGH	38.0	117	120	124	127	130	133	135	138	140	144	147

## 6. External Static Pressure & Air Flow

### Note

1. Be sure to set the value referring table 1. Unexpected set value will cause mal-function.
2. Table 1 is based at 230V. According to the fluctuation of voltage, air flow rate varies.
3. Factory Set(External Static Pressure) each Model

Model	Factory set (E.S.P.) mmAq(Pa)
ZBNW18GM1A1 [CM18F N10]	6(59)
ZBNW24GM1A1 [CM24F N10]	
ZBNW30GM1A1 [UM30F N10]	
ZBNW36GM2A1 [UM36F N20]	
ZBNW42GM2A1 [UM42F N20]	
ZBNW48GM3A1 [UM48F N30]	
ZBNW60GM3A1 [UM60F N30]	

\* If it is zero static pressure, please set value below Maximum value.

Model	Maximum value
ZBNW18GM1A1 [CM18F N10]	115
ZBNW24GM1A1 [CM24F N10]	
ZBNW30GM1A1 [UM30F N10]	
ZBNW36GM2A1 [UM36F N20]	120
ZBNW42GM2A1 [UM42F N20]	
ZBNW48GM3A1 [UM48F N30]	
ZBNW60GM3A1 [UM60F N30]	98



## 6. External Static Pressure & Air Flow

■ Table 2

◆ ZBNW18GM1A1 [CM18F N10], ZBNW24GM1A1 [CM24F N10]

Setting value	Static Pressure (mmAq(Pa))								
	2.0(20)	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]								
70	11.7	11.3	-	-	-	-	-	-	-
75	13.2	12.8	-	-	-	-	-	-	-
80	14.7	14.4	11.4	-	-	-	-	-	-
85	16.2	15.9	13.2	10.2	-	-	-	-	-
90	17.8	17.5	15.0	12.0	-	-	-	-	-
95	19.3	19.0	16.7	13.7	10.7	-	-	-	-
100	21.0	20.6	18.5	15.5	12.5	-	-	-	-
105	22.6	22.1	20.3	17.3	14.3	11.1	-	-	-
110	24.1	23.7	22.1	19.0	16.1	13.1	10.0	-	-
115	-	-	23.8	20.8	17.9	15.1	12.2	-	-
120	-	-	-	22.6	19.7	17.1	14.3	11.3	-
125	-	-	-	-	21.5	19.1	16.5	13.6	11.9
130	-	-	-	-	23.3	21.2	18.7	15.8	14.3
135	-	-	-	-	-	23.2	20.8	18.0	16.7
140	-	-	-	-	-	-	23.0	20.3	19.1
145	-	-	-	-	-	-	-	22.5	21.5
150	-	-	-	-	-	-	-	-	23.8

◆ ZBNW30GM1A1 [UM30F N10]

Setting value	Static Pressure (mmAq(Pa))							
	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]							
85	16.8	14.6	-	-	-	-	-	-
90	18.1	15.9	-	-	-	-	-	-
95	19.4	17.2	15.0	-	-	-	-	-
100	20.7	18.5	16.3	13.9	-	-	-	-
105	22.0	19.8	17.7	15.3	13.0	-	-	-
110	23.3	21.1	19.1	16.8	14.6	-	-	-
115	24.6	22.4	20.5	18.3	16.3	14.2	-	-
120	25.9	23.7	21.8	19.7	17.9	15.9	13.3	-
125	-	25.1	23.2	21.2	19.6	17.5	15.2	14.6
130	-	-	24.6	22.7	21.2	19.2	17.1	16.3
135	-	-	-	24.2	22.9	20.9	19.0	18.1
140	-	-	-	-	24.5	22.6	20.9	19.9

**Note**

The above table shows the correlation between the air rates and E.S.P.

## 6. External Static Pressure & Air Flow

### ◆ ZBNW36GM2A1 [UM36F N20]

Setting value	Static Pressure (mmAq(Pa))							
	4(39)	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]							
80	-	-	-	-	-	-	-	-
85	21.9	-	-	-	-	-	-	-
90	24.8	22.2	-	-	-	-	-	-
95	27.5	25.1	22.3	-	-	-	-	-
100	30.1	28.0	25.4	-	-	-	-	-
105	32.7	30.9	28.5	23.3	-	-	-	-
110	35.6	33.8	31.6	26.8	-	-	-	-
115	38.7	36.7	34.8	30.3	24.4	-	-	-
120	41.5	39.7	37.9	33.8	28.3	23.5	-	-
125	-	42.6	41.0	37.3	32.2	27.5	-	-
130	-	-	44.1	40.8	36.1	31.6	26.1	-
135	-	-	-	44.3	40.0	35.6	30.4	28.0
140	-	-	-	-	43.9	39.7	34.6	32.4
145	-	-	-	-	-	43.7	38.9	36.8
150	-	-	-	-	-	-	43.1	41.2
155	-	-	-	-	-	-	-	45.6

### ◆ ZBNW42GM2A1 [UM42F N20]

Setting value	Static Pressure (mmAq(Pa))						
	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]						
80	-	-	-	-	-	-	-
85	-	-	-	-	-	-	-
90	22.2	-	-	-	-	-	-
95	25.1	22.3	-	-	-	-	-
100	28.0	25.4	-	-	-	-	-
105	30.9	28.5	23.3	-	-	-	-
110	33.8	31.6	26.8	-	-	-	-
115	36.7	34.8	30.3	24.4	-	-	-
120	39.7	37.9	33.8	28.3	23.5	-	-
125	42.6	41.0	37.3	32.2	27.5	-	-
130	-	44.1	40.8	36.1	31.6	26.1	-
135	-	-	44.3	40.0	35.6	30.4	28.0
140	-	-	-	43.9	39.7	34.6	32.4
145	-	-	-	-	43.7	38.9	36.8
150	-	-	-	-	-	43.1	41.2
155	-	-	-	-	-	-	45.6

### Note

The above table shows the correlation between the air rates and E.S.P.

## 6. External Static Pressure & Air Flow

### ◆ ZBNW48GM3A1 [UM48F N30], ZBNW60GM3A1 [UM60F N30]

Setting value	Static Pressure (mmAq(Pa))							
	4(39)	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]							
70	27.4	25.1	-	-	-	-	-	-
75	31.6	29.5	26.1	-	-	-	-	-
80	36.3	34.0	30.8	25.9	-	-	-	-
85	40.6	38.4	35.4	30.6	23.2	-	-	-
90	45.4	42.9	40.1	35.2	28.1	21.0	-	-
95	49.7	47.3	44.8	39.9	33.1	26.3	19.5	-
100	56.1	51.8	49.4	44.6	38.0	31.7	25.2	22.6
105	-	56.2	54.1	49.2	43.0	37.1	31.0	28.5
110	-	-	58.8	53.9	47.9	42.4	36.7	34.4
115	-	-	-	58.6	52.9	47.8	42.5	40.3
120	-	-	-	-	57.8	53.1	48.2	46.1
121	-	-	-	-	-	54.2	49.4	47.3

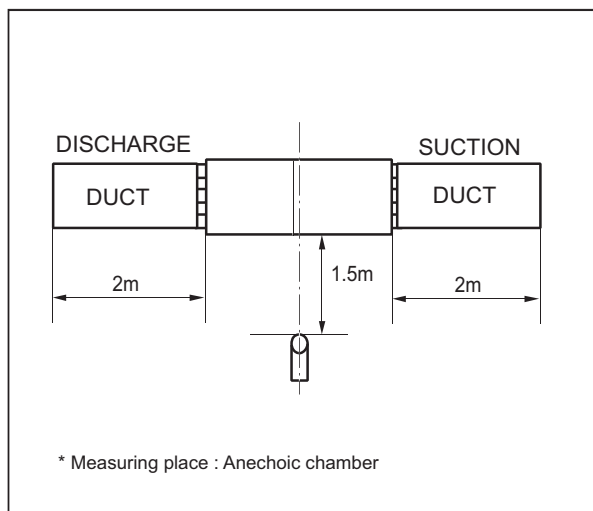
### Note

The above table shows the correlation between the air rates and E.S.P.

## 7. Sound Levels

### 7.1 Sound Pressure Level

#### Overall



#### Note

1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure  $0\text{dB} = 20\mu\text{Pa}$ .
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

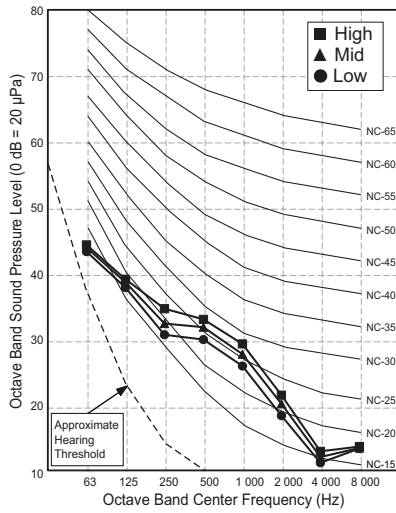
Model	Sound Pressure Levels (dB(A),H-M-L)				
	External Static Pressure [mmAq(Pa)]				
	2.5(25)	5(49)	7(69)	10(98)	15(147)
ZBNW18GM1A1 [CM18F N10]	34-32-30	35-33-32	36-35-34	38-37-36	40-39-38
ZBNW24GM1A1 [CM24F N10]	35-34-32	36-35-34	37-36-35	39-38-37	41-40-39

Model	Sound Pressure Levels (dB(A),H-M-L)					
	External Static Pressure [mmAq(Pa)]					
	2.5(25)	4(39)	5(49)	7(69)	10(98)	15(147)
ZBNW36GM2A1 [UM36F N20]	-	36-34-33	37-36-34	38-37-35	39-38-37	42-40-39
ZBNW42GM2A1 [UM42F N20]	-	-	38-36-34	40-39-37	41-40-39	44-43-42
ZBNW48GM3A1 [UM48F N30]	-	-	39-37-35	40-38-36	41-39-37	43-42-41
ZBNW60GM3A1 [UM60F N30]	-	-	42-40-39	43-41-40	44-42-40	45-44-43

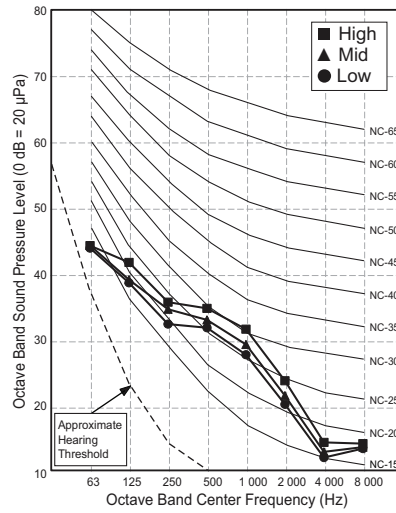
## 7. Sound Levels

### ◆ External Static Pressure 2.5(25) [mmAq(Pa)]

ZBNW18GM1A1 [CM18F N10]



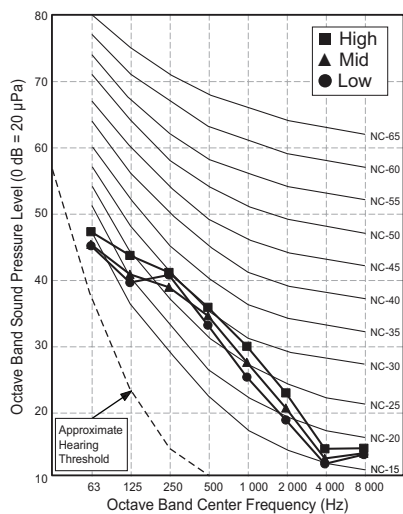
ZBNW24GM1A1 [CM24F N10]



## 7. Sound Levels

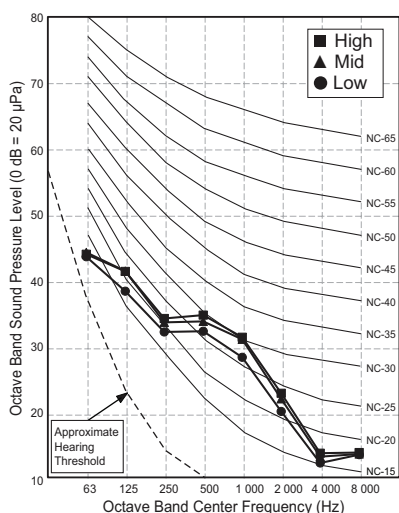
### ◆ External Static Pressure 4(39) [mmAq(Pa)]

ZBNW36GM2A1 [UM36F N20]

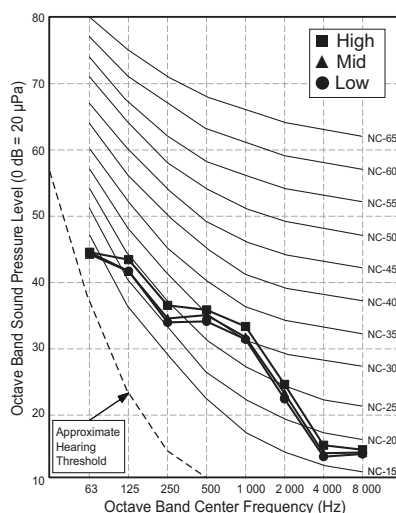


### ◆ External Static Pressure 5(49) [mmAq(Pa)]

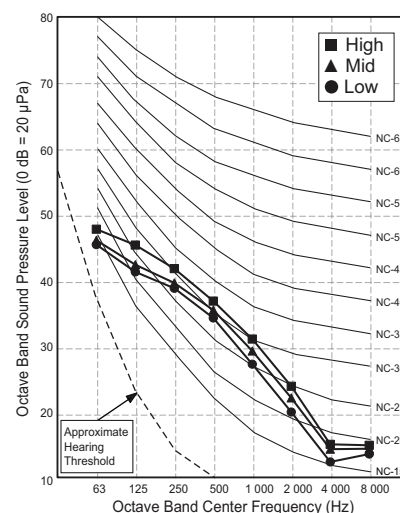
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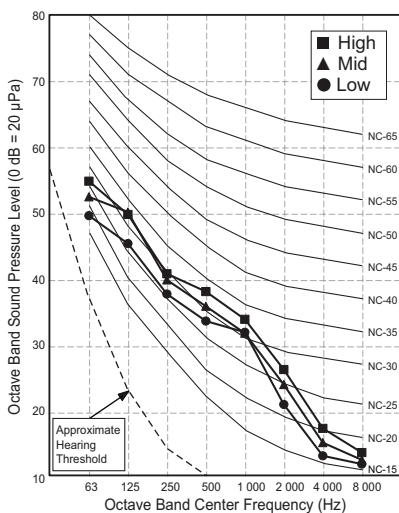
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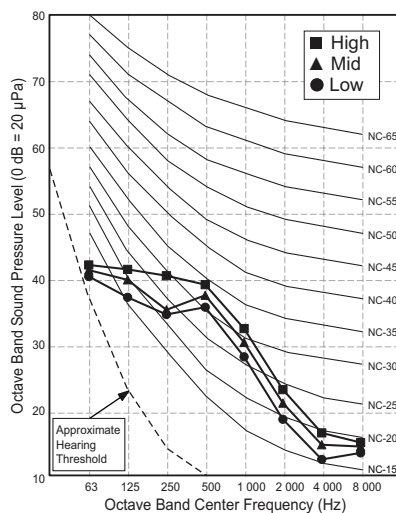
ZBNW36GM2A1 [UM36F N20]



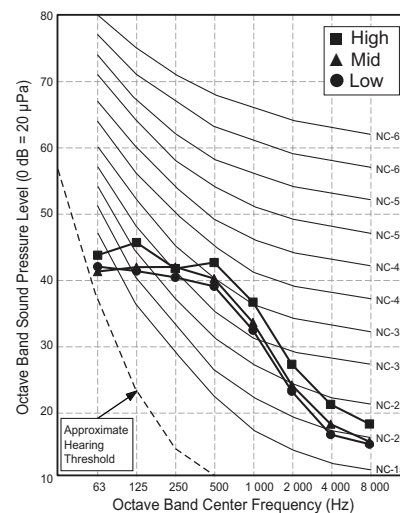
ZBNW42GM2A1 [UM42F N20]



ZBNW48GM3A1 [UM48F N30]



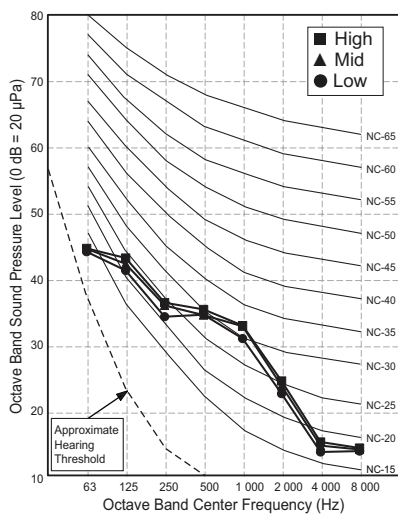
ZBNW60GM3A1 [UM60F N30]



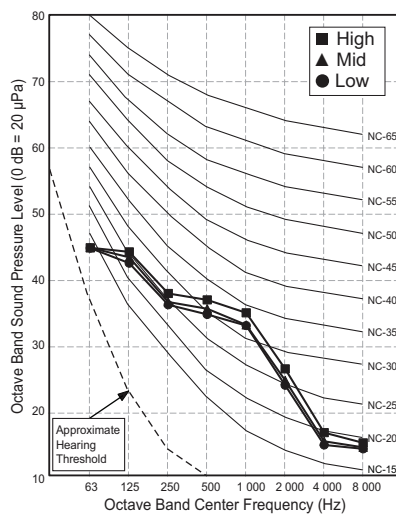
## 7. Sound Levels

### ◆ External Static Pressure 7(69) [mmAq(Pa)]

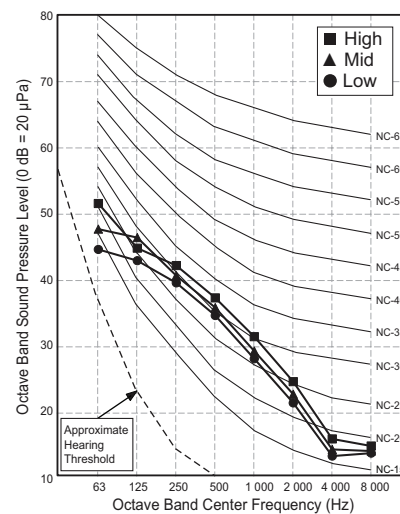
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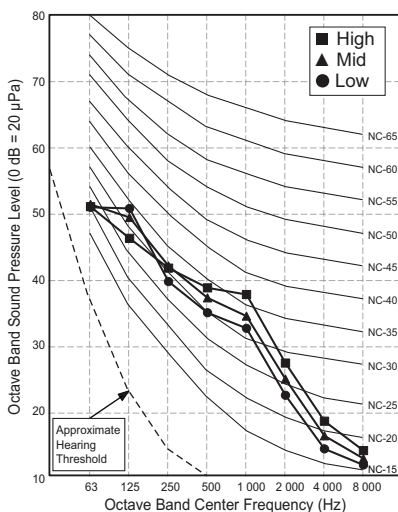
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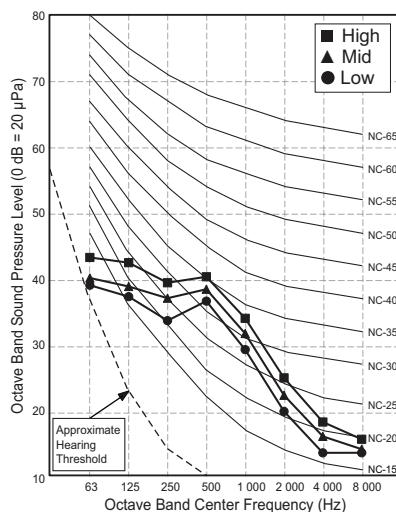
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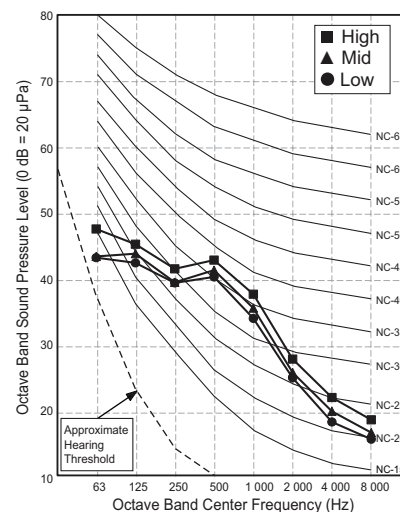
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ZBNW48GM3A1 [UM48F N30]



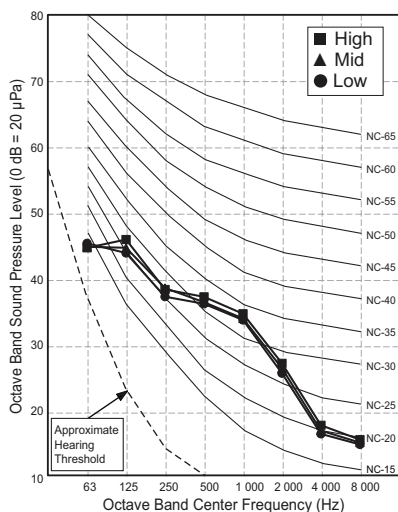
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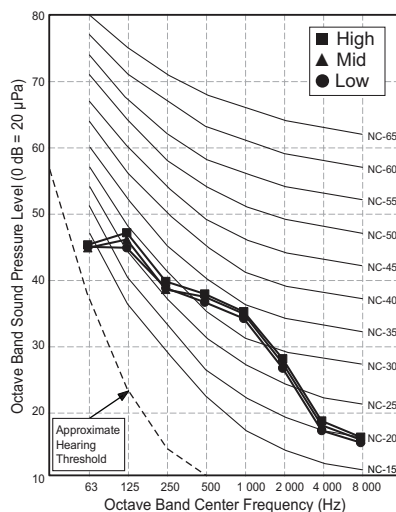
## 7. Sound Levels

### ◆ External Static Pressure 10(98) [mmAq(Pa)]

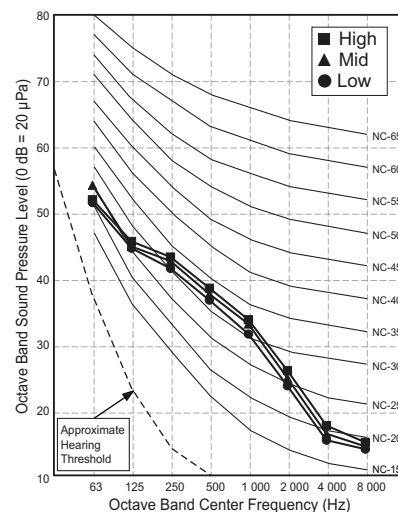
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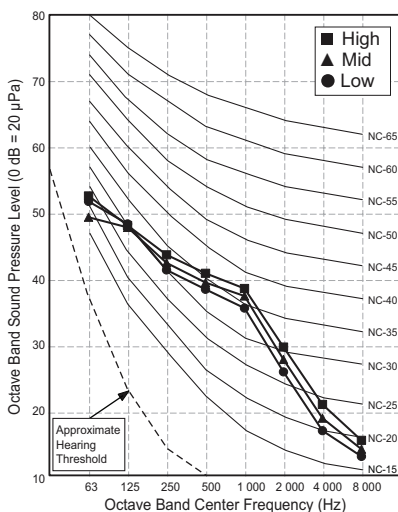
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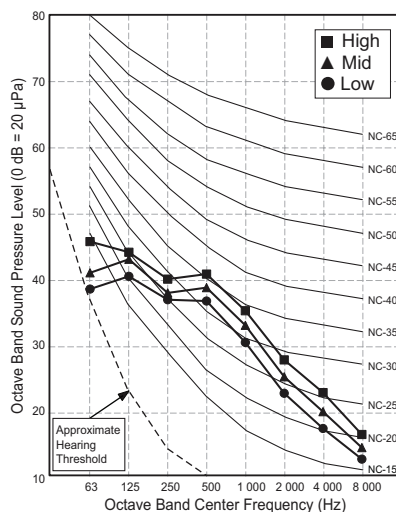
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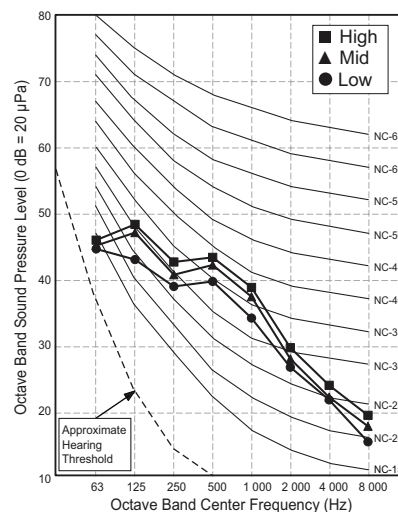
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ZBNW48GM3A1 [UM48F N30]

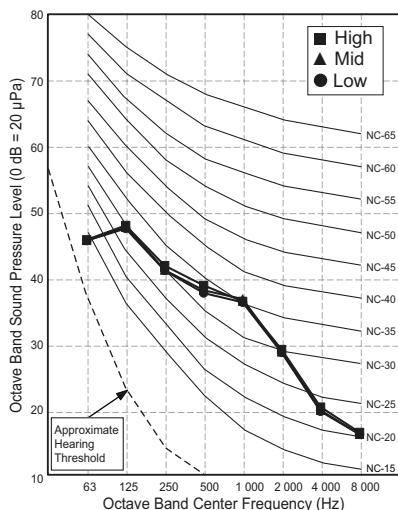


ZBNW60GM3A1 [UM60F N30]

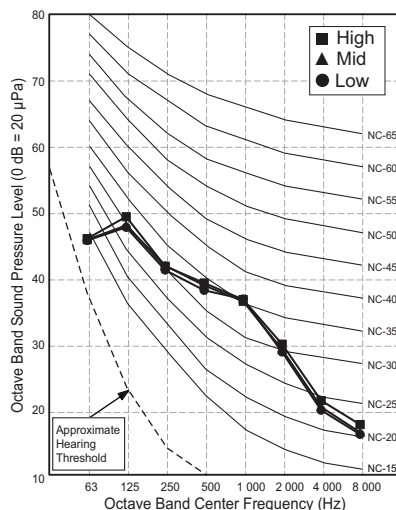


### ◆ External Static Pressure 15(147) [mmAq(Pa)]

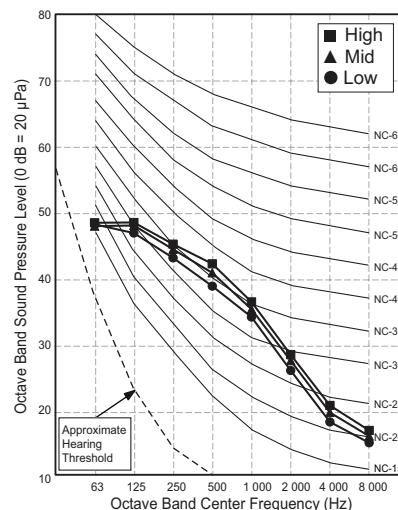
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ZBNW24GM1A1 [CM24F N10]



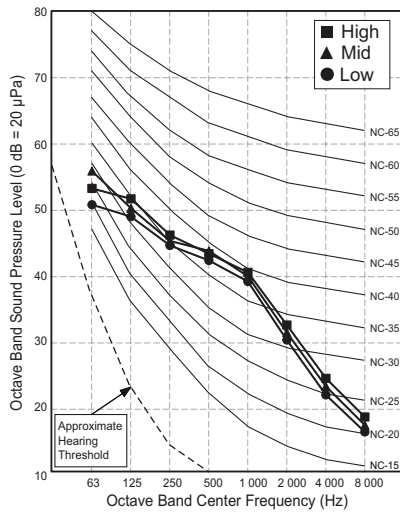
ZBNW36GM2A1 [UM36F N20]



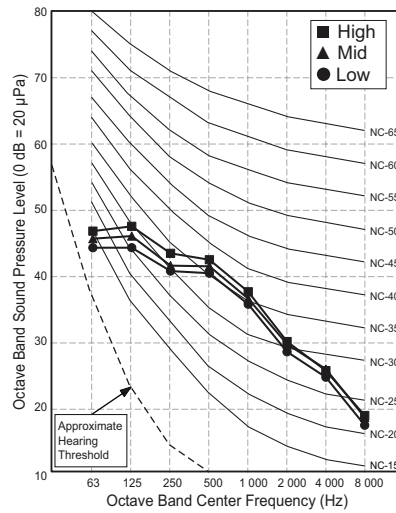


## 7. Sound Levels

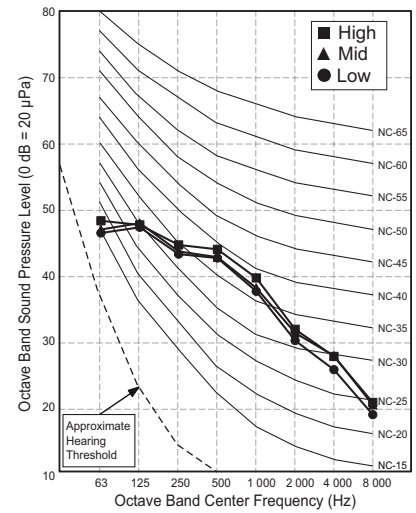
ZBNW42GM2A1 [UM42F N20]



ZBNW48GM3A1 [UM48F N30]



ZBNW60GM3A1 [UM60F N30]



## 7. Sound Levels

### 7.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>

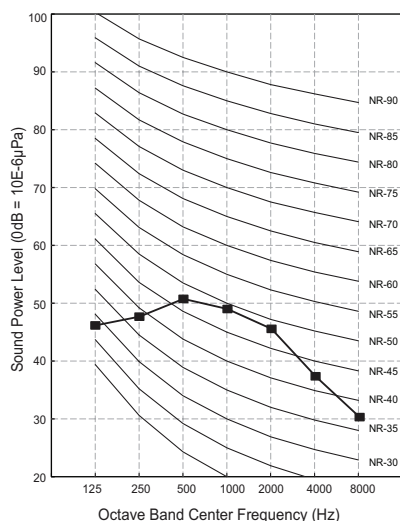
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound Power Levels (dB(A))	
	External Static Pressure [mmAq(Pa)]	
	2.5(25)	
ZBNW18GM1A1 [CM18F N10]	59	
ZBNW24GM1A1 [CM24F N10]	60	

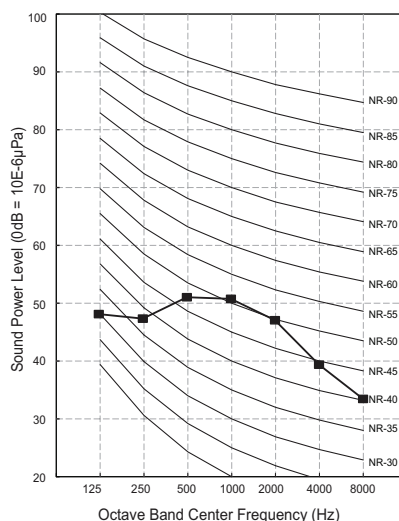
Model	Sound Power Levels (dB(A))	
	External Static Pressure [mmAq(Pa)]	
	4(39)	5(49)
ZBNW36GM2A1 [UM36F N20]	60	-
ZBNW42GM2A1 [UM42F N20]	-	62
ZBNW48GM3A1 [UM48F N30]	-	65
ZBNW60GM3A1 [UM60F N30]	-	66

#### ◆ External Static Pressure 2.5(25) [mmAq(Pa)]

ZBNW18GM1A1 [CM18F N10]



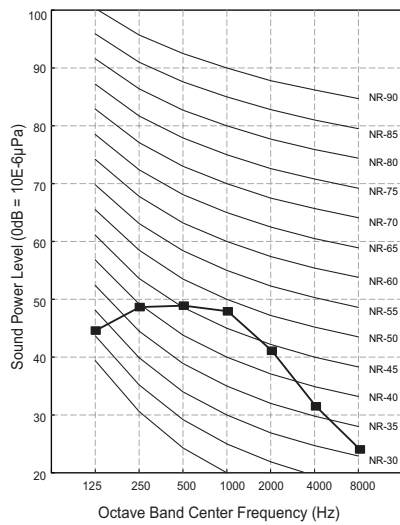
ZBNW24GM1A1 [CM24F N10]



## 7. Sound Levels

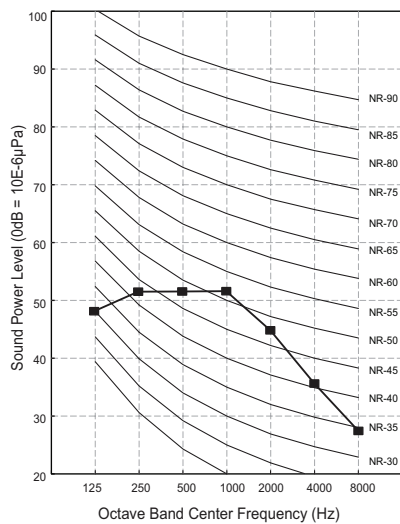
### ◆ External Static Pressure 4(39) [mmAq(Pa)]

ZBNW36GM2A1 [UM36F N20]

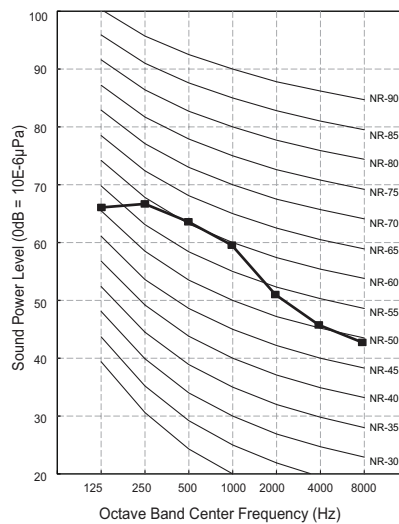


### ◆ External Static Pressure 5(49) [mmAq(Pa)]

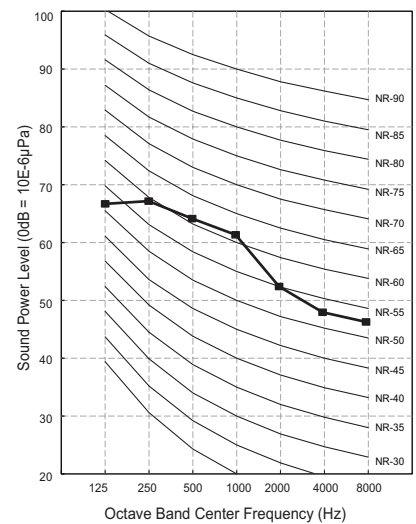
ZBNW42GM2A1 [UM42F N20]



ZBNW48GM3A1 [UM48F N30]



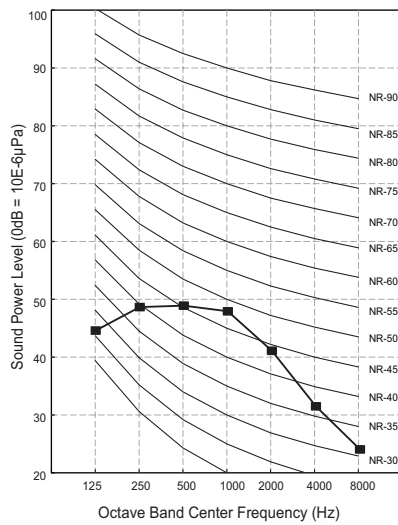
ZBNW60GM3A1 [UM60F N30]



## 7. Sound Levels

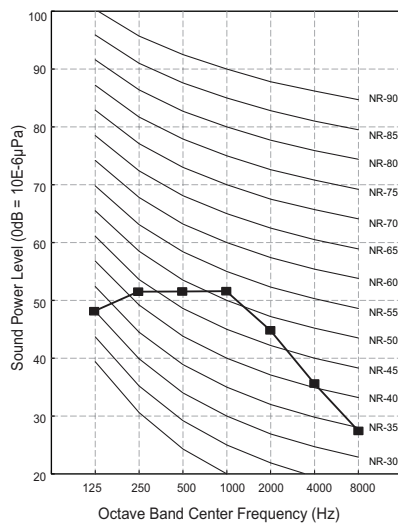
### ◆ External Static Pressure 4(39) [mmAq(Pa)]

ZBNW36GM2A1 [UM36F N20]

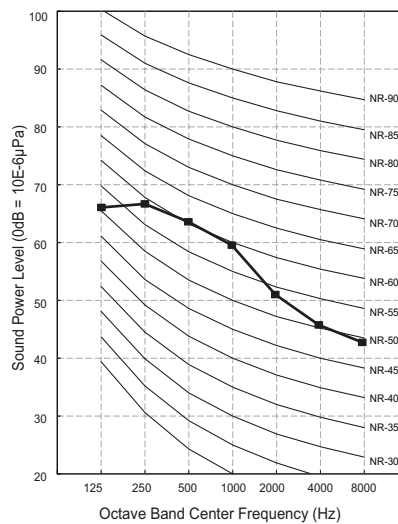


### ◆ External Static Pressure 5(49) [mmAq(Pa)]

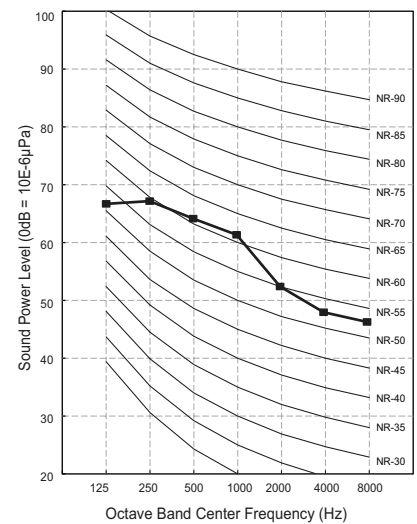
ZBNW36GM2A1 [UM36F N20]



ZBNW48GM3A1 [UM48F N30]

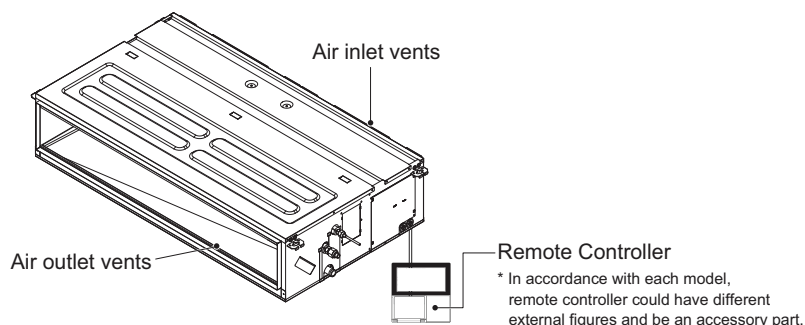


ZBNW60GM3A1 [UM60F N30]



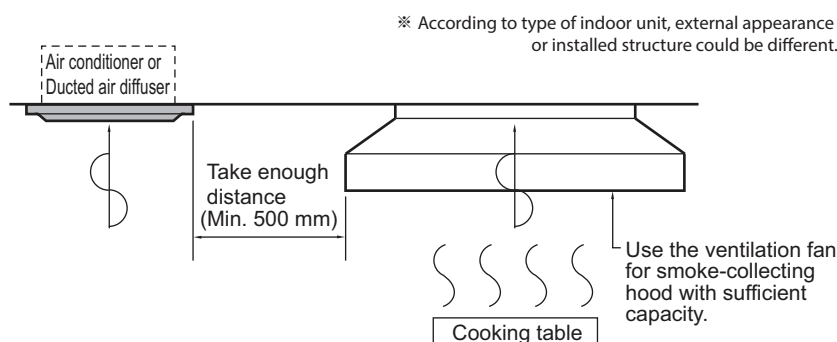
## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)



### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



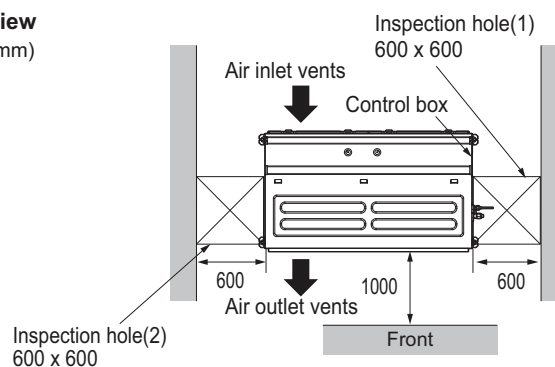
## 8. Installation

2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

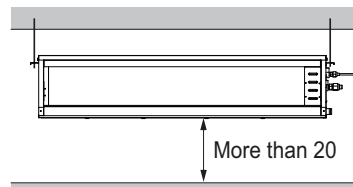
### ⚠ CAUTION

- If the temperature rise above 30 °C or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.

**Top view**  
(Unit: mm)



**Front view**  
(Unit: mm)



\* These figures are representative.  
Actual appearance of indoor unit  
may be different but clearances  
will stay the same.

### ◆ Inspection Hole Standard

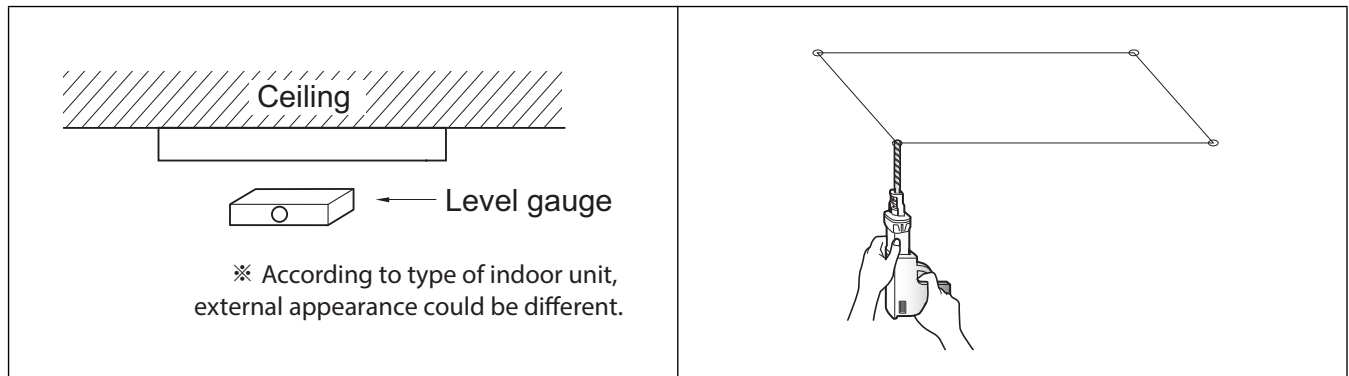
Distance between false ceiling & actual ceiling	Number of in spection hole	Remarks
More than 100cm	1	Sufficient space in the ceiling for servicing.
20cm to 100cm	2	Insufficient space. Difficult for servicing
Less than 20cm	Hole size should be more than the size of IDU.	Minimum height for motor replacement.

## 8. Installation

### 8.2 Ceiling dimension and hanging bolt location

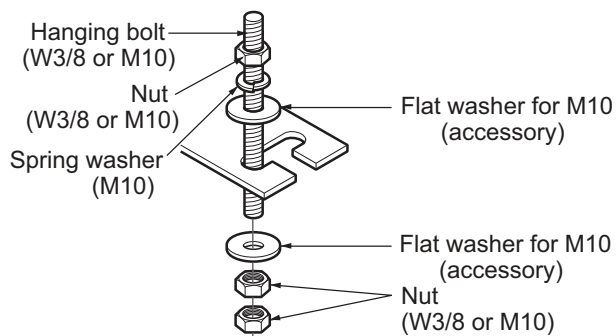
#### ⚠ CAUTION

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation

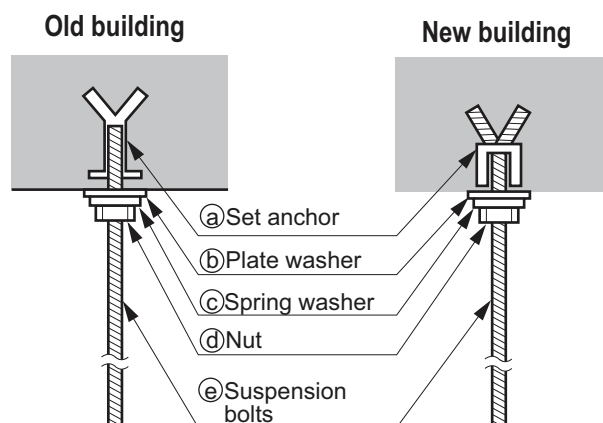


- The following parts are local purchasing.

1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### CAUTION

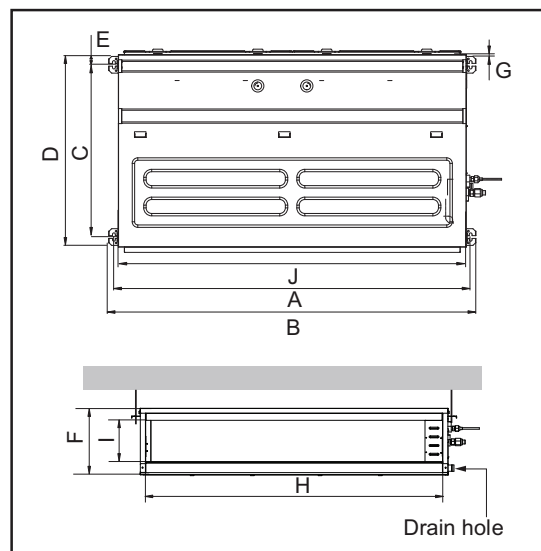
- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)



## Installation dimension of Indoor unit

### M1/M2/M3 Chassis

\* According to product type, model line up, sales region...etc, applicability of each chassis could be different.



Chassis name	Dimension (mm)									
	A	B	C	D	E	F	G	H	I	J
M1	933.4	971.6	619.2	700	30	270	15.2	858	201.4	900
M2	1,283.4	1,321.6	619.2	689.6	30	270	15.2	1,208	201.4	1,250
M3	1,283.4	1,321.6	619.2	689.6	30	360	15.2	1,208	291.4	1,250



## 8. Installation

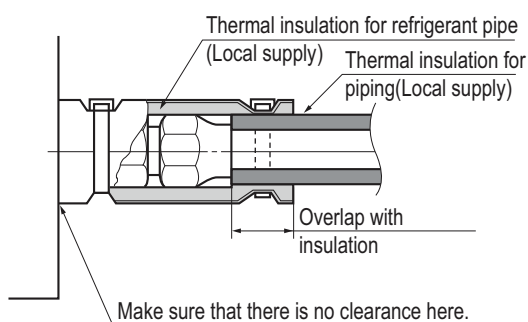
### 8.3 Connecting pipes to the indoor unit

#### ■ Refrigerant piping work

To detail information for connecting the refrigerant pipes, please refer to the installation manual included with product.

#### ■ Piping insulation work

- Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.
- Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 120°C (248°F)).
- Precautions in high humidity circumstance
  - This air conditioner has been tested according to the "KS Conditions" and confirmed.
  - If it is operated for a long time in high humid atmosphere (dew point temperature: more than 23°C(73°F)), water drops are liable to fall. In this case, add heat insulation material according to the following procedure.



- Heat insulation material : Adiabatic glass wool with thickness of 10~20mm(13/32 ~13/16 inch).
- Stick glass wool on all air conditioners that are located in ceiling atmosphere.

#### ⚠ CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

## 8. Installation

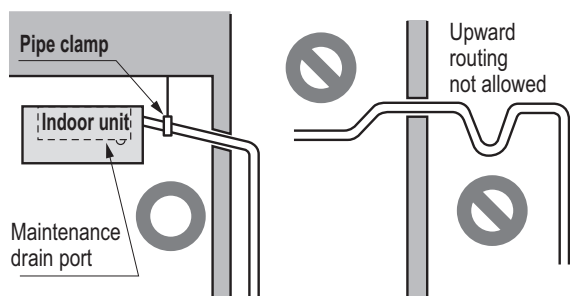
### 8.4 Indoor Unit Drain Piping

#### Important

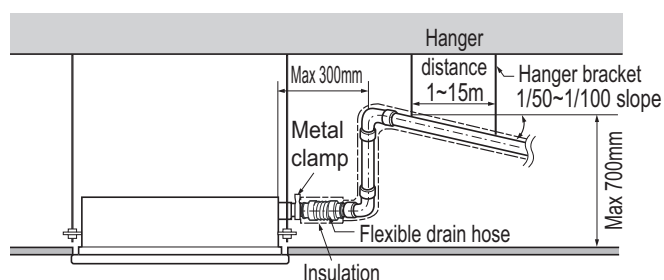
- The drain pipe should be at least equal in size to drain conduit of the indoor unit.
- The drain pipe is thermally insulated to prevent the formation of condensation inside the pipe.
- The drain up mechanism should be fitted before the indoor unit is installed and when the electricity has been connected a little of water should be added to the drain pan and the drain pump to check and see if it is functioning correctly.
- All connections should be secure. (Special care is needed with PVC pipe)

#### 8.4.1 Drain piping of indoor unit with drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
  - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.

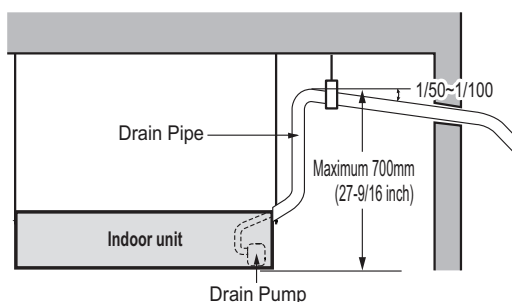


※ According to type of indoor unit, external appearance could be different.

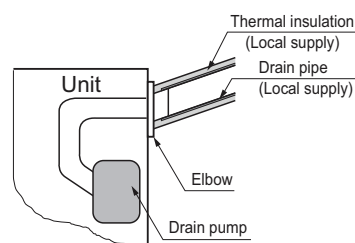


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



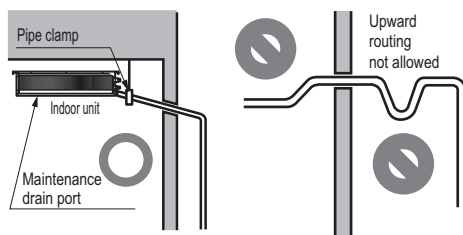
※ According to type of indoor unit, external appearance could be different.



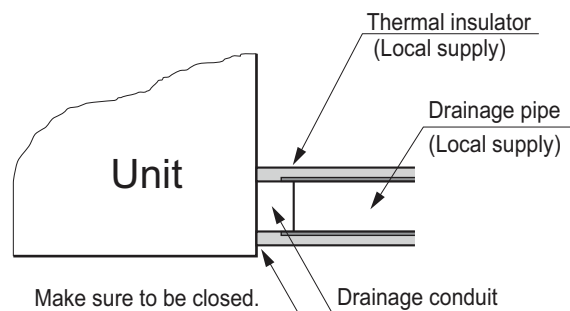
## 8. Installation

### 8.4.2 Drain pipe connection without drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit and drain piping fittings should be referenced from 'Specifications' of each models.
  - Piping material: Use the Polyvinyl chloride pipe.
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



\* U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)



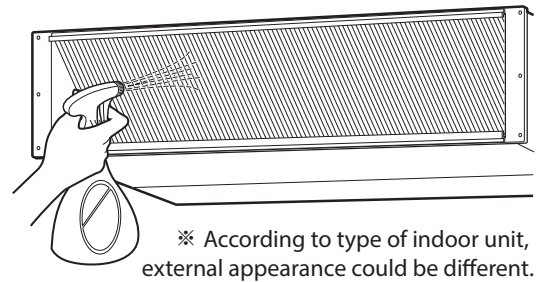
## 8. Installation

### 8.4.3 Method of Drainage test

#### ◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

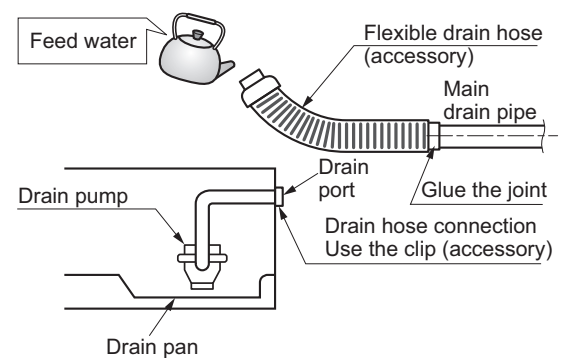
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



#### ◆ Drainage test of indoor unit with drain pump

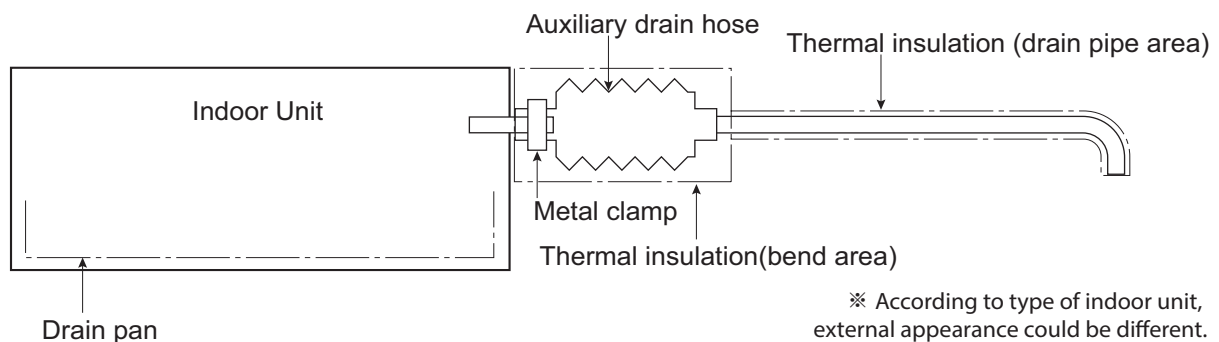
Use the following procedure to test the drain pump operation.

1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.



### 8.4.4 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



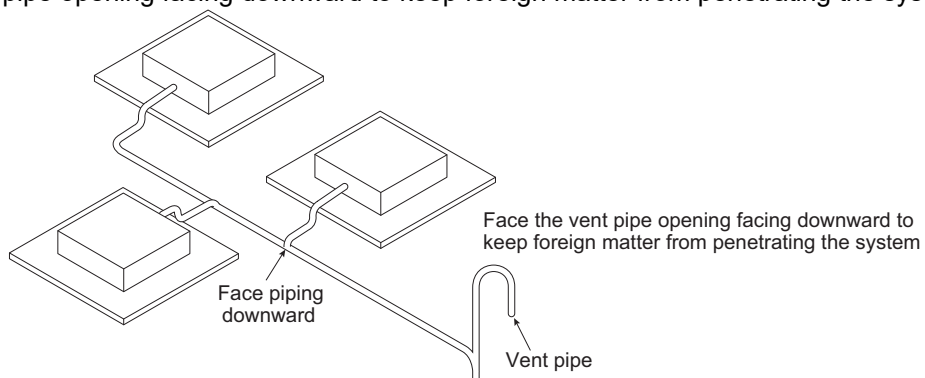
#### ⚠ CAUTION

- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

## 8. Installation

### 8.4.5 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



## 8. Installation

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### 8.5 Electric wiring work

#### 8.5.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.5.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.5.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

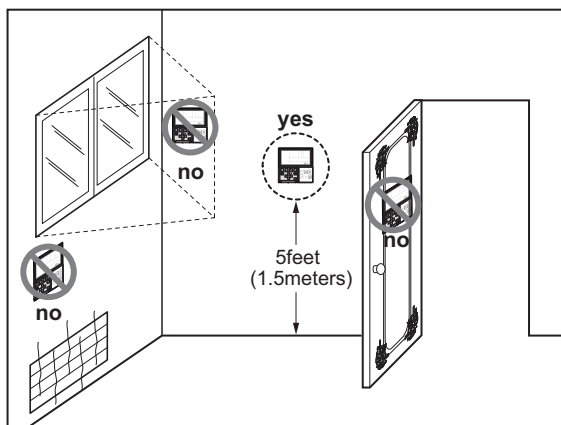
### **! WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.5.4 Wired Remote Controller Installation

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE**

Indoor unit

## **Ceiling concealed duct - Low static pressure**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.External static pressure & Air flow**
- 7.Sound Levels**
- 8.Installation**



# 1. List of functions

## ◆ List of function

Category	Functions	ZBNW09GL5A1 [CL09F N50] / ZBNW12GL5A1 [CL12F N50] ZBNW18GL6A1 [CL18F N60] / ZBNW24GL3A1 [CL24F N30]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	X
	Auto swing (left & right)	X
	Auto swing (up & down)	X
	Airflow steps (fan/cool/heat)	3 / 3 / 3
	Chaos wind(auto wind)	X
	Jet cool/heat	X / X
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	O
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	X
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	X
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZBNW09GL5A1 [CL09F N50] ZBNW12GL5A1 [CL12F N50] ZBNW18GL6A1 [CL18F N60] ZBNW24GL3A1 [CL24F N30]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O***
		PWLSSB21H	Heat Pump	O***
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
		PDRYCB400	2 Points Dry Contact (For Setback)	O
	Communication type	PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	O
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X
	Drain Pump	ABDPG	-	O (Embedded)
<b>Note</b> 1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product. 2. * : Some advanced functions controlled by individual controller cannot be operated. 3. ** : It could not be operated some functions. 4. *** : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal. 5. If you need more detail, please refer to the <b>BECON</b> PDB or the manual of product. ( <a href="http://partner.lge.com/global">http://partner.lge.com/global</a> : Home> Doc.Library> Product > Control(BECON))				

## 2. Specifications

Model Name			Unit	ZBNW09GL5A1 [CL09F N50]	ZBNW12GL5A1 [CL12F N50]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input		H / M / L	W	21 / 15 / 13	21 / 15 / 13
Running Current		H / M / L	A	0.21 / 0.16 / 0.14	0.21 / 0.16 / 0.14
		Max.	A	0.80	0.80
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions		W x H x D	mm	900 x 190 x 460	900 x 190 x 460
Net Weight			kg	18.0	18.0
Shipping Weight			kg	22.0	22.0
Heat Exchanger	Rows x Columns x FPI x No.			(2 × 6 × 18) x 2	(2 × 6 × 18) x 2
	Face Area		m²	0.17	0.17
Fan Type				Sirocco	Sirocco
Air Flow Rate		H / M / L	m³/min	11.5 / 9.5 / 8.0	11.5 / 9.5 / 8.0
External static pressure	High Mode_Factory Set		Pa (mmAq)	0.0 (0.0)	0.0 (0.0)
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	(19 x 1) + (5 x 1)	(19 x 1) + (5 x 1)
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 26.0	Ø 32.0 / 26.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	35 / 30 / 27	35 / 30 / 27
	Heating	H / M / L	dB(A)	35 / 30 / 27	35 / 30 / 27
Sound Power Level	Cooling	Rated	dB(A)	55	55
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741)).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

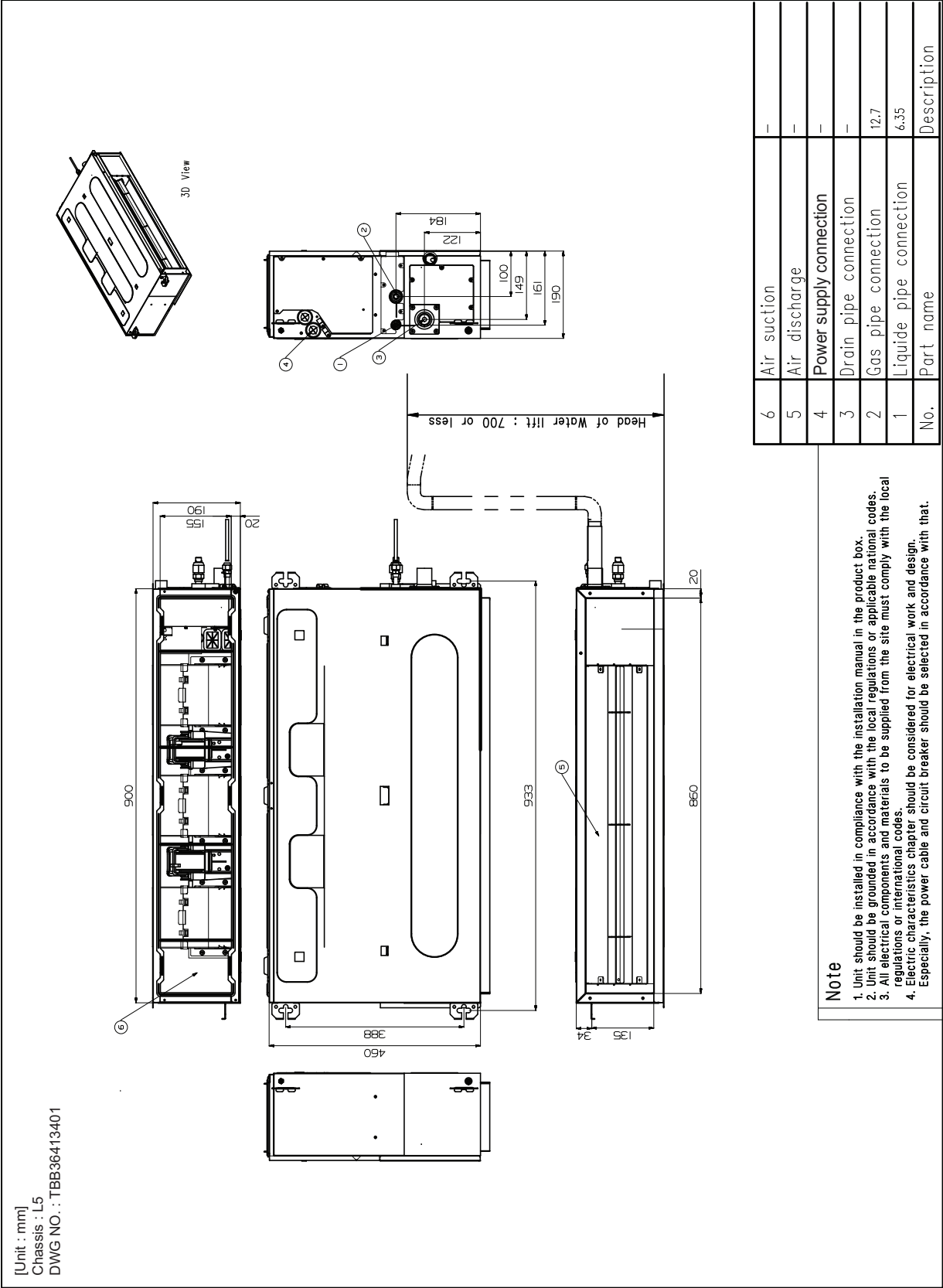
Model Name			Unit	ZBNW18GL6A1 [CL18F N60]	ZBNW24GL3A1 [CL24F N30]
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	H / M / L		W	100 / 90 / 80	150 / 130 / 110
Running Current	H / M / L		A	0.43 / 0.39 / 0.34	0.65 / 0.56 / 0.47
	Max.		A	1.00	1.00
Exterior	Color		-	Steel Gray	Steel Gray
Dimensions	W x H x D		mm	1,100 x 190 x 460	1,100 x 190 x 700
Net Weight			kg	20.9	26.0
Shipping Weight			kg	24.5	32.0
Heat Exchanger	Rows x Columns x FPI x No.			(2 × 6 × 18) x 2	(3 x 11 x 18) x 1
	Face Area		m²	0.22	0.22
Fan Type				Sirocco	Sirocco
Air Flow Rate		H / M / L	m³/min	15.0 / 12.0 / 10.0	20.0 / 16.0 / 12.0
External static pressure	High Mode_Factory Set		Pa (mmAq)	0.0 (0.0)	24.5 (2.5)
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	19 x 2	19 x 2
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	Ø 32.0 / 26.0	Ø 32.0 / 26.0
Sound Pressure Level	Cooling	H / M / L	dB(A)	34 / 31 / 29	39 / 35 / 32
	Heating	H / M / L	dB(A)	34 / 31 / 29	39 / 35 / 32
Sound Power Level	Cooling	Rated	dB(A)	56	58
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

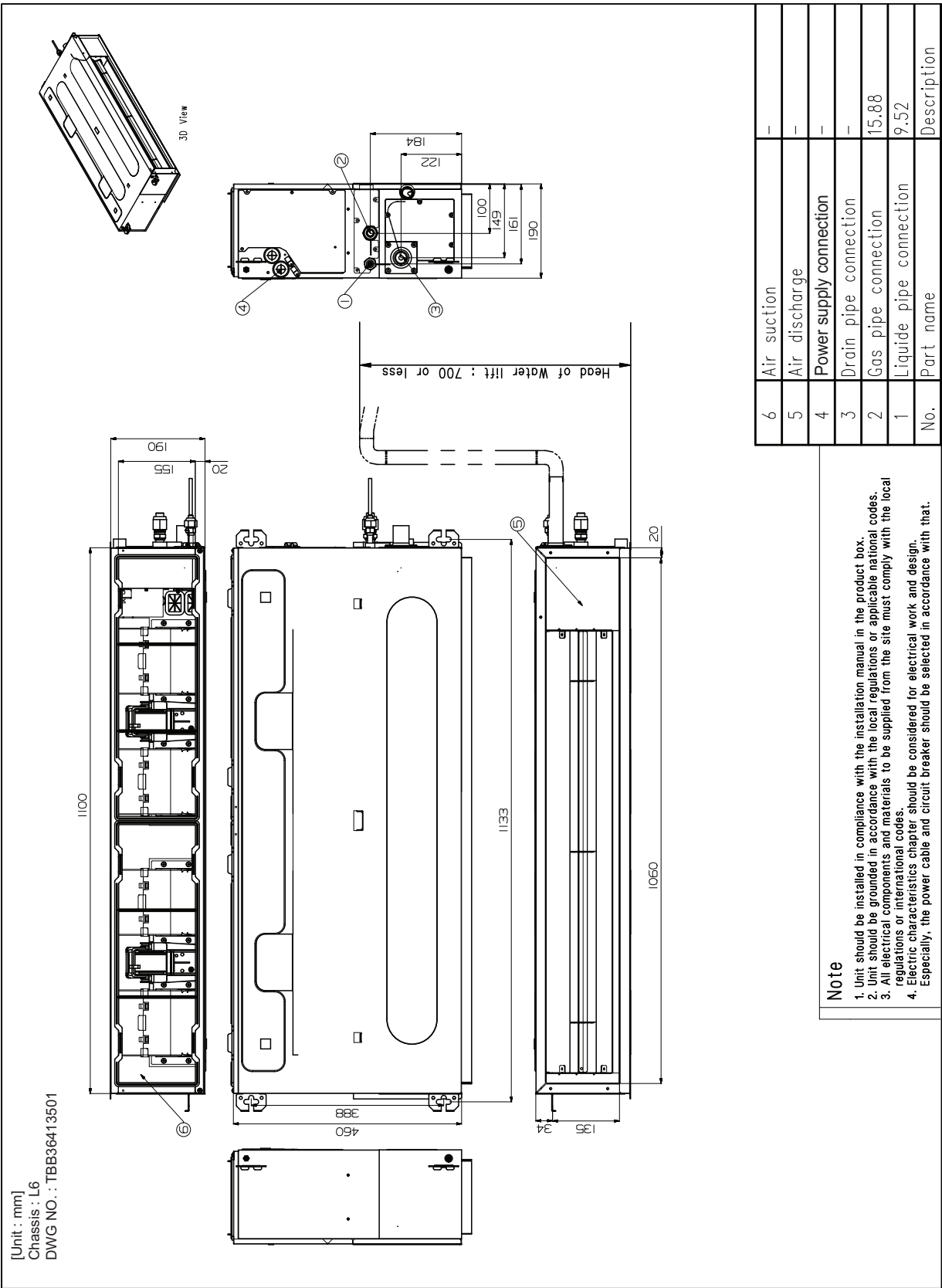
3. Dimensions

ZBNW09GL5A1 [CL09F N50] / ZBNW12GL5A1 [CL12F N50]



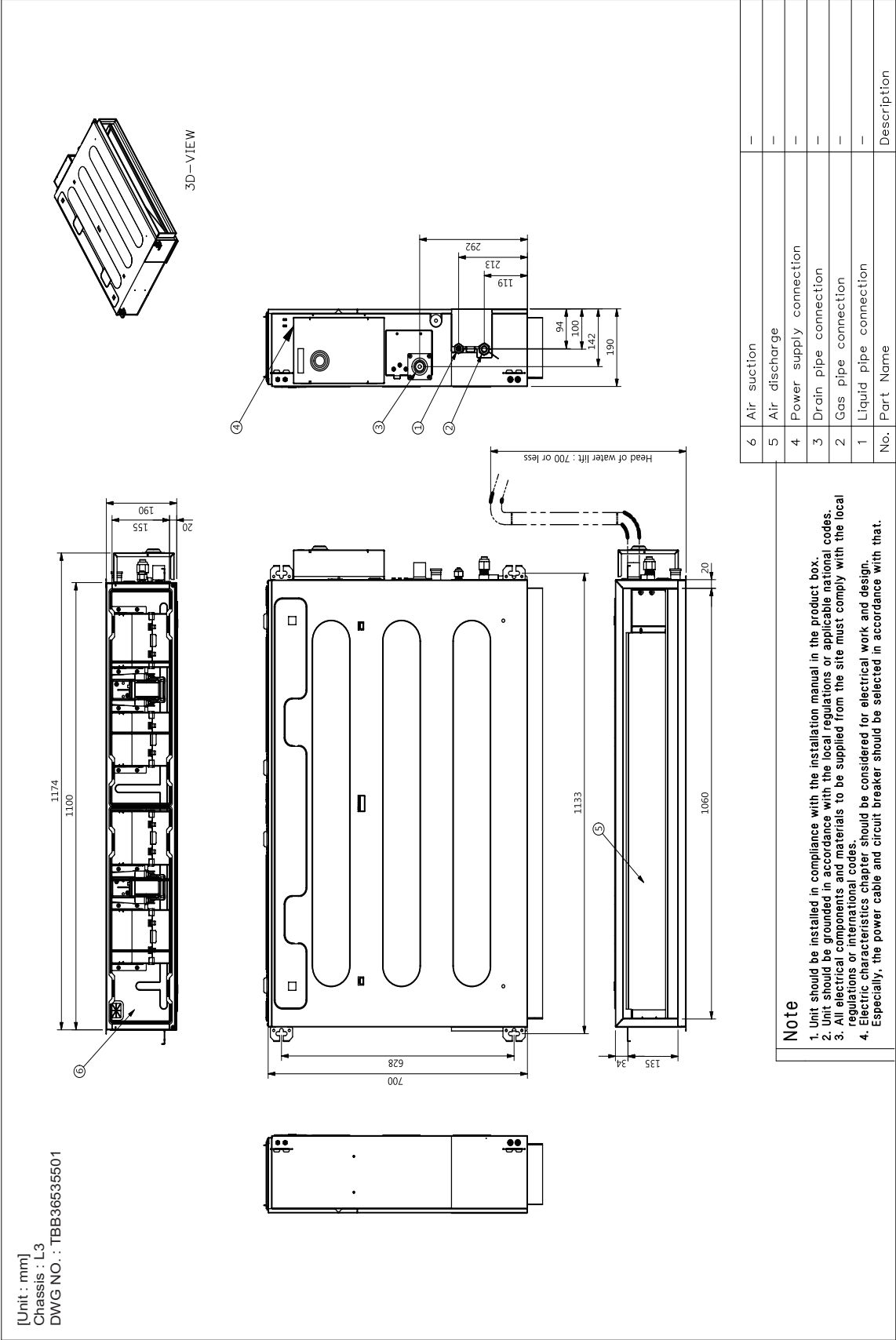
3. Dimensions

■ ZBNW18GL6A1 [CL18F N60]



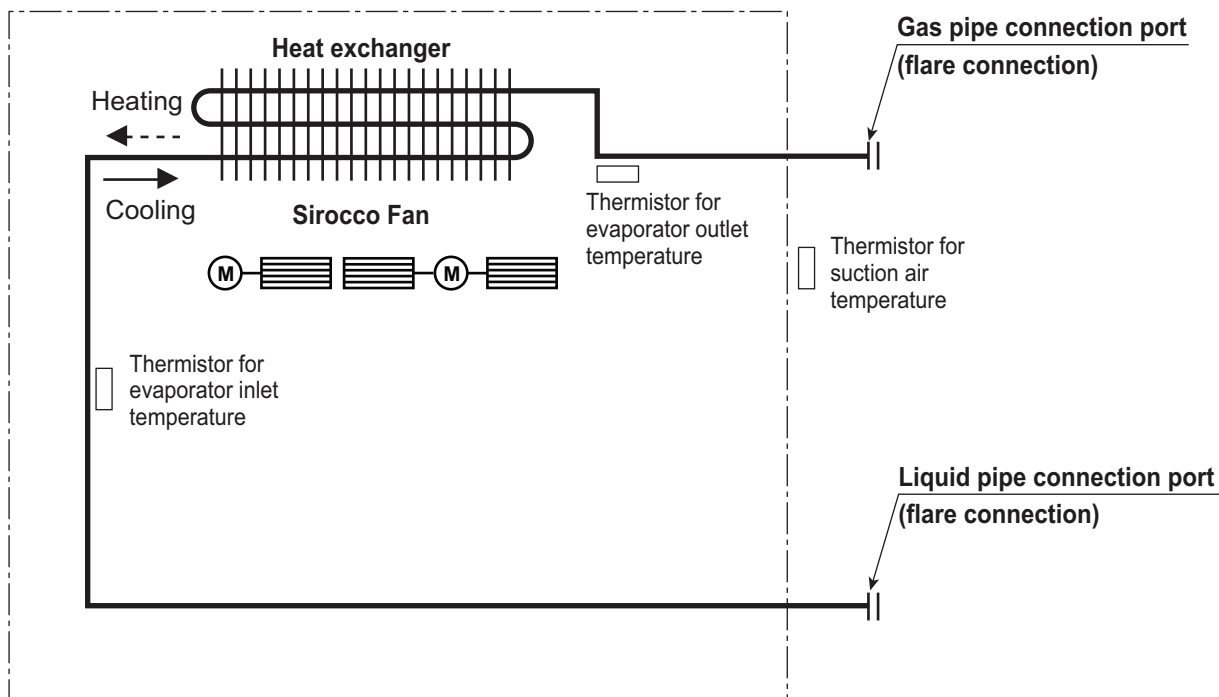
3. Dimensions

ZBNW24GL3A1 [CL24F N30]



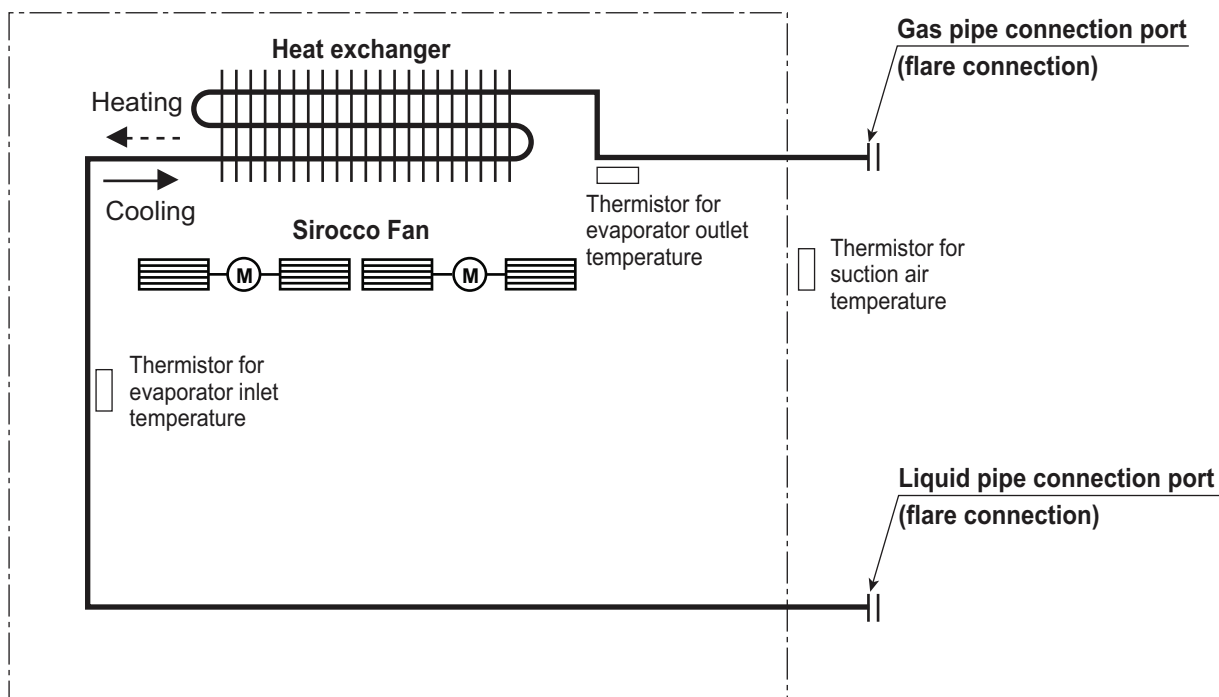
## 4. Piping Diagrams

### ■ ZBNW09GL5A1 [CL09F N50] / ZBNW12GL5A1 [CL12F N50]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT

### ■ ZBNW18GL6A1 [CL18F N60] / ZBNW24GL3A1 [CL24F N30]

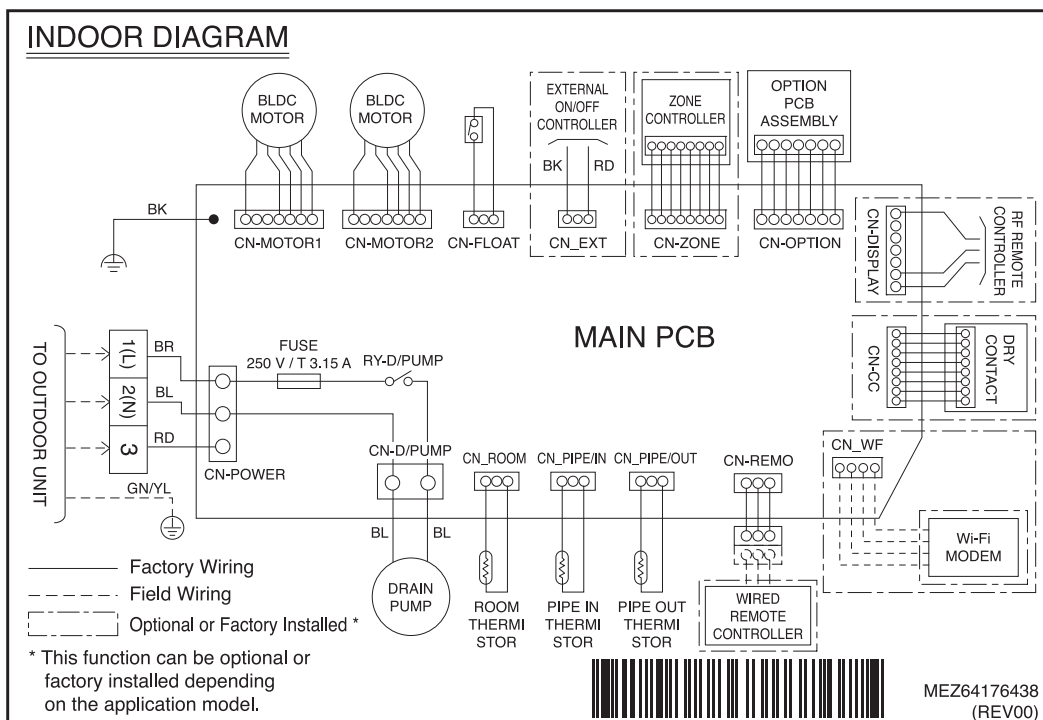


Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT

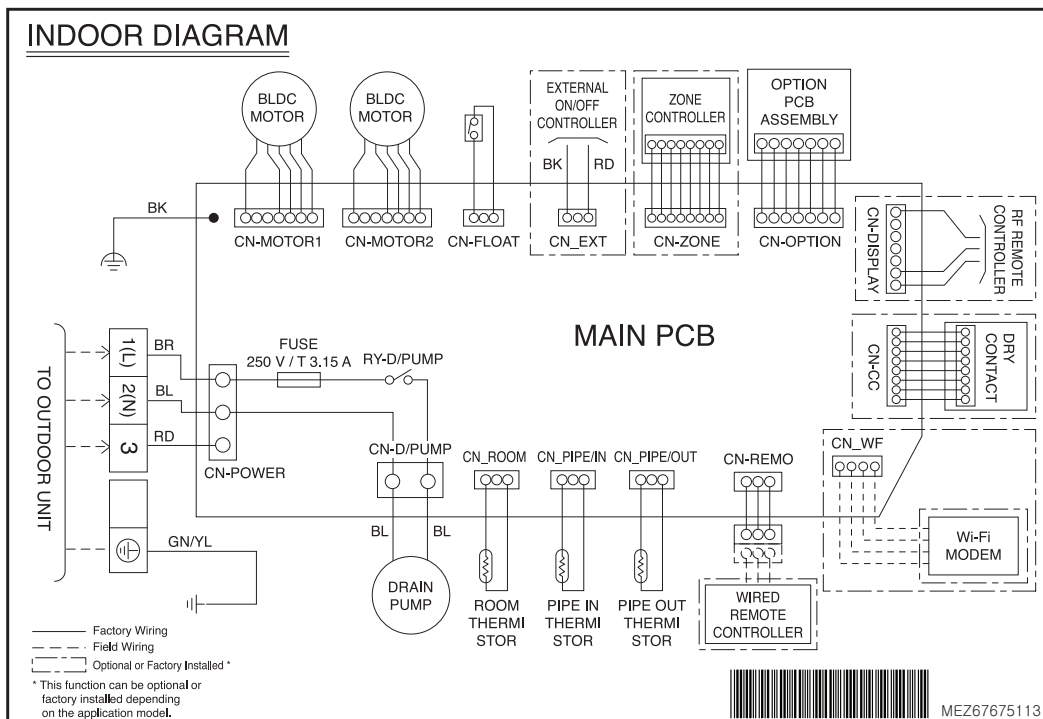


## 5. Wiring Diagrams

### ◆ ZBNW09GL5A1 [CL09F N50] / ZBNW12GL5A1 [CL12F N50] ZBNW24GL3A1 [CL24F N30]



### ◆ ZBNW18GL6A1 [CL18F N60]



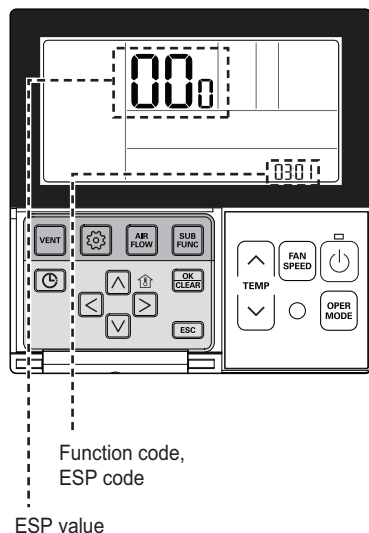
## 6. External Static Pressure & Air Flow

### How to Set E.S.P. on the remote controller?

#### Wired Remote Controller (Standard II)

This is the function that decides the strength of the wind for each wind level and because this function is to make the installation easier.

- If you set ESP incorrectly, the air conditioner may malfunction.
- This setting must be carried out by a certificated-technician.



<p><b>1</b> If pressing  button long for 3 seconds, it enters into remote controller setter setup mode. - If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.</p>	<p><b>4</b> Move to ESP value setting by pressing  button. (It is 000 when delivering from the warehouse.)</p>
<p><b>2</b> If entering into ESP setup mode by using  button, it indicates as the picture below.</p>	<p><b>5</b> Press   button to setup ESP value. (It is possible to setup ESP value from 1 to 255, and 1 is the smallest and 255 is the biggest.)</p>
<p><b>3</b> Select ESP fan step by pressing   button. (01: very low, 02: low, 03: medium, 04: high, 05: very high)</p>	<p><b>6</b> Select ESP fan step again by using   button and setup ESP value, as No. 4 and 5, that corresponds each wind flow</p> <p><b>7</b> Press  button to save.</p>
	<p><b>8</b> Press  button to exit. * After setup, it automatically gets out of setup mode if there is no button input for 25 seconds. * When exiting without pressing set button, the manipulated value is not reflected.</p>

- When setting ESP value on the product without very weak wind or power wind function, it may not work.
- Please be careful not to change the ESP value for each fan step.
- It does not work to setup ESP value for very low/power step for some products.
- ESP value is available for specific range belongs to the product.

## 6. External Static Pressure & Air Flow

### Wired Remote Controller (Standard III)

Static pressure setting can be set only in the duct products. (It cannot be set in other products.)

- You can set the following setting values using [<,>(left/right)] button.

Installer	Back OK OK
Ceiling Height Selection	< LOW >
Static Pressure	< V-H >
RMC Master/Slave	< Master >
Override Master/Slave	< Slave >
Dry Contact Mode	< Auto >

Static pressure		Description	
		Variable / Fixed	ESP default value
Variable high static pressure	V-H	Variable	High static pressure(High)
Fixed high static pressure	F-H	Fixed	High static pressure(High)
Variable low static pressure	V-L	Variable	Low static pressure(Low)
Fixed low static pressure	F-L	Fixed	Low static pressure(Low)

- 2TH function's operation characteristics may be different for each product.

## 6. External Static Pressure & Air Flow

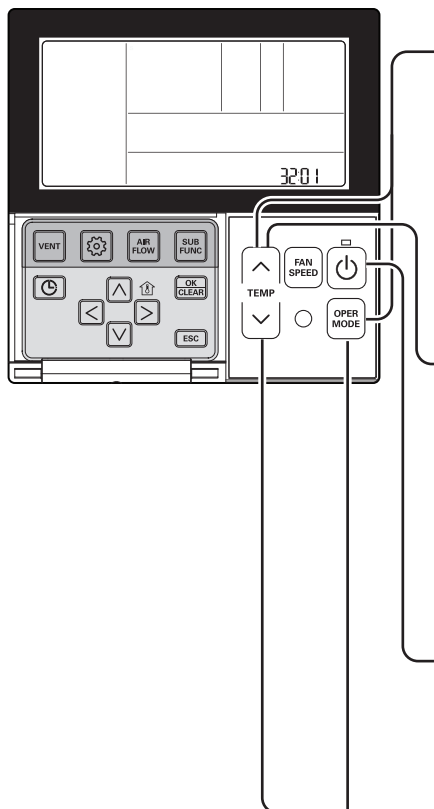
### ■ Installer Setting - Static Pressure Step Setting

#### Wired Remote Controller (Standard II)

This function is applied to only duct type. Setting this in other cases will cause malfunction.

This function is only available on some products.

This is the function that static pressure of the product is divided in 11 steps for setting.



**1** When pressing the button and button simultaneously for more than 3 seconds, the system will be entered into the installer setting mode.  
- After entering into the installer setting mode, select the static pressure step setting code value by pressing the button.  
\* Static pressure step setting code value : 32

**2** Select the desired setting value with the temperature up(▲), down(▼) button.

Function Code   Existing condition  
 00: use static pressure (code 06) set value  
 01~ 11: static pressure step (code 32) set value

**3** When pressing button, currently established static pressure value will be set up.

**4** When pressing the button and button simultaneously for more than 3 seconds after the setting has been completed, the setting mode will be released.  
- If there isn't any button input for more than 25 seconds, the installer setting mode will also be released.

- Static Pressure (Code 06) setting will not be used if Static Pressure Step (Code 32) setting is being used.
- For the static pressure value for each step, refer to the next page Table. 1

## 6. External Static Pressure & Air Flow

### Wired Remote Controller (Standard III)

It is the function to subdivide and set the product's static pressure to 11 stages.

- Change setting values using [**<**,**>**](left/right)] button.

Installer	Back OK OK
Static Pressure Step	< Step 0 >
Guard Timer	< Step 0 >
Fan Speed In Cooling Thermal Off	< Low >
Primary Heater	< Not Use >
AC Fan Oper. Interlocked With Vent	< On >

Value
Step 0 ~ Step 11

#### ! NOTE

If Static pressure step setting is used, the Static pressure setting is not used.  
For the Static pressure step value for each stage, refer to the indoor unit product manual

## 6. External Static Pressure & Air Flow

■ Table 1

Model	Step	CMM	Static Pressure[mmAq(Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ZBNW09GL5A1 [CL09F N50]	LOW	8.0	76	87	96	106	116	116
ZBNW12GL5A1 [CL12F N50]	MID	9.5	87	96	106	114	120	120
	HIGH	11.5	101	109	118	125	130	130

Model	Step	CMM	Static Pressure[mmAq(Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ZBNW18GL6A1 [CL18F N60]	LOW	10.0	82	87	90	96	106	116
	MID	12.5	92	98	105	109	119	128
	HIGH	15.0	100	106	112	122	129	137

Model	Step	CMM	Static Pressure[mmAq(Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ZBNW24GL3A1 [CL24F N30]	LOW	12.0	89	95	102	106	120	130
	MID	16.0	102	108	115	125	131	139
	HIGH	20.0	125	131	136	141	142	147

## 6. External Static Pressure & Air Flow

■ Table 2

◆ ZBNW09GL5A1 [CL09F N50] / ZBNW12GL5A1 [CL12F N50]

Setting Value	Static Pressure [mmAq(Pa)]					
	0 (0)	1 (10)	2 (20)	3 (30)	4 (40)	5 (50)
	Air Flow Rate [m³/min]					
75	8.00	6.72	-	-	-	-
80	8.70	7.31	6.26	-	-	-
85	9.35	7.94	6.81	5.77	-	-
90	9.95	8.63	7.40	6.28	5.27	-
95	10.70	9.38	8.04	6.82	5.73	4.93
100	11.50	10.09	8.74	7.41	6.23	5.36
105	12.08	10.85	9.50	8.06	6.77	5.82
110	12.68	11.54	10.26	8.95	7.36	6.33
115	-	12.12	11.08	9.73	8.00	6.88
120	-	-	11.63	10.58	9.50	7.97
125	-	-	-	11.50	10.58	9.42
130	-	-	-	-	11.50	10.47

◆ ZBNW18GL6A1 [CL18F N60] / ZBNW24GL3A1 [CL24F N30]

Setting Value	Static Pressure [mmAq(Pa)]					
	0 (0)	1 (10)	2 (20)	3 (30)	4 (40)	5 (50)
	Air Flow Rate [m³/min]					
85	10.19	-	-	-	-	-
90	12.18	10.71	11.09	-	-	-
95	13.81	12.34	12.19	-	-	-
100	15.16	13.69	13.38	10.71	-	-
105	16.30	14.83	14.36	11.85	-	-
110	17.31	15.85	15.23	12.86	10.97	-
115	18.27	16.80	16.07	13.82	11.93	-
120	19.26	17.79	16.93	14.80	12.91	10.49
125	20.34	18.87	17.89	15.88	13.99	11.57
130	21.60	20.13	19.01	17.14	15.25	12.83
135	-	21.64	20.36	18.66	16.76	14.35
140	-	-	22.01	20.50	18.61	16.19
145	-	-	-	22.75	20.86	18.44

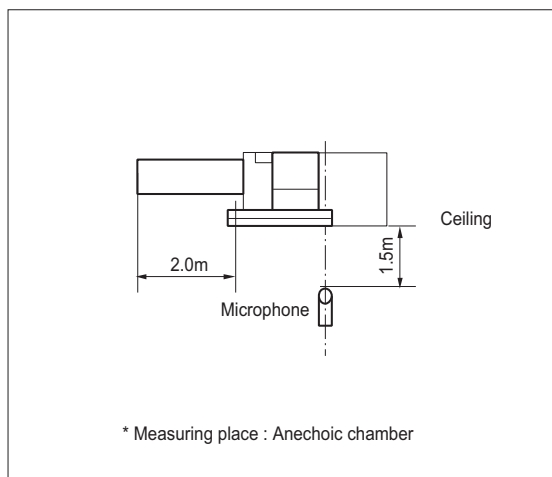
**Note**

1. The above table shows the correlation between the air rates and E.S.P.

## 7. Sound Levels

### 7.1 Sound Pressure Level

#### Overall

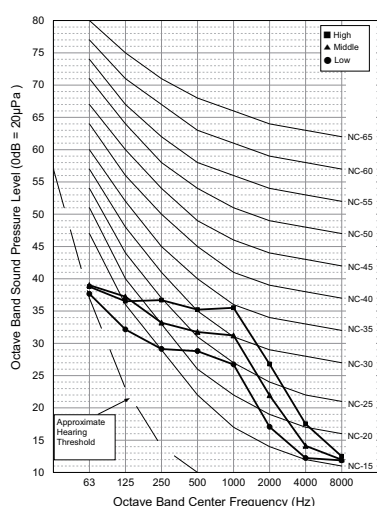


#### Note

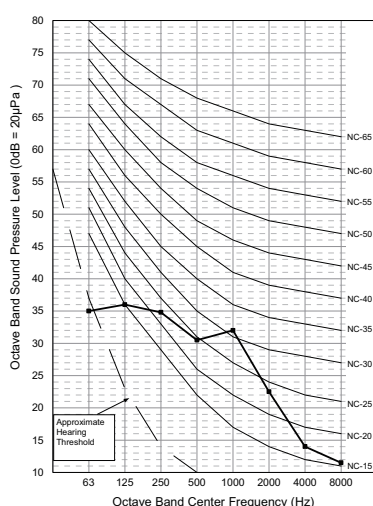
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound Level [dB(A)]		
	H	M	L
ZBNW09GL5A1 [CL09F N50] ZBNW12GL5A1 [CL12F N50]	35	30	27
ZBNW18GL6A1 [CL18F N60]	34	31	29
ZBNW24GL3A1 [CL24F N30]	39	35	32

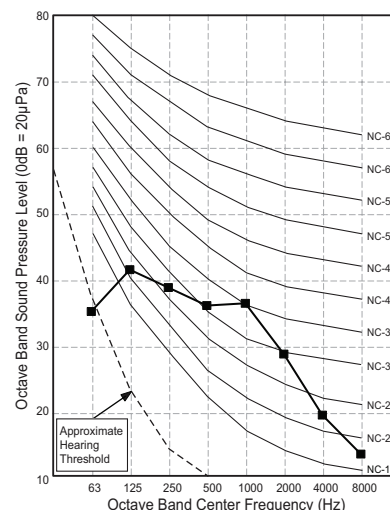
**ZBNW09GL5A1 [CL09F N50]  
ZBNW12GL5A1 [CL12F N50]**



**ZBNW18GL6A1 [CL18F N60]**



**ZBNW24GL3A1 [CL24F N30]**





## 7. Sound Levels

### 7.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

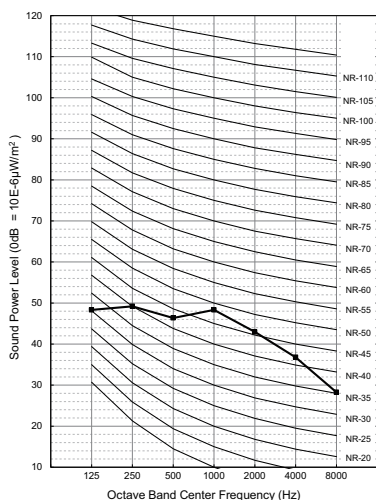
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>

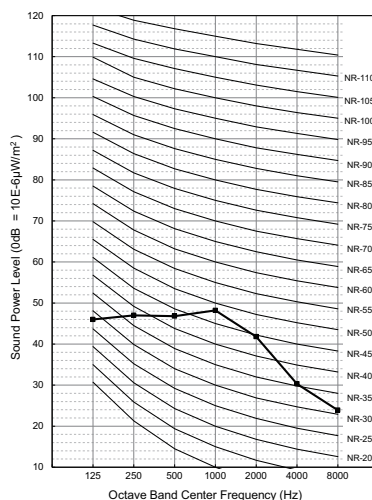
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
	Cooling
ZBNW09GL5A1 [CL09F N50] ZBNW12GL5A1 [CL12F N50]	55
ZBNW18GL6A1 [CL18F N60]	56
ZBNW24GL3A1 [CL24F N30]	58

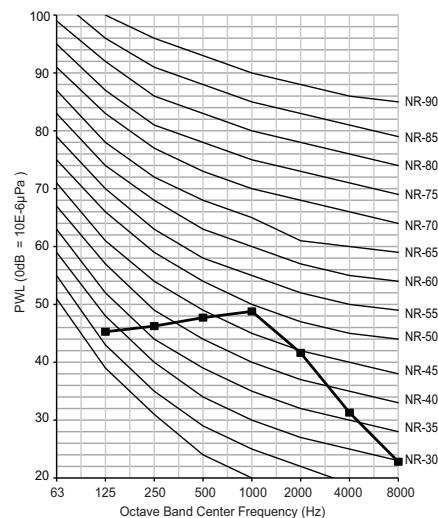
**ZBNW09GL5A1 [CL09F N50]  
ZBNW12GL5A1 [CL12F N50]**



**ZBNW18GL6A1 [CL18F N60]**



**ZBNW24GL3A1 [CL24F N30]**

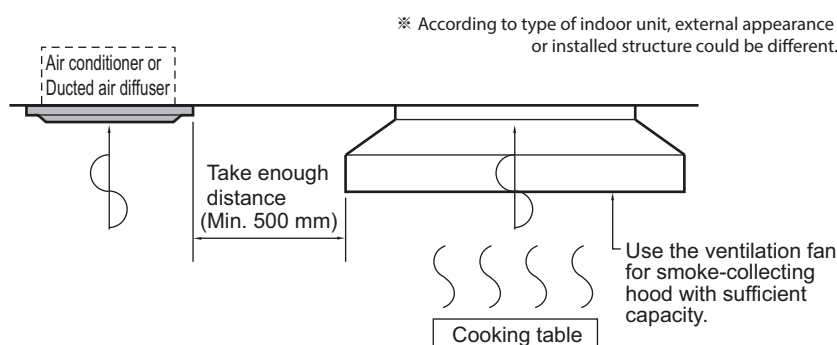


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



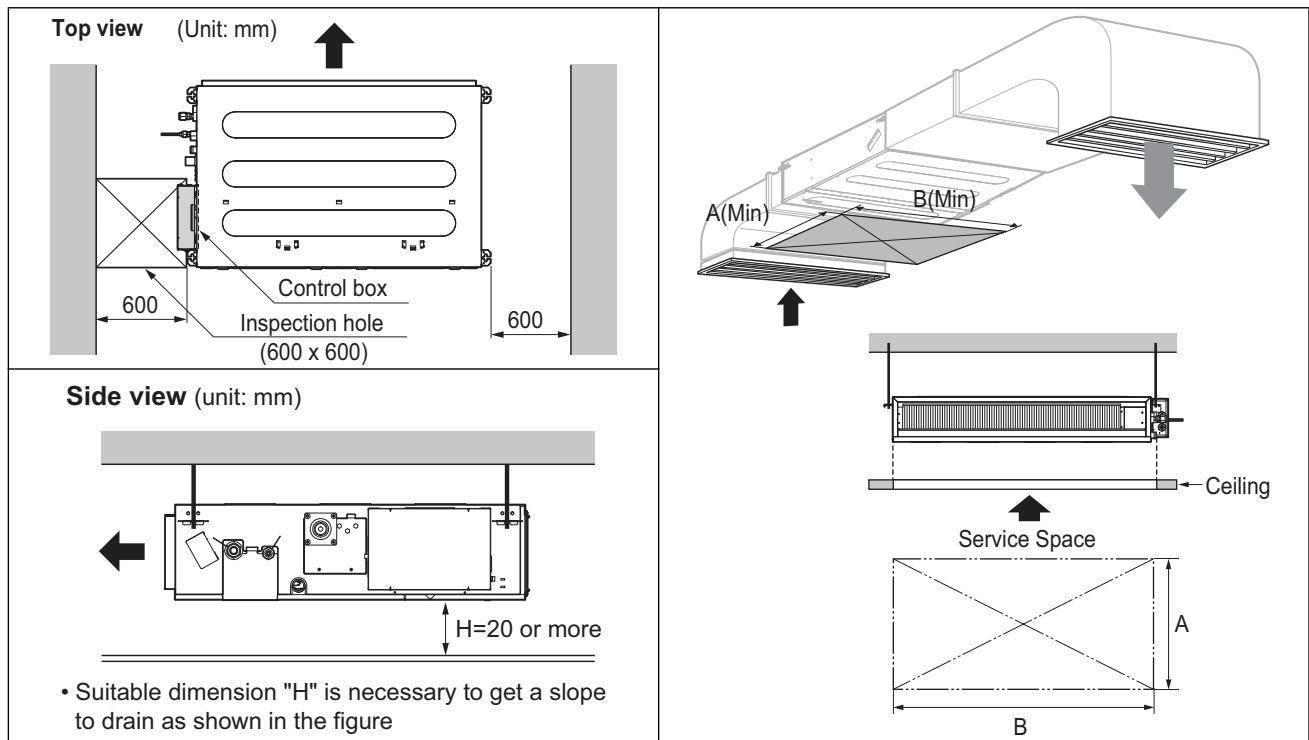
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

## 8. Installation

### ⚠ CAUTION

- If the temperature rise above 30℃ or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.

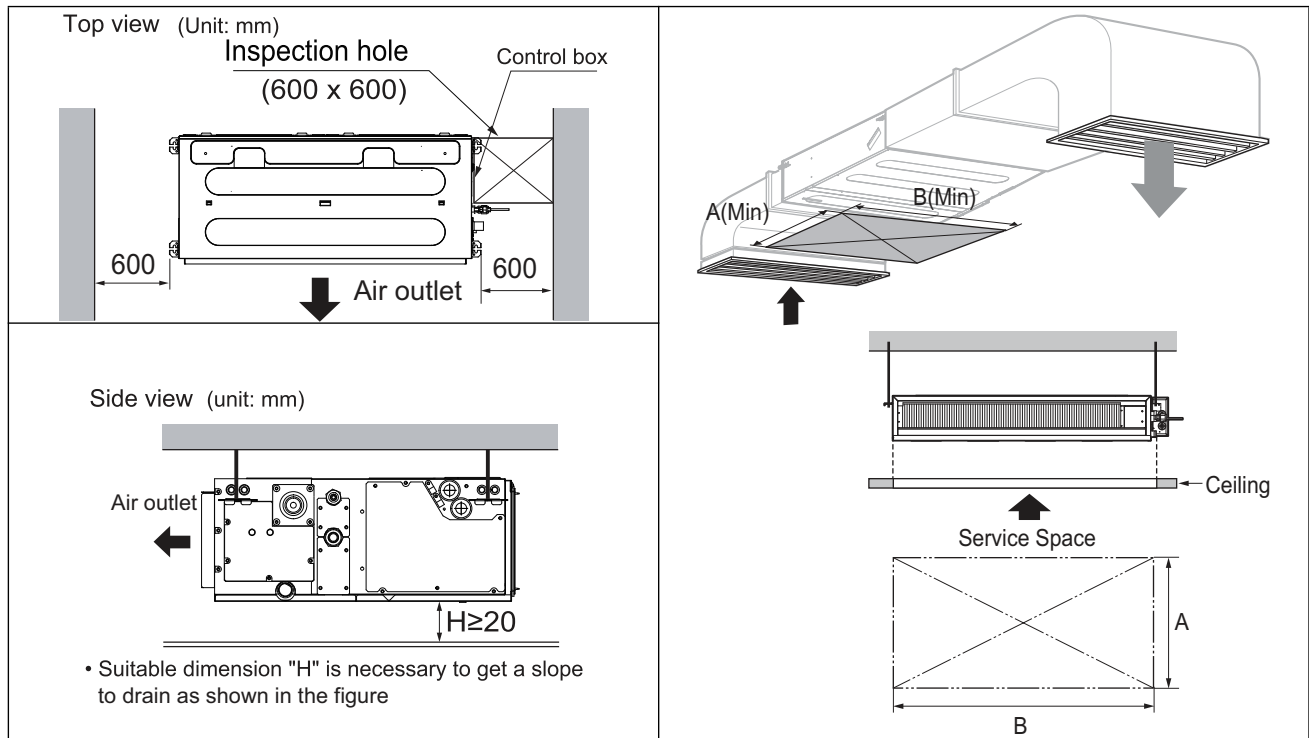
### ◆ L1 / L2 / L3



Chassis code	A [mm]	B [mm]
L1	800	800
L2	800	1,000
L3	800	1,200

## 8. Installation

### ◆ L4 / L5 / L6



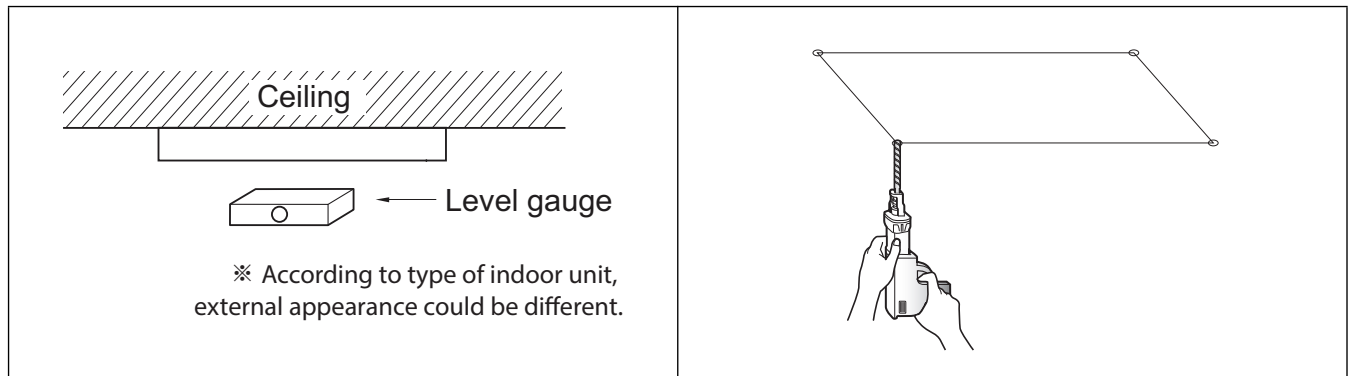
Chassis code	A [mm]	B [mm]
L4	600	800
L5	600	1,000
L6	600	1,200

## 8. Installation

### 8.2 Ceiling dimension and hanging bolt location

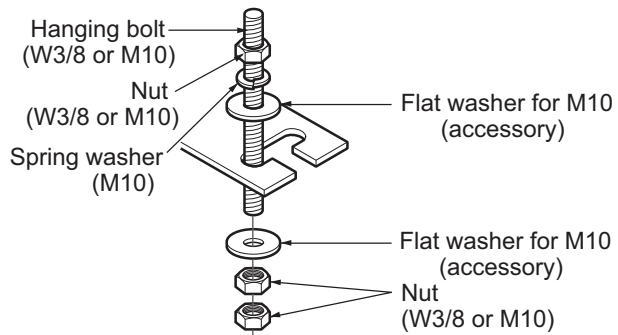
#### ⚠ CAUTION

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation

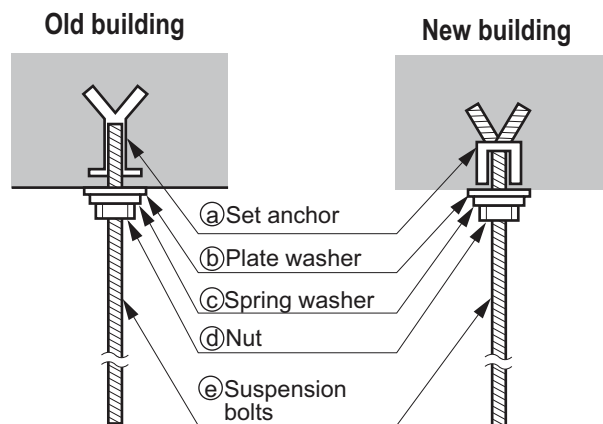


- The following parts are local purchasing.

1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### ⚠ CAUTION

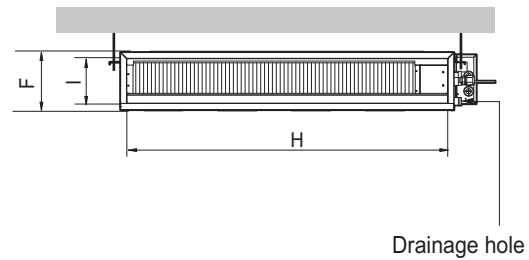
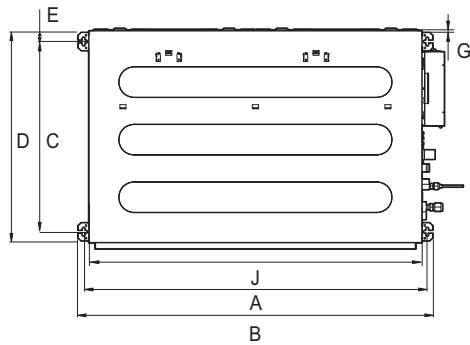
- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)



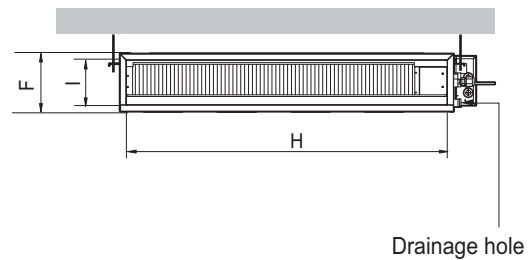
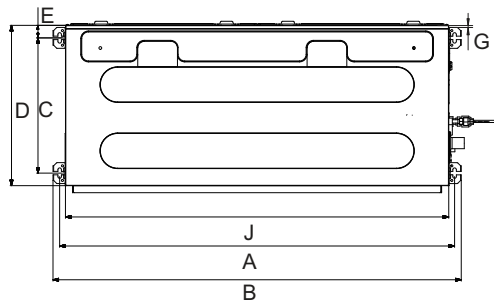
## 8. Installation

### ■ Installation of Unit

Install the unit above the ceiling correctly.



Chassis	Dimension (mm)									
	A	B	C	D	E	F	G	H	I	J
L1	733	772	628	700	36	190	20	660	155	700
L2	933	972	628	700	36	190	20	860	155	900
L3	1,133	1,172	628	700	36	190	20	1,060	155	1,100



Chassis	Dimension (mm)									
	A	B	C	D	E	F	G	H	I	J
L4	733	772	338	460	36	190	20	660	148	700
L5	933	972	338	460	36	190	20	860	148	900
L6	1,133	1,172	338	460	36	190	20	1,060	148	1,100

## 8. Installation

### 8.3 Connecting cables between Indoor Unit and Outdoor Unit

#### 8.3.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.3.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.3.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.



## 8. Installation

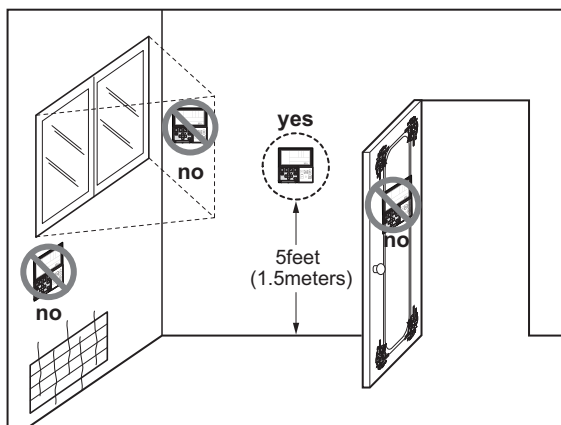
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.3.4 Wire Remote Controller Installation (Optional)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

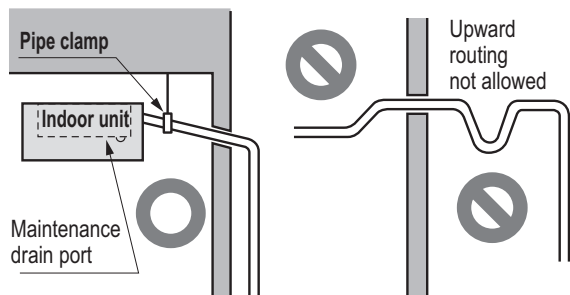
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

## 8. Installation

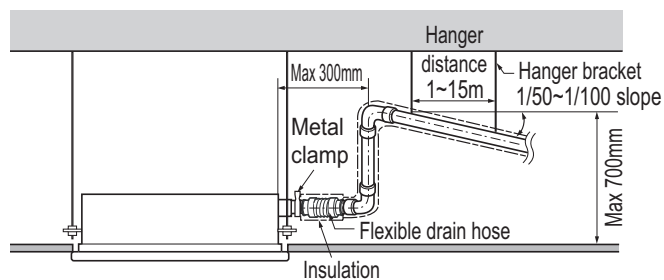
### 8.4 Indoor Unit Drain Piping

#### 8.4.1 Drain piping of indoor unit with drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
  - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.

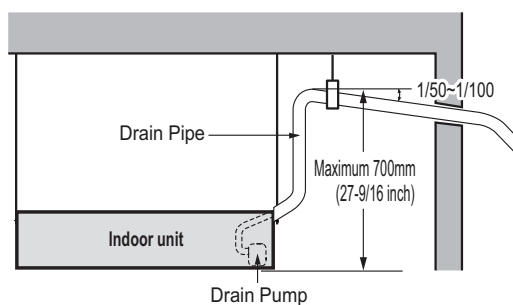


※ According to type of indoor unit, external appearance could be different.

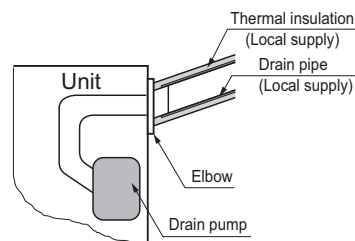


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



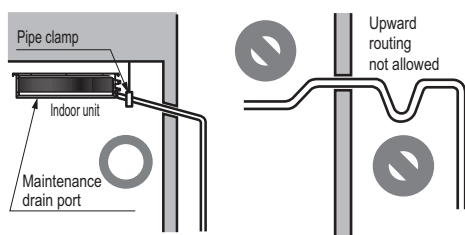
※ According to type of indoor unit, external appearance could be different.



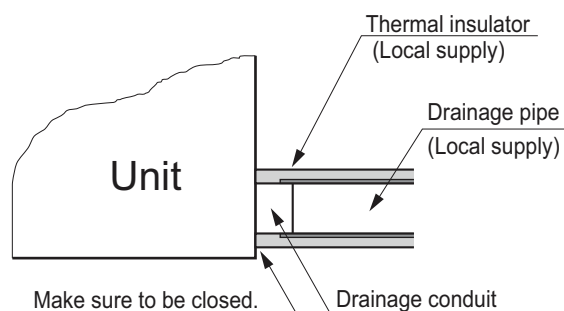
## 8. Installation

### 8.4.2 Drain pipe connection without drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit and drain piping fittings should be referenced from 'Specifications' of each models.
  - Piping material: Use the Polyvinyl chloride pipe.
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



\* U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)



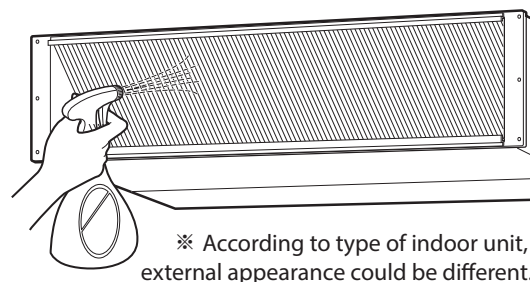
## 8. Installation

### 8.4.3 Method of Drainage test

#### ◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

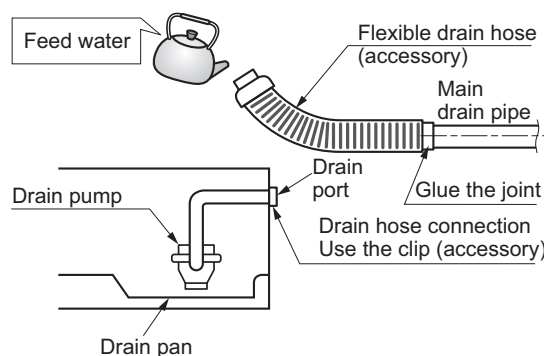
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



#### ◆ Drainage test of indoor unit with drain pump

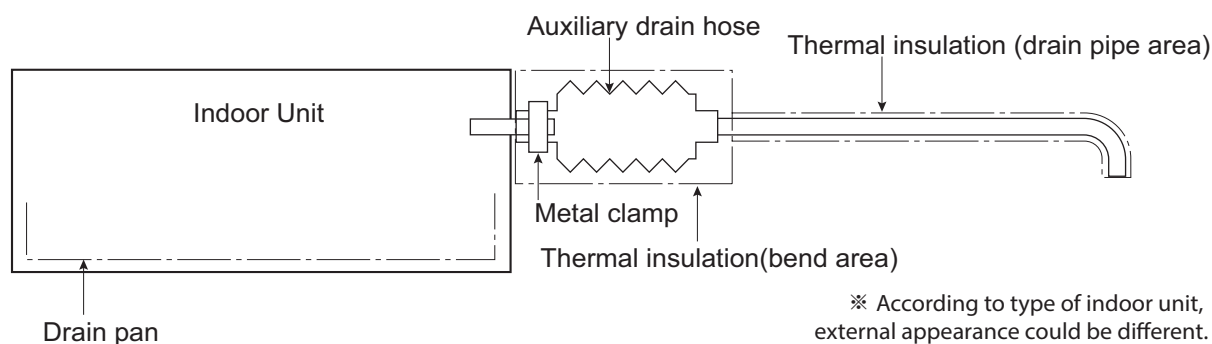
Use the following procedure to test the drain pump operation.

1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.



### 8.4.4 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



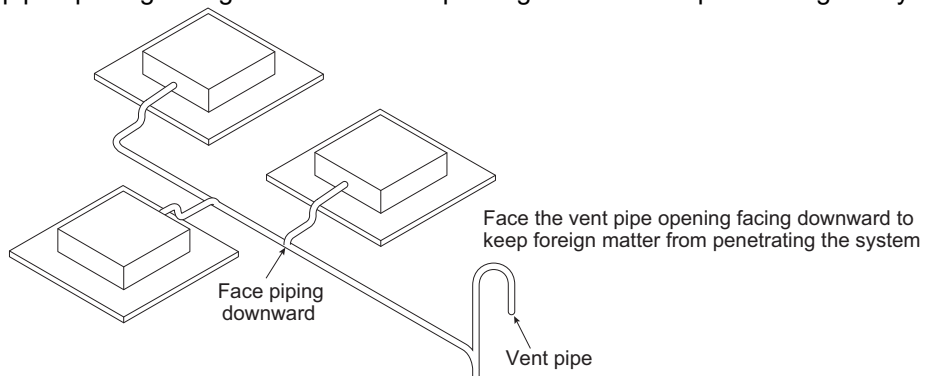
#### ⚠ CAUTION

- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

## 8. Installation

### 8.4.5 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



# **MULTI/SINGLE**

Indoor unit

## **Ceiling Suspended Unit**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZVNW18GM1A1 [UV18F N10] ZVNW24GM1A1 [UV24F N10] ZVNW30GM1A1 [UV30F N10] ZVNW36GM2A1 [UV36F N20] ZVNW42GM2A1 [UV42F N20] ZVNW48GM2A1 [UV48F N20] ZVNW60GM2A1 [UV60F N20]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 5
	Chaos wind(auto wind)	X
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O (Accessory)
	Comfort Cooling (Humidity Control)	O
Wireless Remote Controller		O**
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

### Note

1. O : Applied, X : Not applied, Embedded : Included with product.

Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

Accessory line-ups varies by region, so check your local catalogue or local sales material.

2. Some functions can be limited by remote controller.

3. Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.

4. \* : These functions need to connect to the wired remote controller.

5. \*\* : It is included by default when the product is manufactured.

6. \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZVNW18GM1A1 [UV18F N10] ZVNW24GM1A1 [UV24F N10] ZVNW30GM1A1 [UV30F N10] ZVNW36GM2A1 [UV36F N20] ZVNW42GM2A1 [UV42F N20] ZVNW48GM2A1 [UV48F N20] ZVNW60GM2A1 [UV60F N20]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	X
		PQRCHCA0Q(W)	for Hotel	X
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X
	Drain Pump	ABDPG	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \*: Some advanced functions controlled by individual controller cannot be operated.
3. \*\*: It could not be operated some functions.
4. \*\*\*: Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))



## 2. Specifications

Model Name			Unit	ZVNW18GM1A1 [UV18F N10]	ZVNW24GM1A1 [UV24F N10]
Power Supply			V , Ø , Hz	220-240 / 1 / 50	220-240 / 1 / 50
				220 / 1 / 60	220 / 1 / 60
Power Input		H / M / L	W	17 / 15 / 13	33 / 26 / 19
Running Current		H / M / L	A	0.55 / 0.54 / 0.53	0.64 / 0.61 / 0.58
		Max.	A	1.00	1.00
Exterior	Color (RAL Code)		-	Morning Fog (9001)	Morning Fog (9001)
Dimensions		W x H x D	mm	1,200 x 235 x 690	1,200 x 235 x 690
Weight	Net		kg	27.3	28.0
	Shipping		kg	34.0	34.5
Heat Exchanger	Rows x Columns x FPI			(2 x 18 x 18) x 1	(3 x 18 x 18) x 1
	Face Area		m²	0.31	0.31
Fan Type				Cross flow Fan	Cross flow Fan
Air Flow Rate		H / M / L	m³/min	13.0 / 12.0 / 11.0	16.0 / 15.0 / 14.0
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	85.9 x 1	85.9 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.0 / 20.5	Ø 25.0 / 20.5
Sound Pressure Level	Cooling	H / M / L	dB(A)	42 / 40 / 39	46 / 45 / 43
	Heating	H / M / L	dB(A)	42 / 40 / 39	46 / 45 / 43
Sound Power Level	Cooling	Rated	dB(A)	55	61
	Heating	Rated	dB(A)	-	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name			Unit	ZVNW30GM1A1 [UV30F N10]
Power Supply			V , Ø , Hz	220-240 , 1 , 50
				220 , 1 , 60
Power Input		H / M / L	W	47 / 40 / 33
Running Current		H / M / L	A	0.70 / 0.67 / 0.64
		Max.	A	1.00
Exterior	Color (RAL Code)		-	Morning Fog (9001)
Dimensions		W x H x D	mm	1,200 x 235 x 690
Weight	Net		kg	28.0
	Shipping		kg	34.5
Heat Exchanger	Rows x Columns x FPI			(3 x 18 x 18) x 1
	Face Area		m²	0.31
Fan Type				Cross flow Fan
Air Flow Rate		H / M / L	m³/min	19.0 / 17.5 / 16.0
Fan Motor	Type			BLDC
	Drive			Internal
	Output		W x No.	85.9 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.0 / 20.5
Sound Pressure Level	Cooling	H / M / L	dB(A)	46.0 / 44.0 / 43.0
	Heating	H / M / L	dB(A)	46.0 / 44.0 / 43.0
Sound Power Level	Cooling	Rated	dB(A)	62
	Heating	Rated	dB(A)	-
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name			Unit	ZVNW36GM2A1 [UV36F N20]	ZVNW42GM2A1 [UV42F N20]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	50 / 35 / 28	50 / 35 / 28
Running Current		H / M / L	A	0.58 / 0.54 / 0.50	0.58 / 0.54 / 0.50
		Max.	A	0.92	0.92
Exterior	Color (RAL Code)		-	Morning Fog (9001)	Morning Fog (9001)
Dimensions		W x H x D	mm	1,600 x 235 x 690	1,600 x 235 x 690
Weight	Net		kg	36.7	36.7
	Shipping		kg	42.8	42.8
Heat Exchanger	Rows x Columns x FPI			3 x 18 x 18	3 x 18 x 18
	Face Area		m²	0.46	0.46
Fan Type				Cross Flow Fan	Cross Flow Fan
Air Flow Rate		H / M / L	m³/min	28 / 24 / 20	28 / 24 / 20
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	125 x 1	125 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.0 / 20.5	Ø 25.0 / 20.5
Sound Pressure Level	Cooling	H / M / L	dB(A)	46 / 43 / 40	46 / 43 / 40
	Heating	H / M / L	dB(A)	46 / 43 / 40	46 / 43 / 40
Sound Power Level	Cooling	Rated	dB(A)	62	62
	Heating	Rated	dB(A)	-	66
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

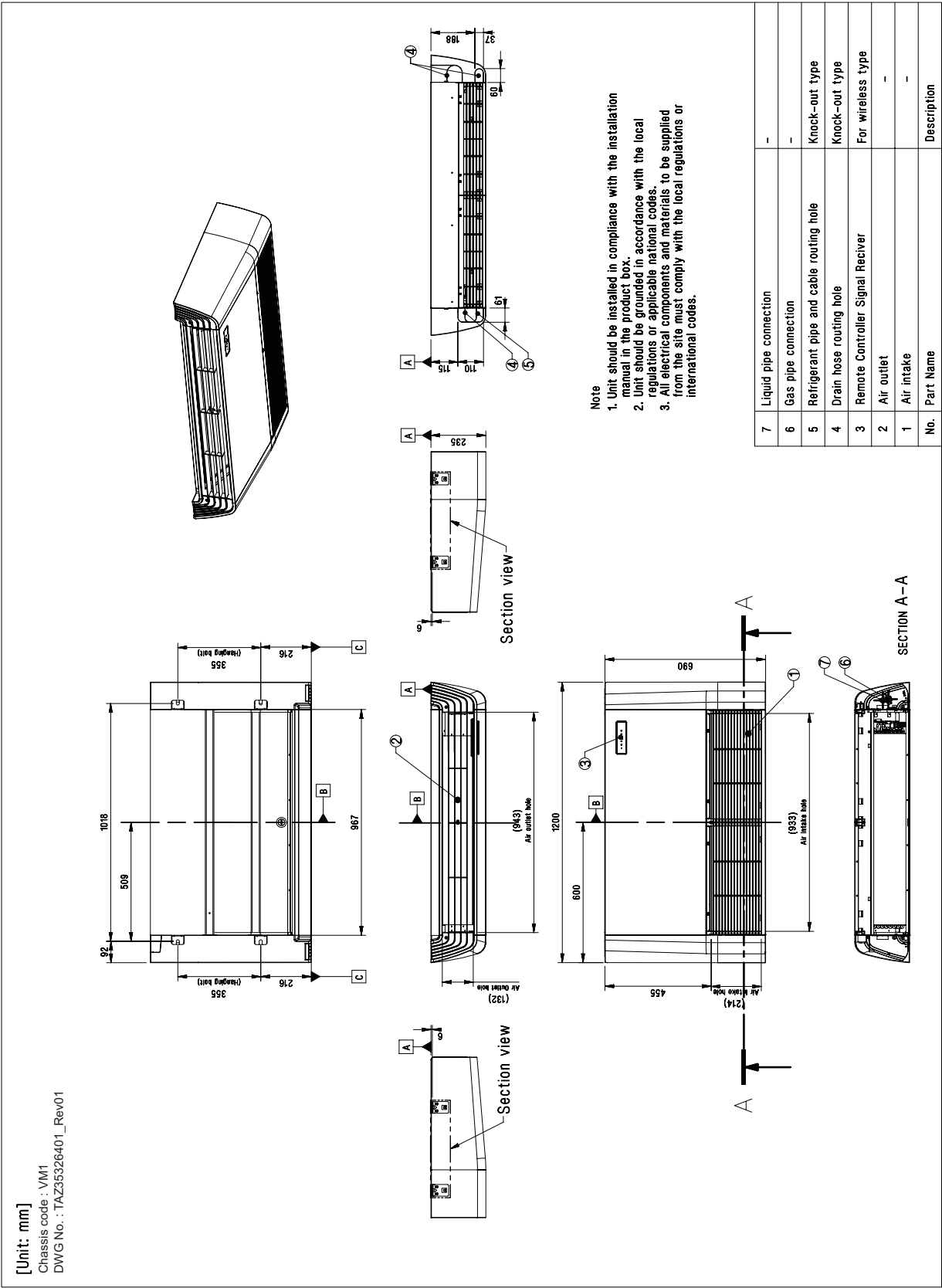
Model Name			Unit	ZVNW48GM2A1 [UV48F N20]	ZVNW60GM2A1 [UV60F N20]
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
				220 , 1 , 60	220 , 1 , 60
Power Input		H / M / L	W	50 / 35 / 28	50 / 35 / 28
Running Current		H / M / L	A	0.58 / 0.54 / 0.50	0.58 / 0.54 / 0.50
		Max.	A	0.92	0.92
Exterior	Color (RAL Code)		-	Morning Fog (9001)	Morning Fog (9001)
Dimensions		W x H x D	mm	1,600 x 235 x 690	1,600 x 235 x 690
Weight	Net		kg	36.7	36.7
	Shipping		kg	42.8	42.8
Heat Exchanger	Rows x Columns x FPI			3 x 18 x 18	3 x 18 x 18
	Face Area		m²	0.46	0.46
Fan Type				Cross Flow Fan	Cross Flow Fan
Air Flow Rate		H / M / L	m³/min	28 / 24 / 20	28 / 24 / 20
Fan Motor	Type			BLDC	BLDC
	Drive			Internal	Internal
	Output		W x No.	125 x 1	125 x 1
Safety Device				Fuse / Thermal Protector for Fan Motor	
Piping Connections	Liquid Side		mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas Side		mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Drain Pipe (Natural Drainage)	O.D. / I.D.	mm	Ø 25.0 / 20.5	Ø 25.0 / 20.5
Sound Pressure Level	Cooling	H / M / L	dB(A)	46 / 43 / 40	46 / 43 / 40
	Heating	H / M / L	dB(A)	46 / 43 / 40	46 / 43 / 40
Sound Power Level	Cooling	Rated	dB(A)	62	62
	Heating	Rated	dB(A)	-	66
Power and Communication Cable (included Earth)			No. x mm²	4C x 0.75	4C x 0.75

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

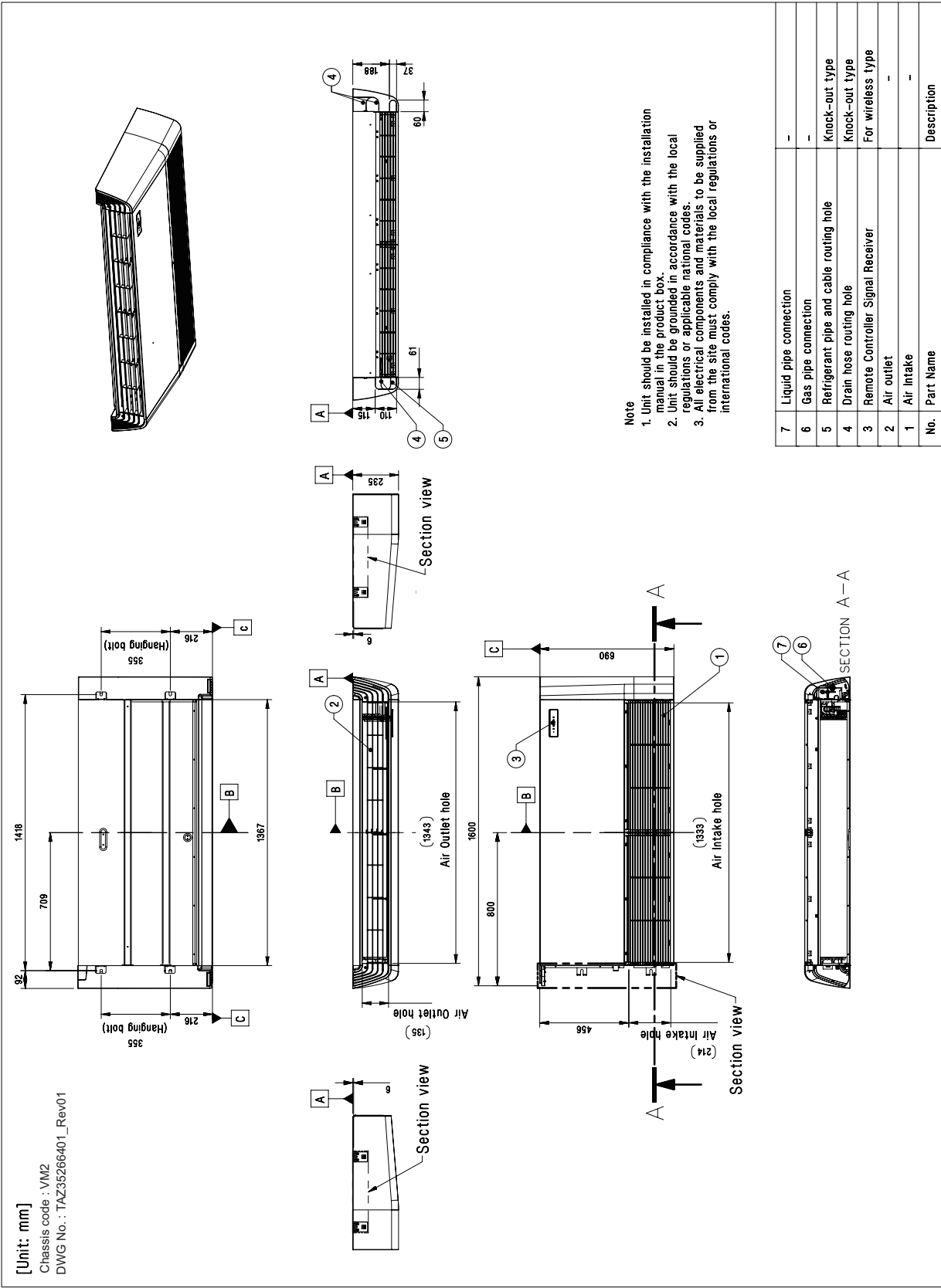
3. Dimensions

■ ZVNW18GM1A1 [UV18F N10] / ZVNW24GM1A1 [UV24F N10]  
ZVNW30GM1A1 [UV30F N10]



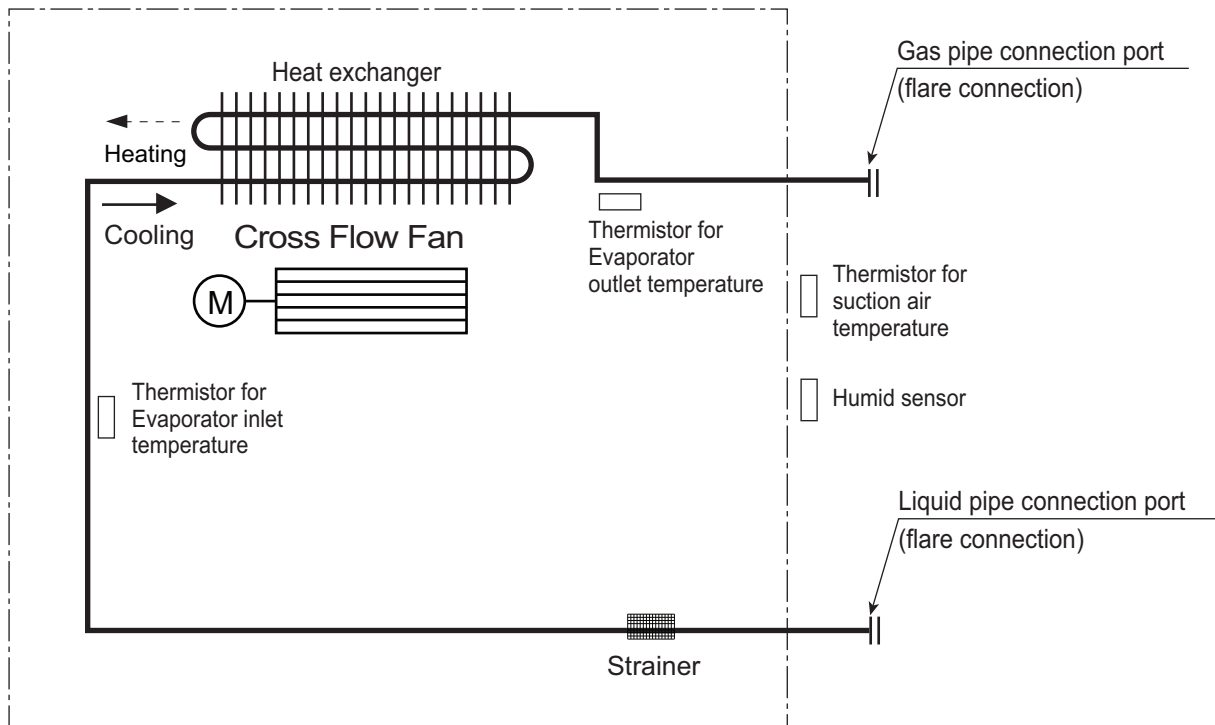
### 3. Dimensions

- ZVNW36GM2A1 [UV36F N20] / ZVNW42GM2A1 [UV42F N20]  
ZVNW48GM2A1 [UV48F N20] / ZVNW60GM2A1 [UV60F N20]



## 4. Piping Diagrams

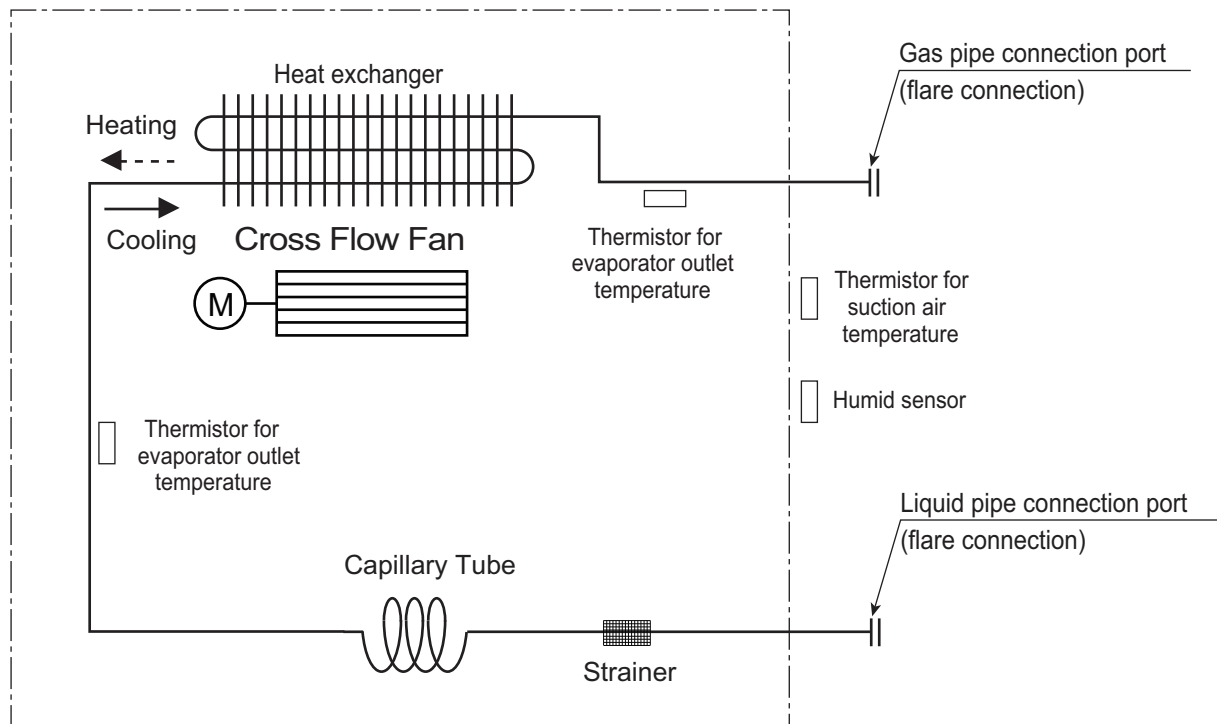
### ■ ZVNW18GM1A1 [UV18F N10] / ZVNW24GM1A1 [UV24F N10] ZVNW30GM1A1 [UV30F N10]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT
Humid sensor	CN_HUMID

## 4. Piping Diagrams

- ZVNW36GM2A1 [UV36F N20] / ZVNW42GM2A1 [UV42F N20]  
ZVNW48GM2A1 [UV48F N20] / ZVNW60GM2A1 [UV60F N20]

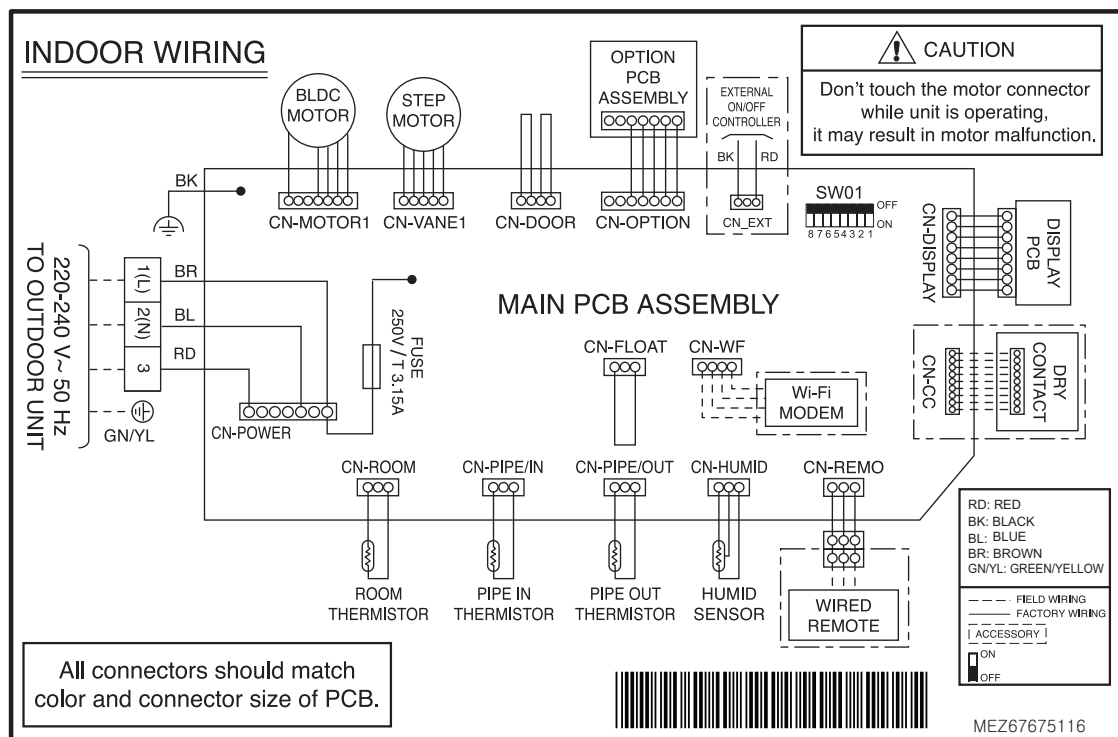


Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT
Humid sensor	CN_HUMID

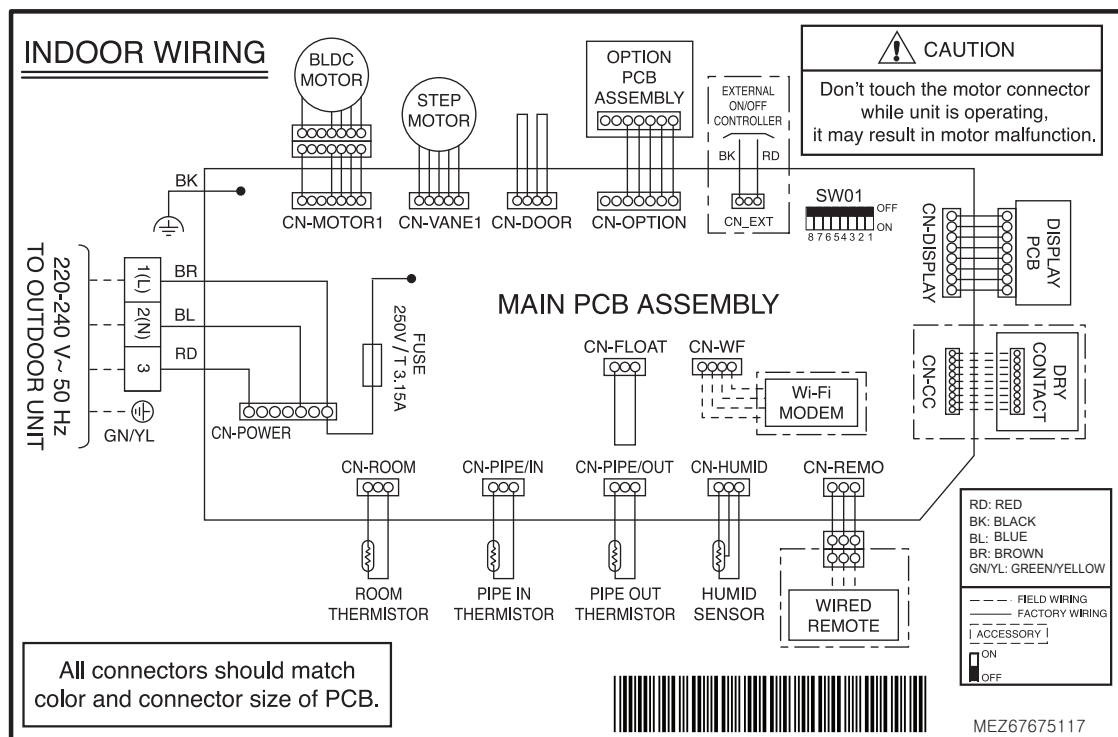


## 5. Wiring Diagrams

- ◆ ZVNW18GM1A1 [UV18F N10] / ZVNW24GM1A1 [UV24F N10]  
ZVNW30GM1A1 [UV30F N10]



- ◆ ZVNW36GM2A1 [UV36F N20] / ZVNW42GM2A1 [UV42F N20]  
ZVNW48GM2A1 [UV48F N20] / ZVNW60GM2A1 [UV60F N20]

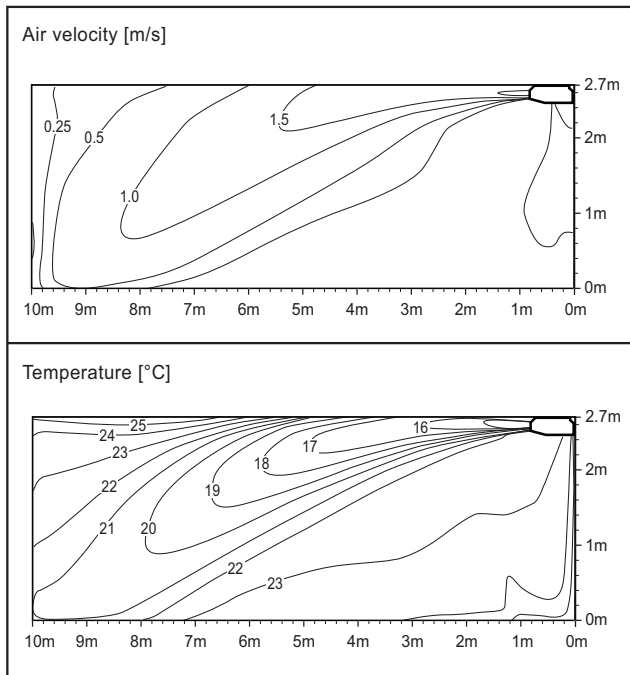


## 6. Air flow and temperature distributions (reference data)

### ■ ZVNW18GM1A1 [UV18F N10]

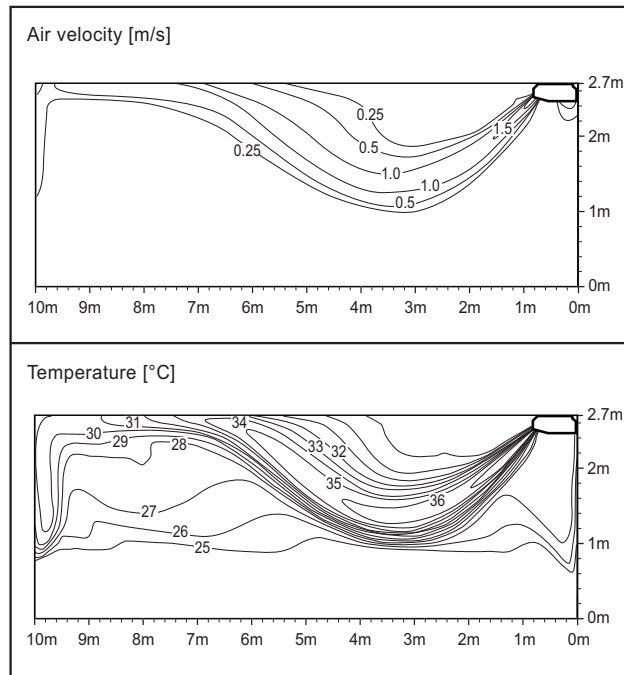
#### Cooling

Discharge angle: 0°



#### Heating

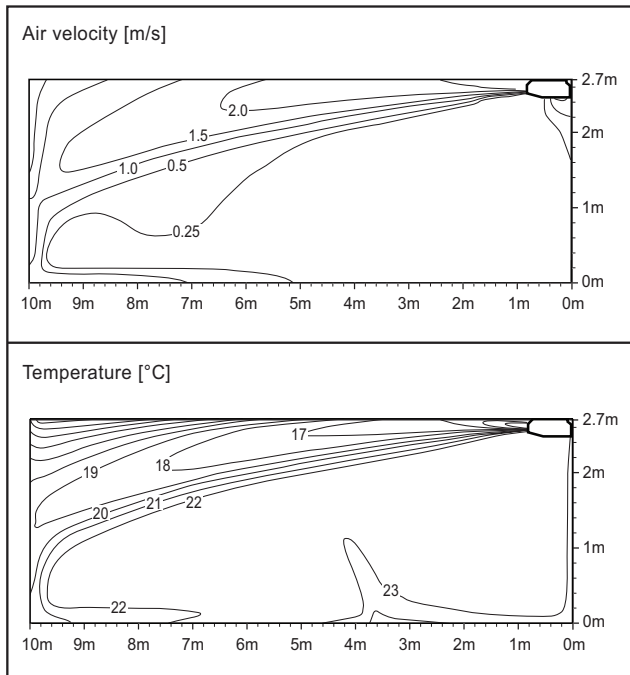
Discharge angle: 40°



### ■ ZVNW24GM1A1 [UV24F N10]

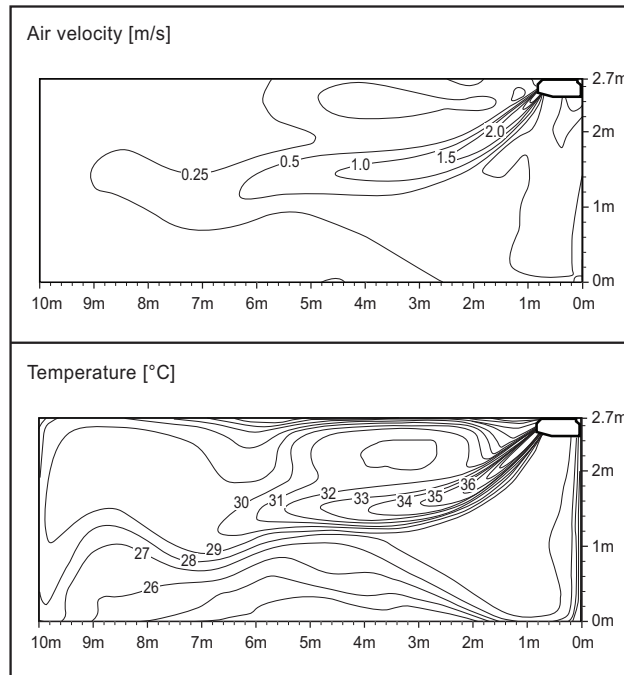
#### Cooling

Discharge angle: 0°



#### Heating

Discharge angle: 40°



#### Note

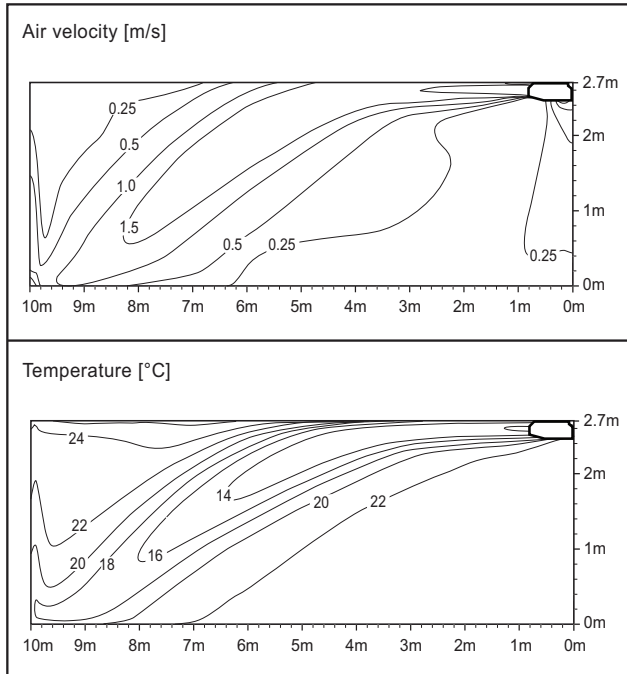
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ■ ZVNW30GM1A1 [UV30F N10]

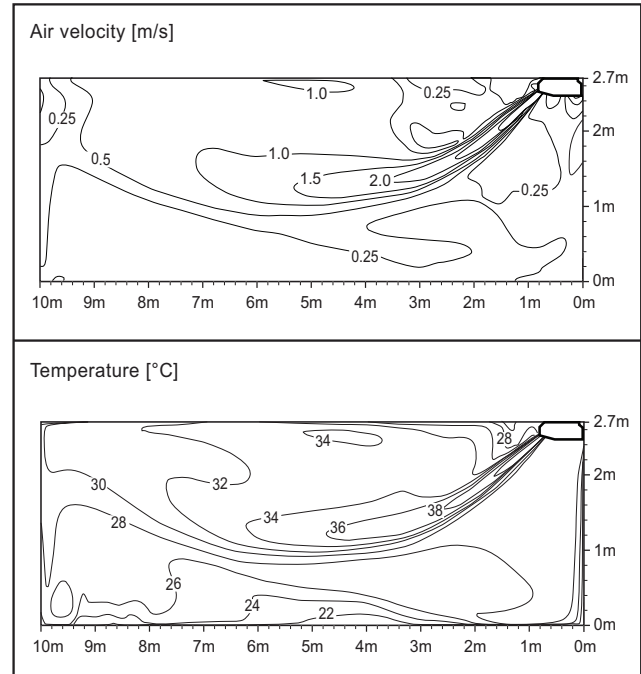
#### Cooling

Discharge angle: 0°



#### Heating

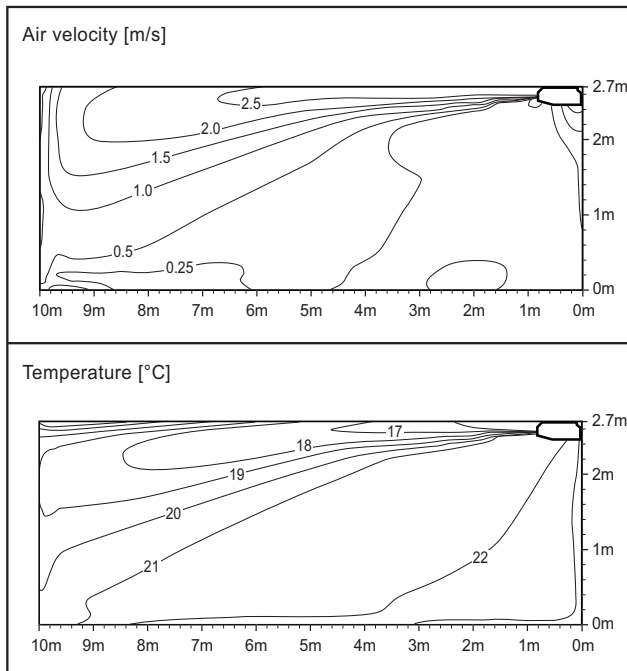
Discharge angle: 40°



### ■ ZVNW36GM2A1 [UV36F N20]

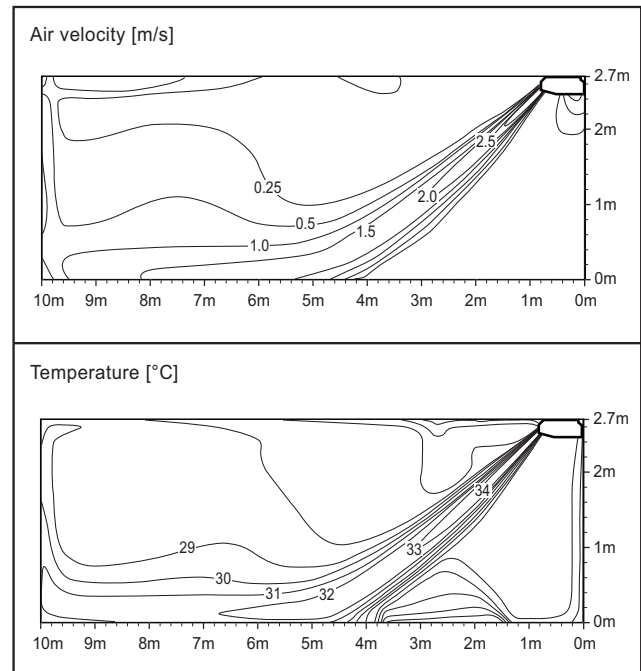
#### Cooling

Discharge angle: 0°



#### Heating

Discharge angle: 40°



#### Note

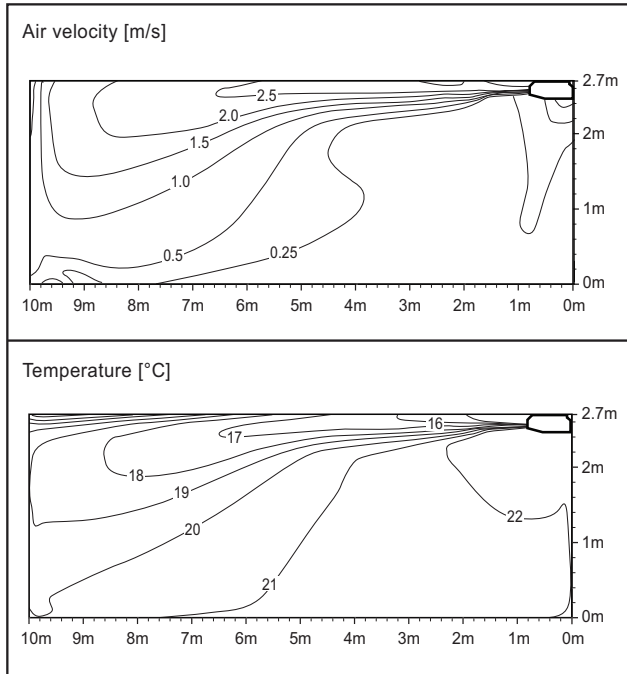
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ■ ZVNW42GM2A1 [UV42F N20]

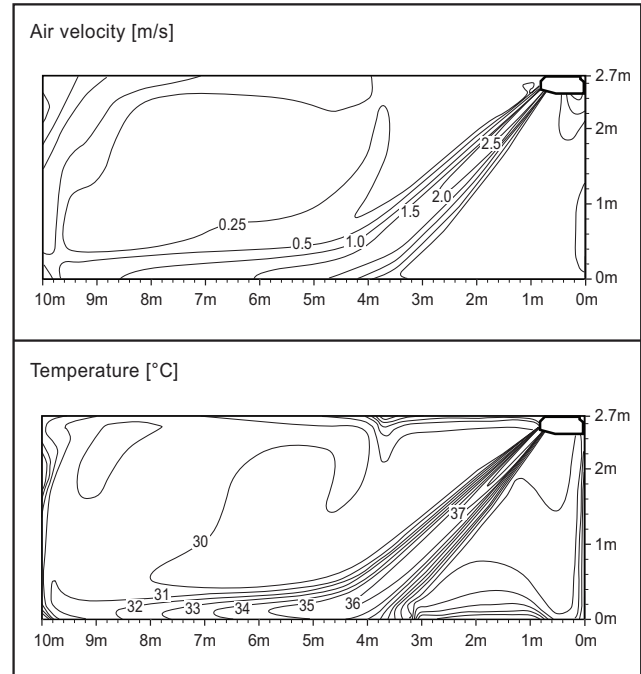
#### Cooling

Discharge angle: 0°



#### Heating

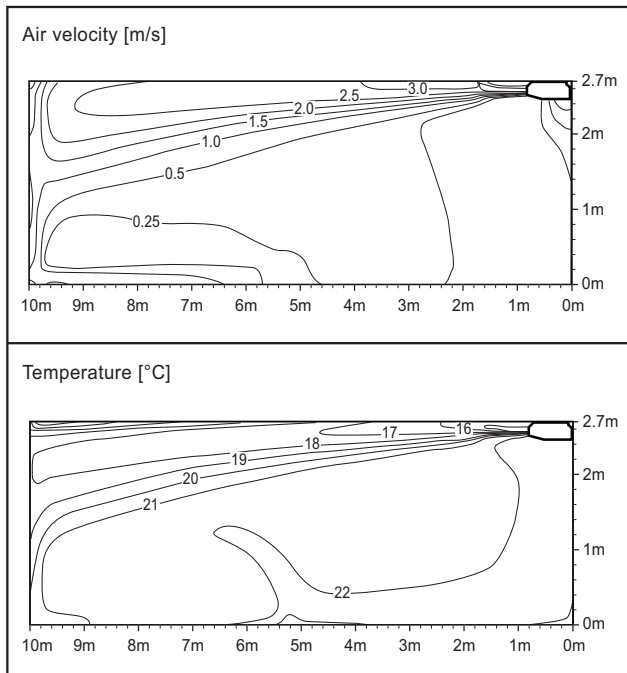
Discharge angle: 40°



### ■ ZVNW48GM2A1 [UV48F N20]

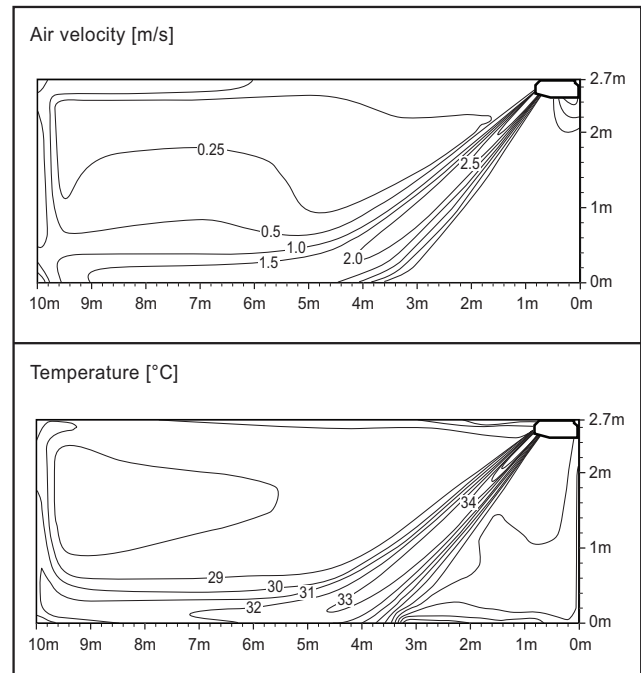
#### Cooling

Discharge angle: 0°



#### Heating

Discharge angle: 40°



#### Note

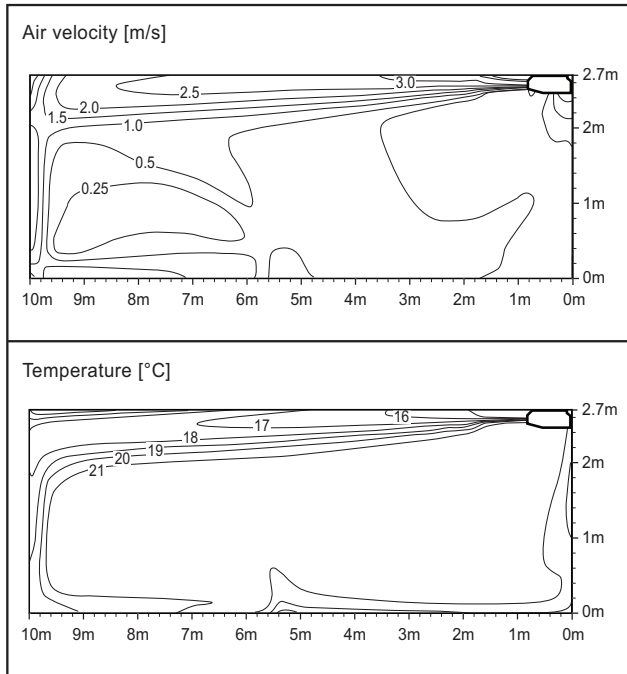
- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 6. Air flow and temperature distributions (reference data)

### ■ ZVNW60GM2A1 [UV60F N20]

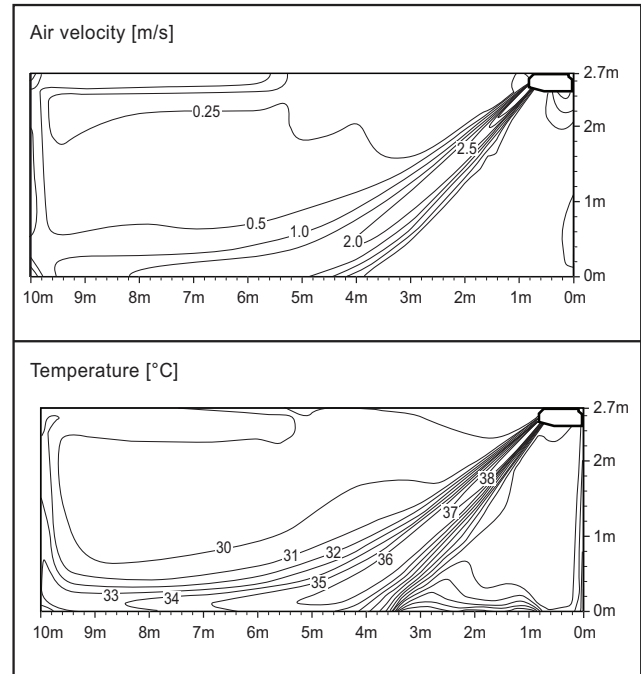
#### Cooling

Discharge angle: 0°



#### Heating

Discharge angle: 40°



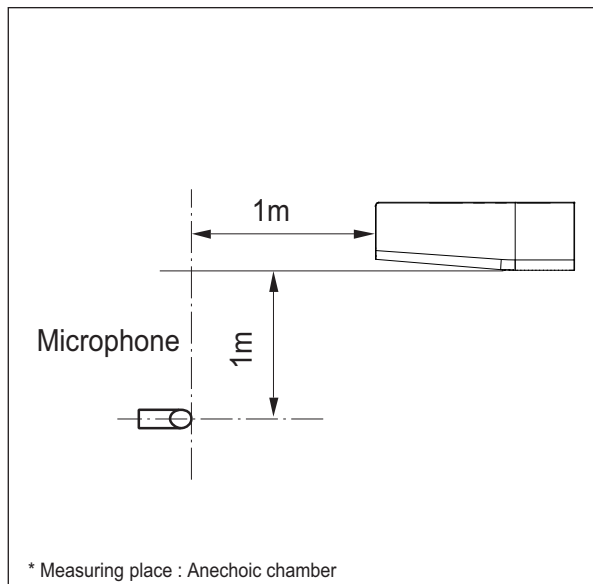
#### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound Levels

### 7.1 Sound Pressure Level

#### Overall

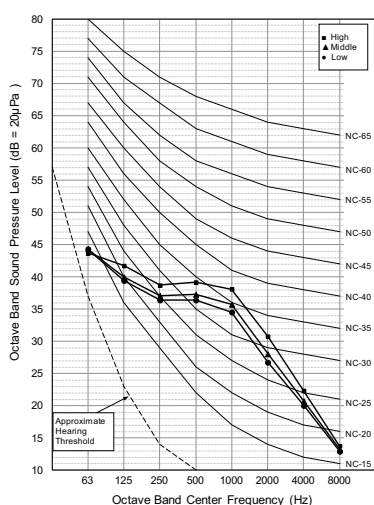


#### Note

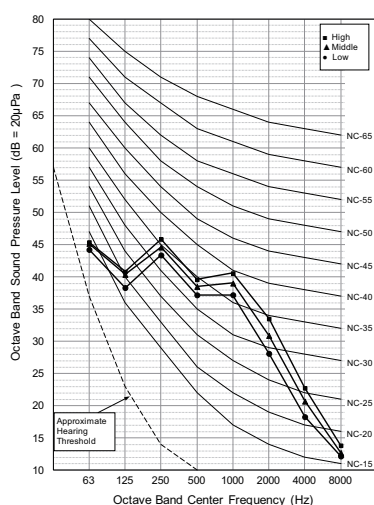
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZVNW18GM1A1 [UV18F N10]	42	40	39
ZVNW24GM1A1 [UV24F N10]	46	45	43
ZVNW30GM1A1 [UV30F N10]	46	44	43
ZVNW36GM2A1 [UV36F N20]	46	43	40
ZVNW42GM2A1 [UV42F N20]	46	43	40
ZVNW48GM2A1 [UV48F N20]	48	44	40
ZVNW60GM2A1 [UV60F N20]	48	44	40

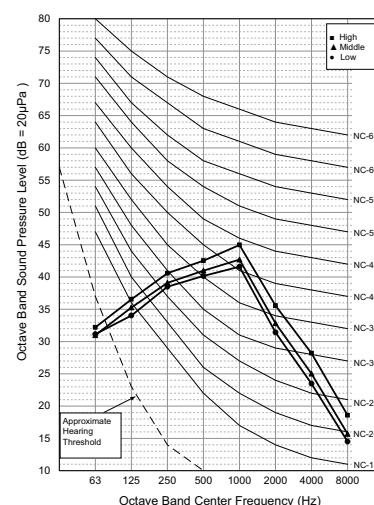
ZVNW18GM1A1 [UV18F N10]



ZVNW24GM1A1 [UV24F N10]

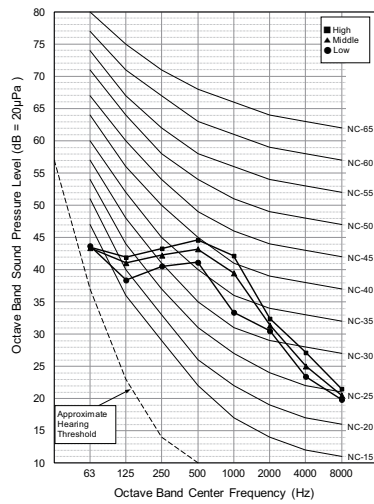


ZVNW30GM1A1 [UV30F N10]

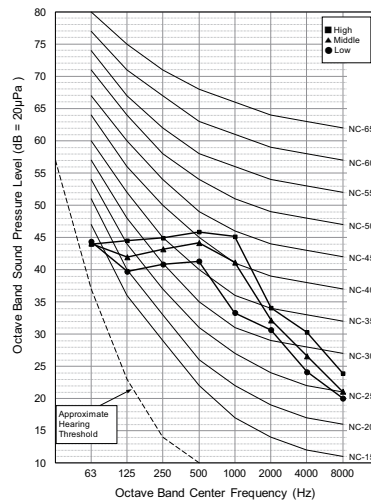


## 7. Sound Levels

ZVNW36GM2A1 [UV36F N20]  
ZVNW42GM2A1 [UV42F N20]



ZVNW48GM2A1 [UV48F N20]  
ZVNW60GM2A1 [UV60F N20]



## 7. Sound Levels

### 7.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to “Standard mode” value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

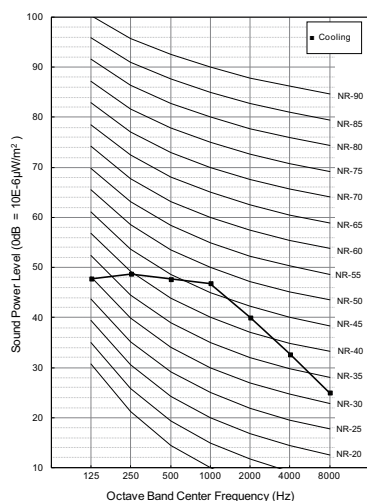
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$

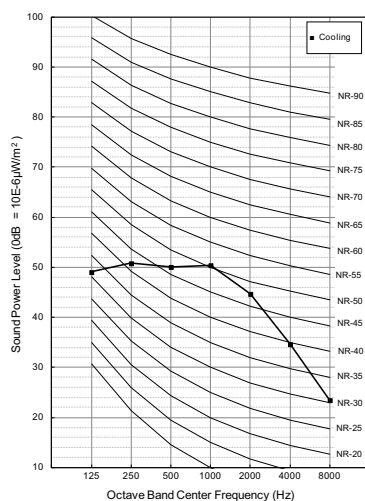
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
	Cooling
ZVNW18GM1A1 [UV18F N10]	55
ZVNW24GM1A1 [UV24F N10]	61
ZVNW30GM1A1 [UV30F N10]	62
ZVNW36GM2A1 [UV36F N20]	62
ZVNW42GM2A1 [UV42F N20]	62
ZVNW48GM2A1 [UV48F N20]	63
ZVNW60GM2A1 [UV60F N20]	63

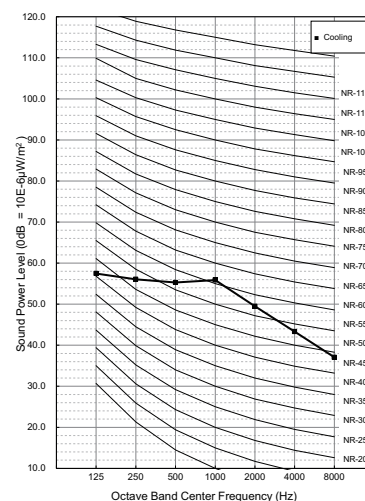
ZVNW18GM1A1 [UV18F N10]



ZVNW24GM1A1 [UV24F N10]



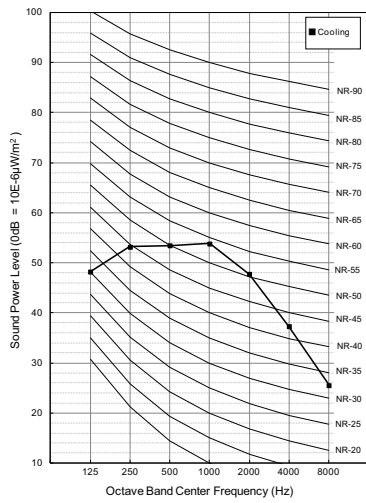
ZVNW30GM1A1 [UV30F N10]



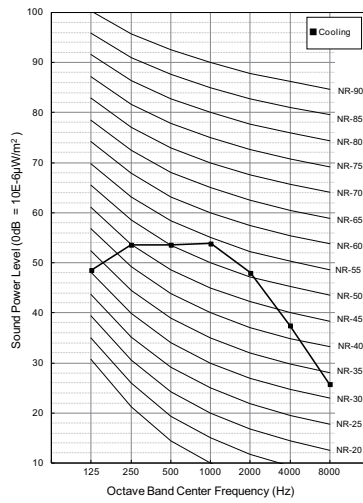


# 7. Sound Levels

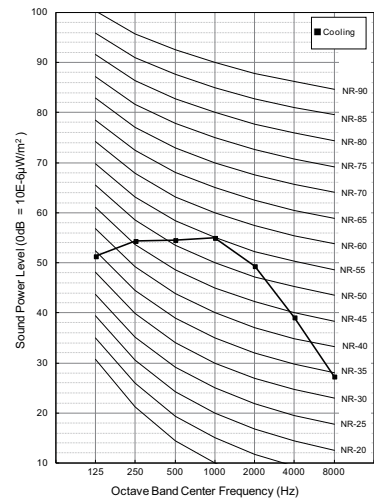
ZVNW36GM2A1 [UV36F N20]



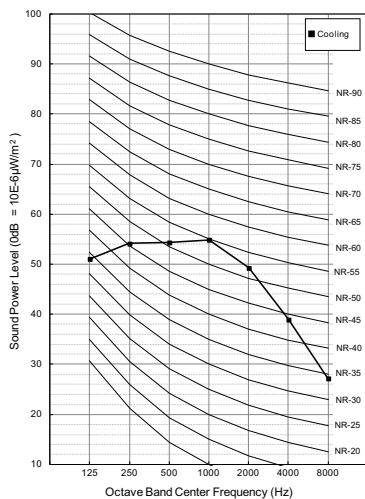
ZVNW42GM2A1 [UV42F N20]



ZVNW48GM2A1 [UV48F N20]



ZVNW60GM2A1 [UV60F N20]

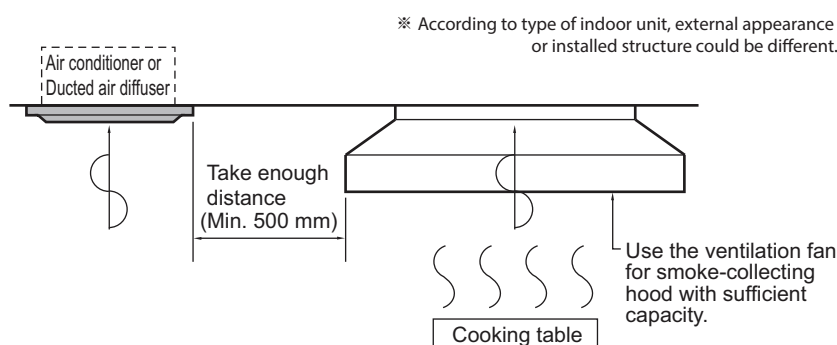


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- Do not install the unit near the door.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The mounting ceiling or wall should be solid enough to protect it from the vibration.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.
- The place where the maintenance space for product is sufficient. (The servicing inspection hole of the ceiling should be larger than the indoor unit.)
- The selection of the servicing inspection hole should be approved by the customer.
- There should not be any heat source or steam near the unit. Avoid the following installation location.
  1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
    - Make sure that ventilation fan is enough to cover all noxious gases from this place.
    - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.

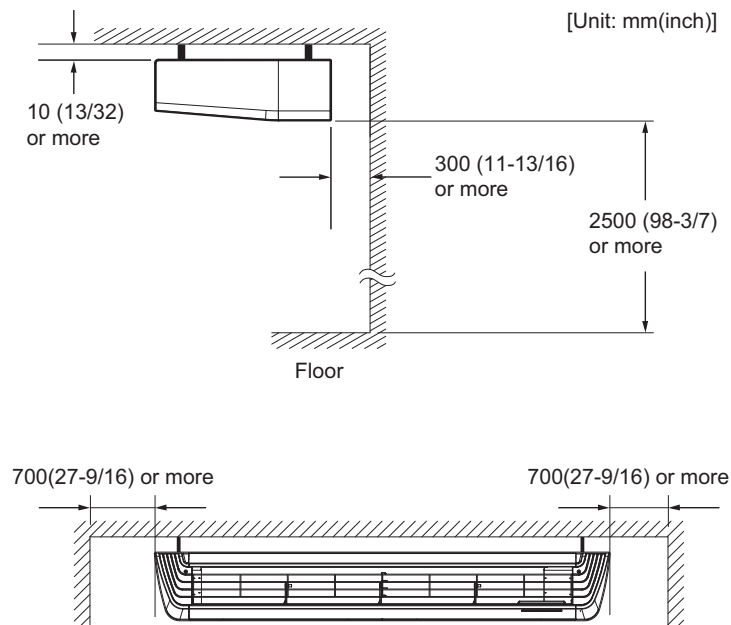


2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

## 8. Installation

### ⚠ CAUTION

- If the temperature rise above 30℃ or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
  - "Dew Protective kit" is sold separately.
  - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm at least.



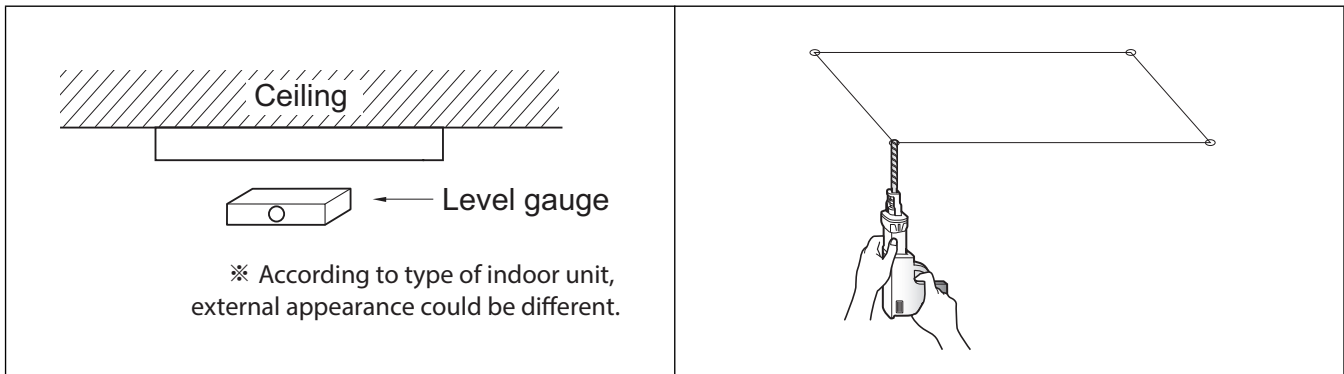
## 8. Installation

### 8.2 Installation of indoor units

#### 8.2.1 Ceiling dimension and hanging bolt location

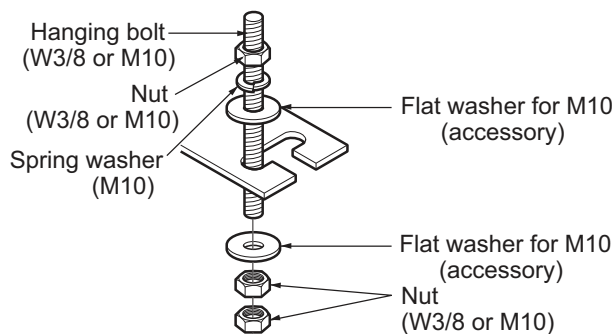
##### **⚠ CAUTION**

- During the installation, care should be taken not to damage electric wires.
- In case of using a drain pump, install the unit horizontally using a level gauge.



1. The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.
2. Select and mark the position for fixing bolts and piping hole.
3. Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
4. Drill the hole for anchor bolt on the wall or ceiling.
  - Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
  - Mount the suspension bolts to the set anchor firmly.
  - Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
5. In case of ducted type unit, apply a joint-canvas between the unit and duct to absorb unnecessary vibration.

## 8. Installation

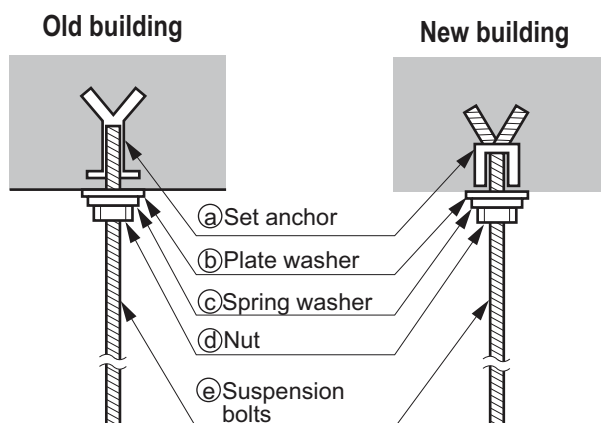


- The following parts are local purchasing.

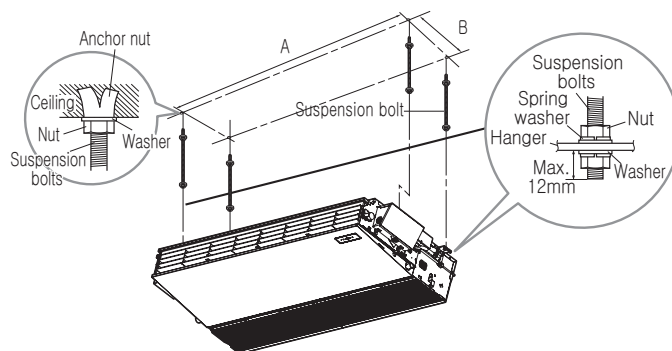
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

### CAUTION

- Tighten the nut and bolt to prevent the unit from falling.
- When mechanical connectors are reused indoors, sealing parts shall be renewed. (for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated. (for R32)



### ◆ Hanging bolts dimensions



Chassis	Bolt lactions [ Unit: mm ]	
	A	B
VM1	1,018	355
VM2	1,418	355

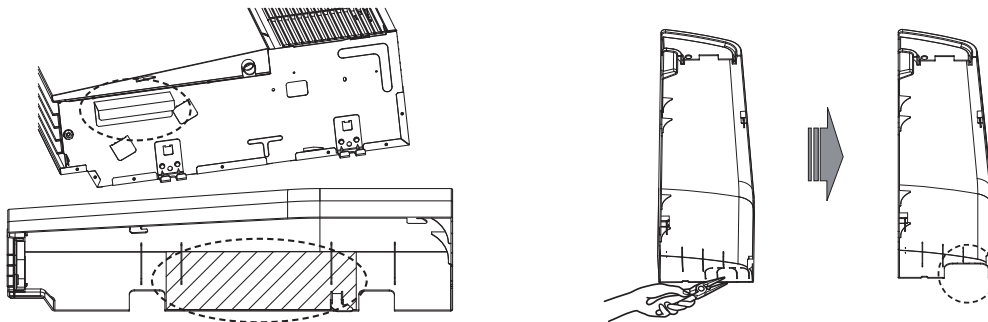
### 8.2.2 Preparing work for Installation

#### ■ Open side cover

- 1) Remove two screws from Left and Right side-cover.
- 2) Unlock side-cover from side panel by slightly pulling the edge of side cover.  
Tap the side-cover with your palm on the backside.
- 3) Remove bracket from side-panel and paper bracket from side-cover.

## 8. Installation

- 4) Knock out the pipe hole from the left side cover with nipper/plier.



- 5) Remove the rubber stopple in the desired drain direction.

### Notice

For more details, refer to the product or panel installation manual.

### Important

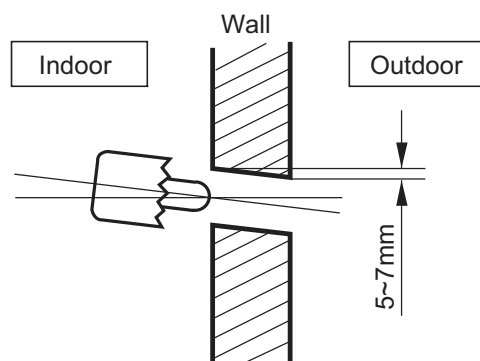
- It is recommended to select the left side for drain to have common hole in the side-cover along with pipe and wiring.
- Knock hole on right side-cover only if right side is selected for water drain.

### CAUTION

- Hold the side-cover with other hand while tapping to prevent it to fall down.

### ■ Drill a hole in the wall

- Drill the piping hole with a  $\phi 70\text{mm}$  hole core drill.
- Drill the piping hole at either the right or the left with the hole slightly slanted to the outdoor side.



### 8.2.3 Indoor unit installation

Hang the Indoor unit on suspension bolt as per following guidelines:

- 1) Lift the indoor unit to sufficient height.
- 2) Insert the suspended part of four suspension bolt in the four hangers provided on the side of main body one by one.
- 3) Lower the indoor unit till the hangers rest on their respective flat washer.
- 4) Adjust the level in the top down direction by adjusting the suspension bolts. Inclined the indoor unit as per direction provided in the figures.

## 8. Installation

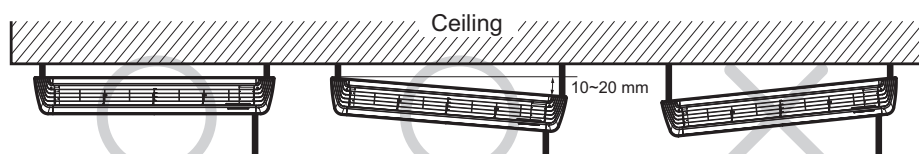
### ■ Installation Information For Declination

#### ⚠ CAUTION

- Installation with declination of the indoor unit is very important for the drain of air conditioner.
- Minimum thickness of the insulation for the connecting pipe shall be 10mm.
- If the Installation Plates are fixed to horizontal line, the indoor unit after installing will be declined to the bottomside.

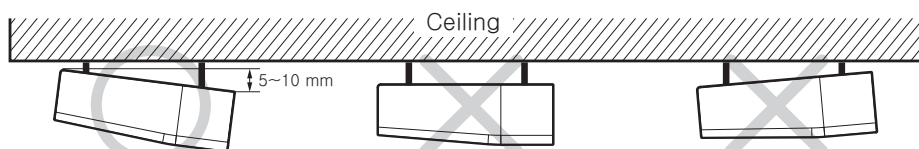
#### [ Front of view ]

- The unit must be horizontal or inclined at angle.
- The inclination should be less than or equal to  $1^{\circ}$  or in between 10 to 20mm inclined in drain direction as shown in fig.



#### [ Side of view ]

- The unit must be declined to the bottomside of the unit when finished installation.

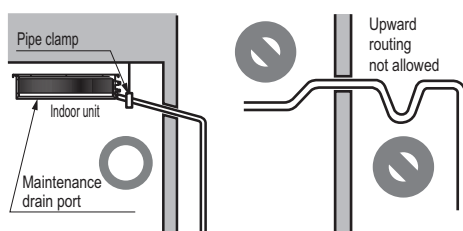


## 8. Installation

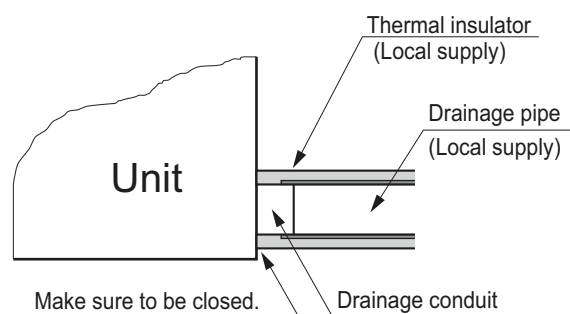
### 8.3 Indoor Unit Drain Piping

#### 8.3.1 Drain piping of indoor unit

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit and drain piping fittings should be referenced from 'Specifications' of each models.
  - Piping material: Use the Polyvinyl chloride pipe.
- Be sure to install heat insulation on the drain piping.
  - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



※ U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)

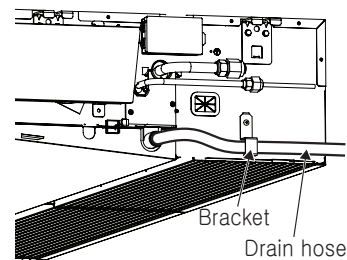




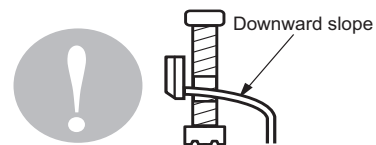
## 8. Installation

### Important

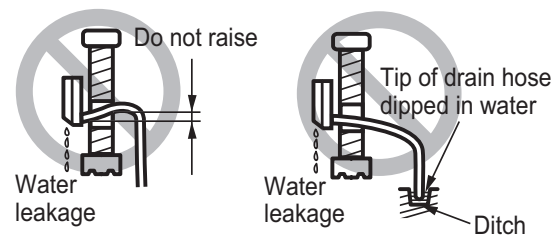
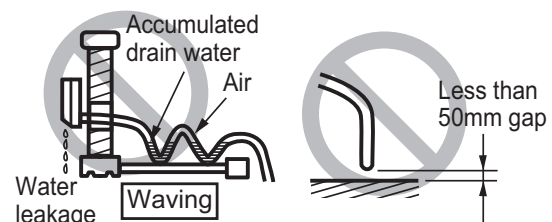
- Hook on the bracket after connecting the drain hose as shown figure.



- The drain hose should point downward for easy drain flow.



- Do not make drain piping like the following.
- Be sure to execute heat insulation on the drain piping.



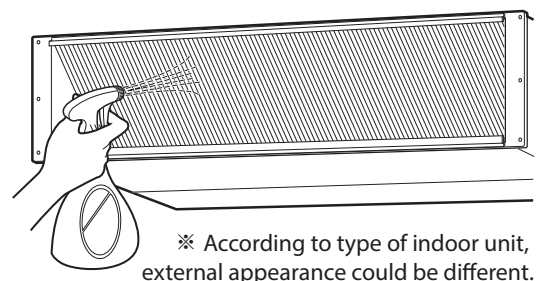
\* The feature can be changed according to type of model.

### 8.3.2 Drain test

#### ◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



## 8. Installation

### 8.4 Connecting Cables between Indoor Unit and Outdoor Unit

#### 8.4.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.

#### CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

#### 8.4.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

#### 8.4.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

## 8. Installation

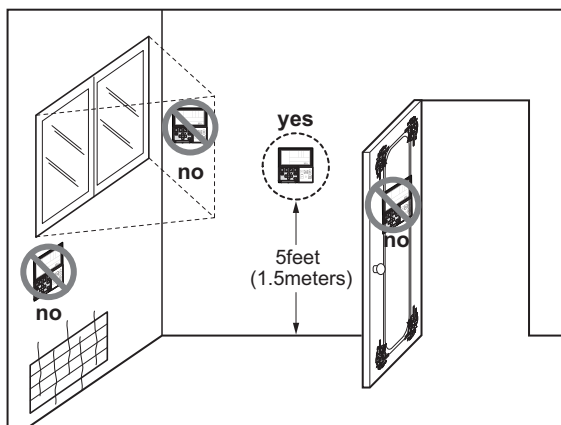
### **⚠ WARNING**

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

### 8.4.4 Wired Remote Controller Installation (Accessory)

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



#### • Do not install the remote controller where it can be affected by :

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

# **MULTI/SINGLE CAC**

Indoor unit

## **Console**

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping Diagrams**
- 5.Wiring Diagrams**
- 6.Air flow and temperature distribution**
- 7.Sound Levels**
- 8.Installation**

# 1. List of functions

## ◆ List of function

Category	Functions	ZQNW09GALA1 [UQ09F NA0] ZQNW12GALA1 [UQ12F NA0] ZQNW18GALA1 [UQ18F NA0]
Air flow	Air supply outlet	2
	Airflow direction control (left & right)	Manual
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	X
	Jet cool/heat	O / X
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	X
	Air purifier (Ionizer)	O
	Allergy Safe filter	O
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	X
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O (Single Only)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O (Multi Only)
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
	Auto Elevation Grille	X
Special Functions	Wi-Fi	O(Accessory)
	Comfort Cooling (Humidity Control)	O
Wireless Remote Controller		O(Accessory)
Wired Remote Controller		O(Accessory)
Network Solution(LGAP)		O

### Note

- O : Applied, X : Not applied, Embedded : Included with product.  
Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.  
Accessory line-ups varies by region, so check your local catalogue or local sales material.
- Some functions can be limited by remote controller.
- Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
- \* : These functions need to connect to the wired remote controller.
- \*\* : It is included by default when the product is manufactured.
- \*\*\* : This functions need to connect to the Standard III wired remote controller.

# 1. List of functions

## ◆ Accessory Compatibility List

Category		Product	Remark	ZQNW09GALA1 [UQ09F NA0] ZQNW12GALA1 [UQ12F NA0] ZQNW18GALA1 [UQ18F NA0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO <sub>2</sub> Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Human detecting sensor	PTVSMA0	-	X

### Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. \* : Some advanced functions controlled by individual controller cannot be operated.
3. \*\* : It could not be operated some functions.
4. \*\*\* : Selecting a wireless remote controller in case of ducted type indoor units requires either a connection to the wired remote controller (Standard II) or an IR receiver accessory to be connected to the duct in order to receive the signal.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product. (<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

## 2. Specifications

Model Name				ZQNW09GALA1 [UQ09F NA0]	ZQNW12GALA1 [UQ12F NA0]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	H / M / L	W		37 / 30 / 25	37 / 30 / 25
Running Current	H / M / L	A		0.53 / 0.51 / 0.48	0.53 / 0.51 / 0.48
	Max.	A		0.70	0.70
Exterior	Color (RAL Code)	-		Morning Fog (9001)	Morning Fog (9001)
Dimensions	W x H x D	mm		700 x 600 x 210	700 x 600 x 210
Weight	Net	kg		16.3	16.3
	Shipping	kg		19.3	19.3
Heat Exchanger	Rows x Columns x FPI	-		2 x 19 x 19	2 x 19 x 19
	Face Area	m <sup>2</sup>		0.18	0.18
Fan Type		-		Turbo Fan	Turbo Fan
Air Flow Rate	H / M / L	m <sup>3</sup> /min		8.5 / 6.7 / 5.0	8.5 / 6.7 / 5.0
Fan Motor	Type	-		BLDC	BLDC
	Drive	-		Internal	Internal
	Output	W x No.		48 x 1	48 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	38 / 32 / 27	38 / 32 / 27
	Heating	H / M / L	dB(A)	38 / 32 / 27	38 / 32 / 27
Sound Power Level	Cooling	Rated	dB(A)	59	59
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)	Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Drain (O.D. / I.D.)	mm		Ø 16.7 / 12.2	Ø 16.7 / 12.2
Safety Devices		-		Fuse	
		-		Thermal Protector for Fan Motor	
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)	4C x 0.75 (18)

### Note

1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

## 2. Specifications

Model Name				ZQNW18GALA1 [UQ18F NA0]
Power Supply		V, Ø, Hz		220-240, 1, 50
				220, 1, 60
Power Input	H / M / L	W		44 / 39 / 35
Running Current	H / M / L	A		0.59 / 0.54 / 0.52
	Max.	A		0.70
Exterior	Color (RAL Code)	-		Morning Fog (9001)
Dimensions	W x H x D	mm		700 × 600 × 210
Weight	Net	kg		16.3
	Shipping	kg		19.3
Heat Exchanger	Rows x Columns x FPI	-		2 x 19 x 19
	Face Area	m <sup>2</sup>		0.18
Fan Type		-		Turbo Fan
Air Flow Rate	H / M / L	m <sup>3</sup> /min		10.1 / 8.6 / 7.2
Fan Motor	Type	-		BLDC
	Drive	-		Internal
	Output	W x No.		48 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	44 / 39 / 35
	Heating	H / M / L	dB(A)	49 / 44 / 39
Sound Power Level	Cooling	Rated	dB(A)	60
	Heating	Rated	dB(A)	-
Piping Connections	Liquid	mm(inch)		Ø 6.35 (1/4)
	Gas	mm(inch)		Ø 12.7 (1/2)
	Drain (O.D. / I.D.)	mm		Ø 16.7 / 12.2
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Power and Communication Cable (included Earth)		No. x mm <sup>2</sup> (AWG)		4C x 0.75 (18)

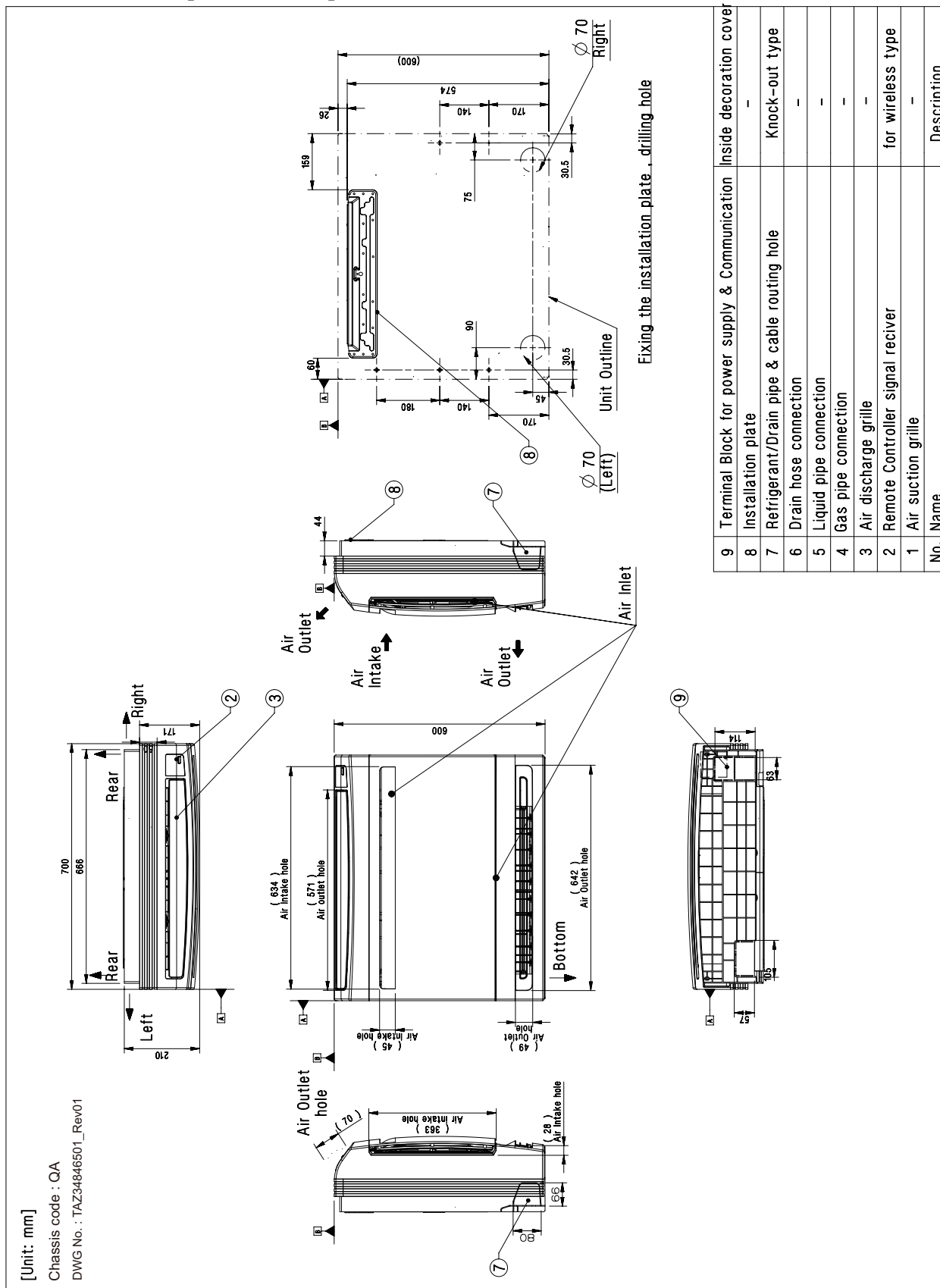
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3. Sound Level Values are measured at Noise Measuring chamber accordance with standard. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation(Sound Pressure : LG Internal standard, Sound Power : EN 12102 (ISO 3741).
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
  - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
  - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
  - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.



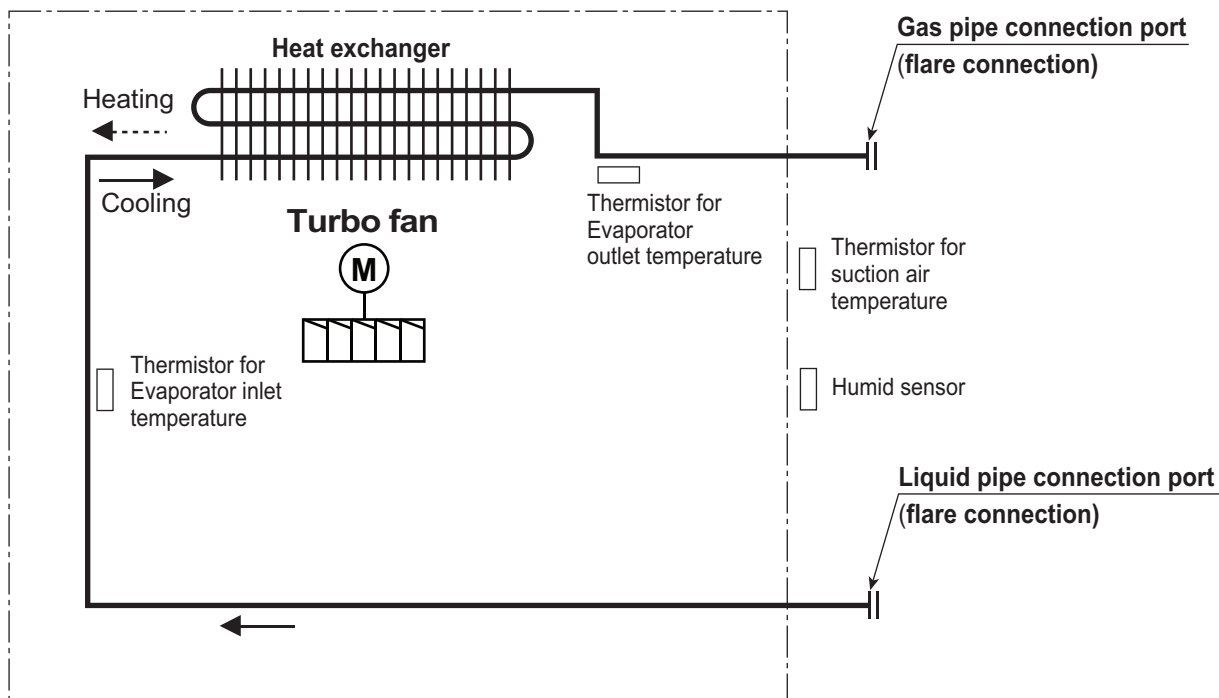
### 3. Dimensions

#### ■ ZQNW09GALA1 [UQ09F NA0] / ZQNW12GALA1 [UQ12F NA0] ZQNW18GALA1 [UQ18F NA0]



## 4. Piping Diagrams

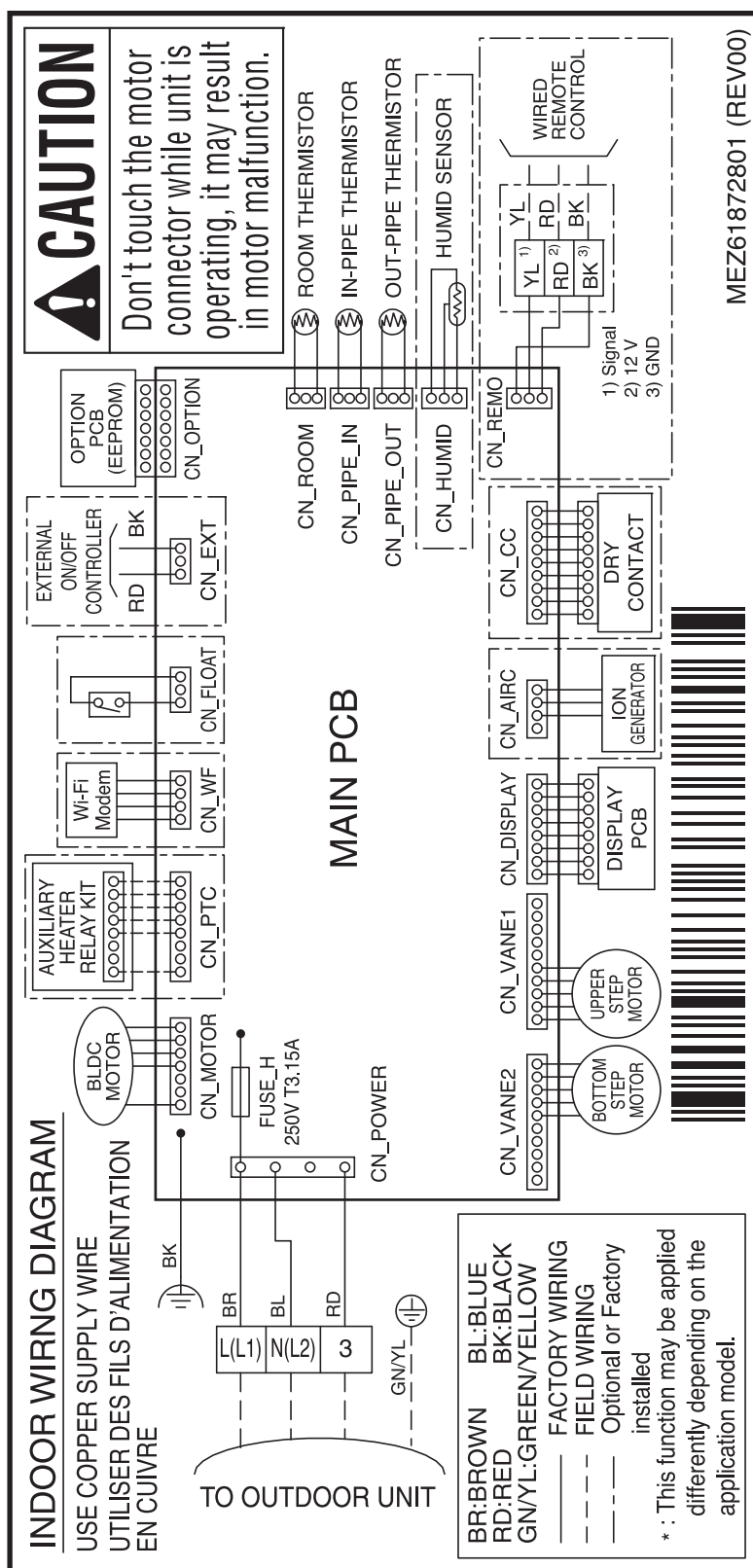
### ■ ZQNW09GALA1 [UQ09F NA0] / ZQNW12GALA1 [UQ12F NA0] ZQNW18GALA1 [UQ18F NA0]



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE_IN
Thermistor for evaporator outlet temperature	CN-PIPE_OUT
Humid sensor	CN_HUMID

## 5. Wiring Diagrams

- ZQNW09GALA1 [UQ09F NA0] / ZQNW12GALA1 [UQ12F NA0]  
ZQNW18GALA1 [UQ18F NA0]

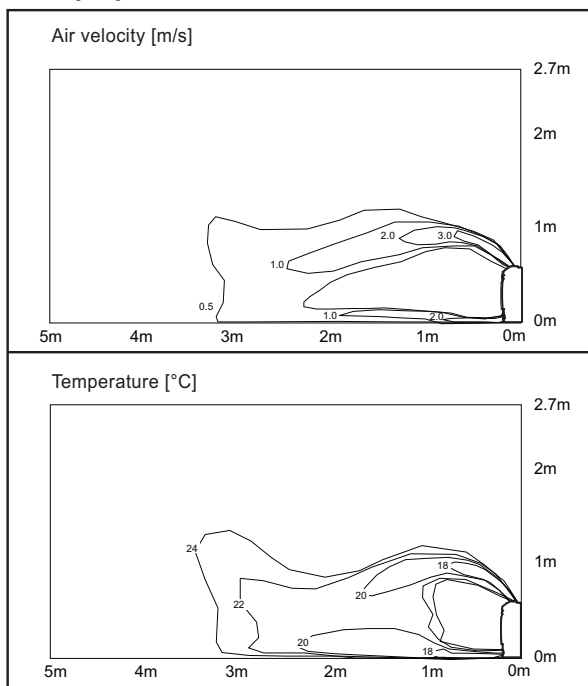


## 6. Air flow and temperature distributions (reference data)

### ■ ZQNW09GALA1 [UQ09F NA0] / ZQNW12GALA1 [UQ12F NA0]

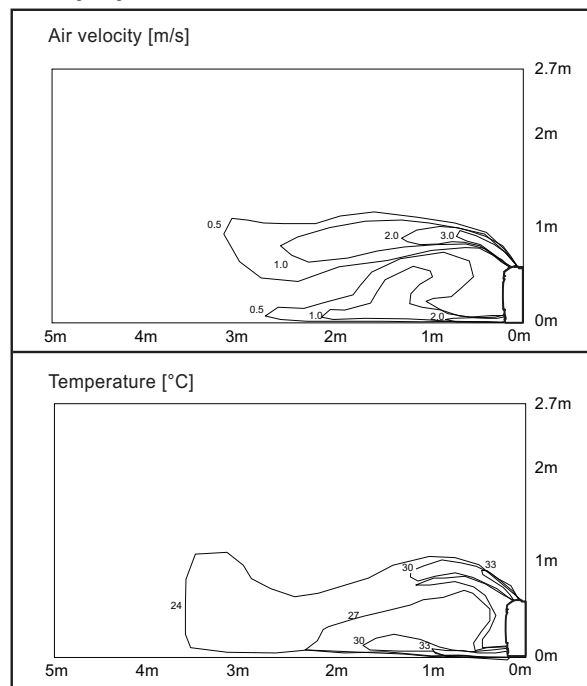
#### Cooling

Discharge angle: 40°



#### Heating

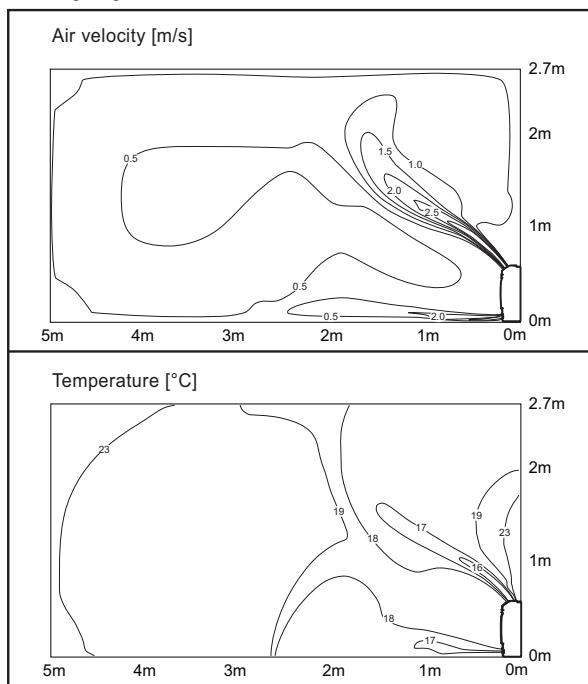
Discharge angle: 50°



### ■ ZQNW18GALA1 [UQ18F NA0]

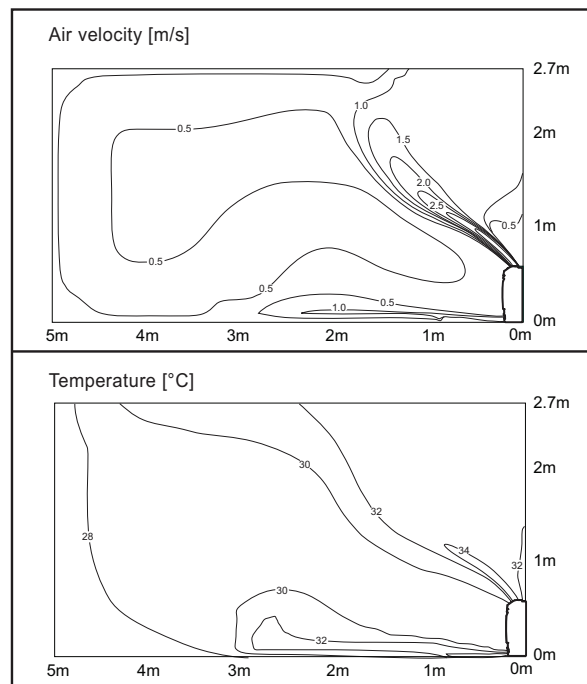
#### Cooling

Discharge angle: 40°



#### Heating

Discharge angle: 50°



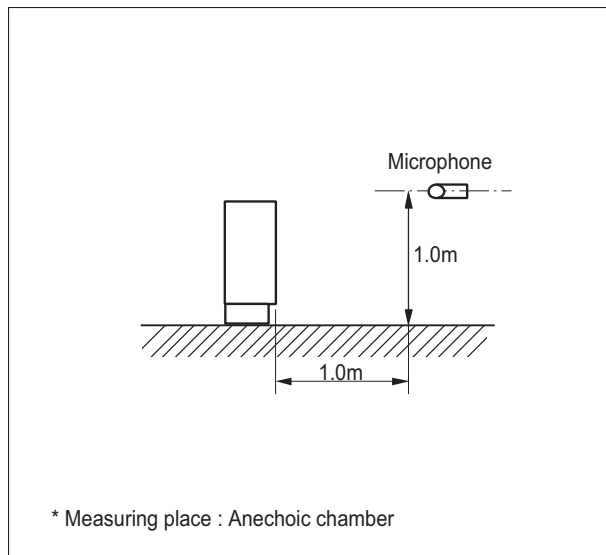
#### Note

- These figures are accordance with normal certain condition and environment.  
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation direction / location, indoor / Heating load, and other obstacles, etc.

## 7. Sound Levels

### 7.1 Sound Pressure Level

#### Overall

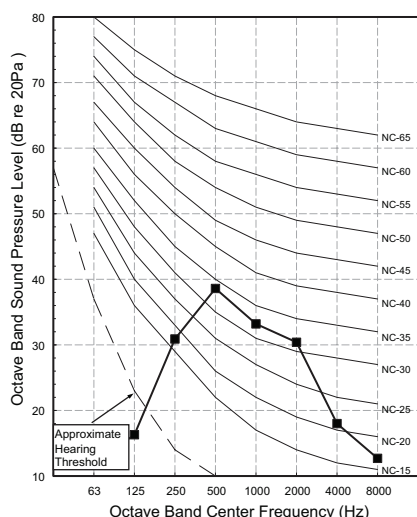


#### Note

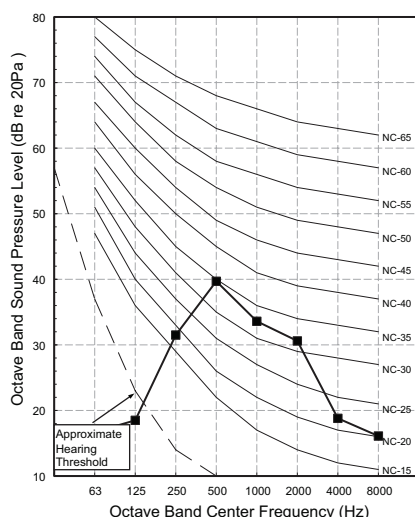
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.  
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
7. Sound pressure level is measured on the rated condition in the anechoic rooms. (LG Internal Standard)  
Therefore, these values can be increased owing to ambient conditions during operation.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ZQNW09GALA1 [UQ09F NA0]	38	32	27
ZQNW12GALA1 [UQ12F NA0]	39	32	27
ZQNW18GALA1 [UQ18F NA0]	44	39	35

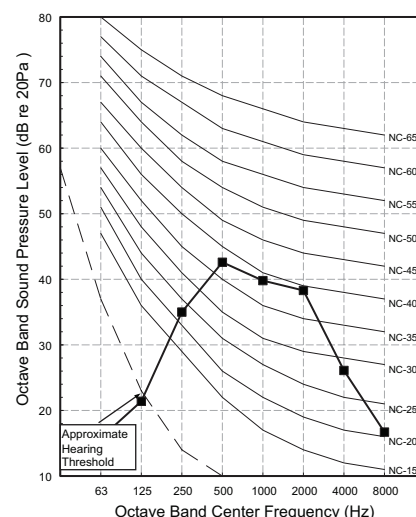
ZQNW09GALA1 [UQ09F NA0]



ZQNW12GALA1 [UQ12F NA0]



ZQNW18GALA1 [UQ18F NA0]



## 7. Sound Levels

### 7.2 Sound Power Level

#### Note

##### 1. Operating condition

- Power source : 220-240V 50 Hz / 220V 60 Hz
- Cooling : Indoor temperature (27°C DB, 19°C WB),  
Outdoor temperature (35°C DB, 24°C WB)
- Heating : Indoor temperature (20°C DB, 15°C WB),  
Outdoor temperature (7°C DB, 6°C WB)
- External static pressure is according to "Standard mode" value. Refer to the specifications.

##### 2. Data is valid at diffuse field condition.

##### 3. Data is valid at nominal operating condition

##### 4. Sound level can be increased in static pressure mode or used air guide.

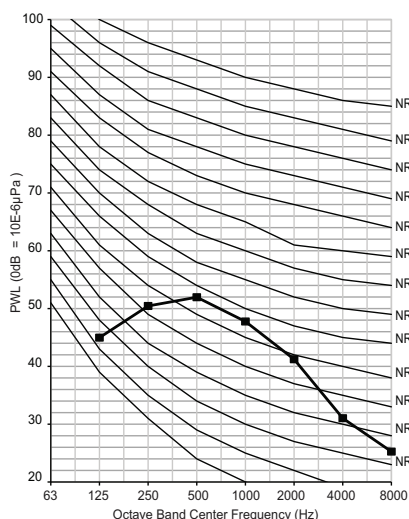
##### 5. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).

##### 6. Reference acoustic intensity 0dB = 10E-6μW/m<sup>2</sup>

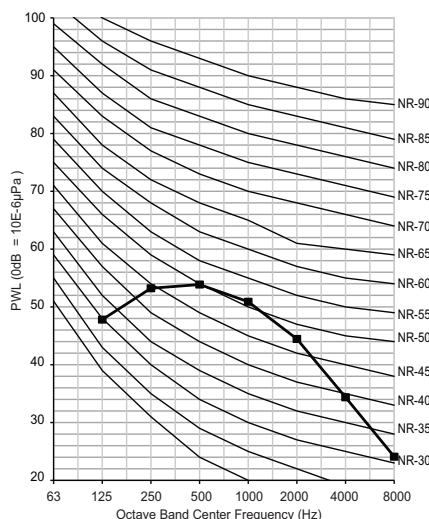
##### 7. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound power level [dB(A)]
	Cooling
ZQNW09GALA1 [UQ09F NA0]	59
ZQNW12GALA1 [UQ12F NA0]	59
ZQNW18GALA1 [UQ18F NA0]	60

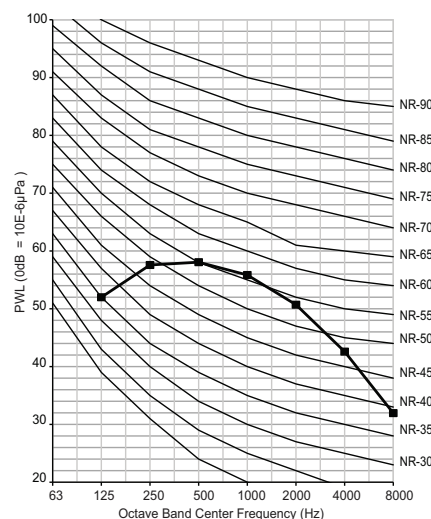
ZQNW09GALA1 [UQ09F NA0]



ZQNW12GALA1 [UQ12F NA0]



ZQNW18GALA1 [UQ18F NA0]

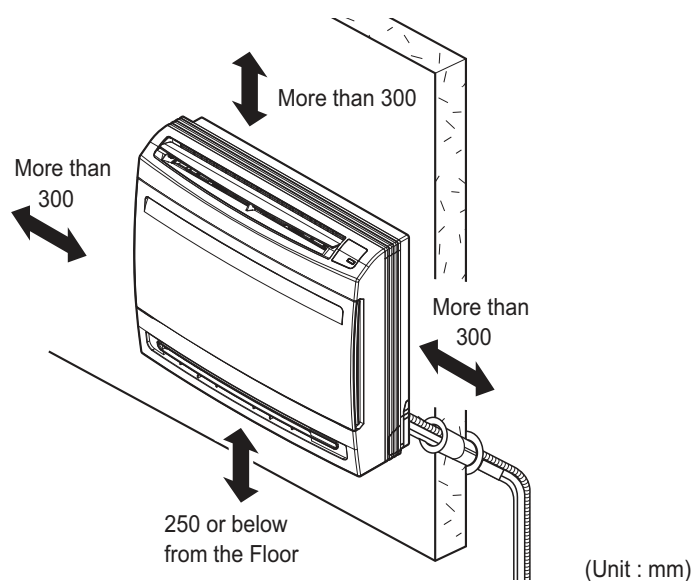


## 8. Installation

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

### 8.1 Selection of the best location

- The place where room air circulation is good.
- There should not be any obstacles to the air circulation or installation. Ensure the spaces from the wall, ceiling, or other obstacles.
- There should not be any heat source or steam near the unit.
- Do not install the unit near the door.
- The place where the unit is leveled.
- The place shall allow easy water drainage.
- The place where bear a load exceeding four times of the indoor unit weight.
- The place where the indoor unit can be connected with outdoor unit easily.
- The place where the unit is not affected by an electrical noise.
- The place where noise prevention is taken into consideration.



#### **CAUTION**

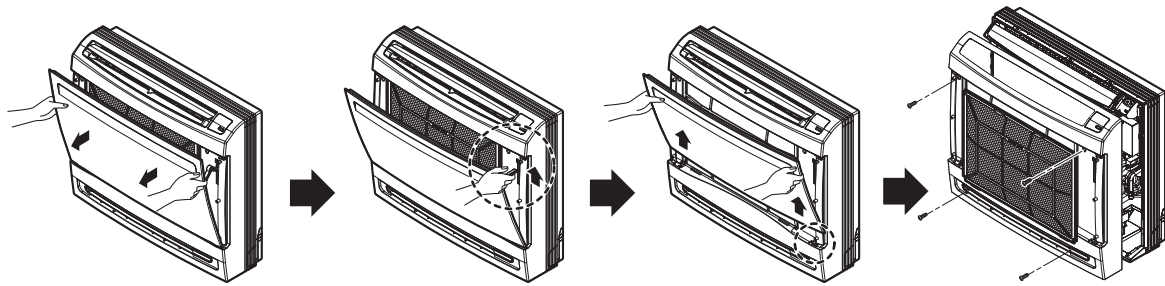
In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

### 8.2 Indoor unit installation

#### 1. Preparation / Removing front panel

- 1) Open the front grille by pulling forward
- 2) Then pull out the link of grille from groove in front panel.
- 3) Then pull out 2 hinges of grille from grooves in front panel.
- 4) Then remove 4 screws, dismount the front panel while pulling it forward.

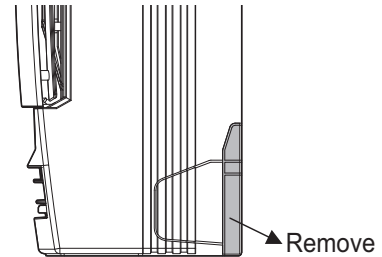
## 8. Installation



### 2. Preparation / For Moldings , Side Piping, and Concealed Installation

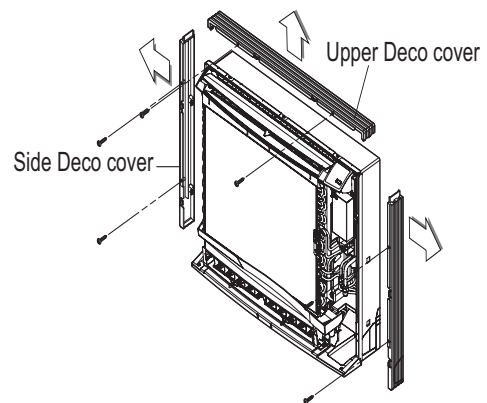
#### 2-1 For Molding

1. Remove the slit portions on the Rear Panel.



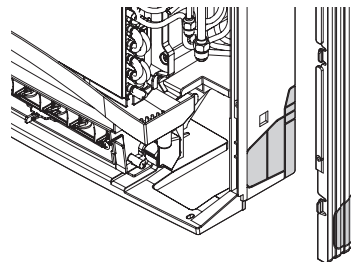
#### 2-2. For Concealed Installation

1. Remove the 6 screws.
2. Remove the Upper Deco cover.
3. Remove the Side Deco covers.



#### 2-3 For Side Piping (Reference 2-2.)


1. Remove the Deco Covers.
2. Remove the slit portions.
3. Assemble the Deco Covers.

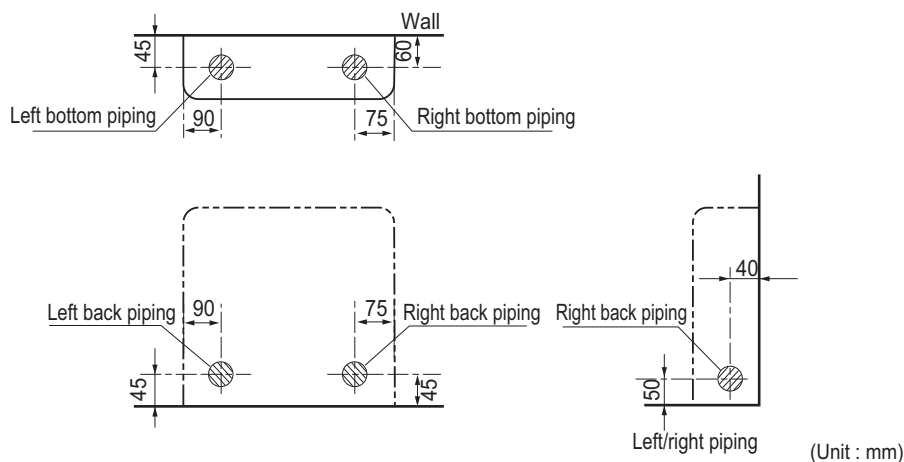




## 8. Installation

### 3. Refrigerant Piping

- 1) The location of hole is different depending on which side of the pipe is taken out.
- 2) Drill a hole( $\varnothing 70$ mm) in the point indicated by  symbol in the illustration as below.



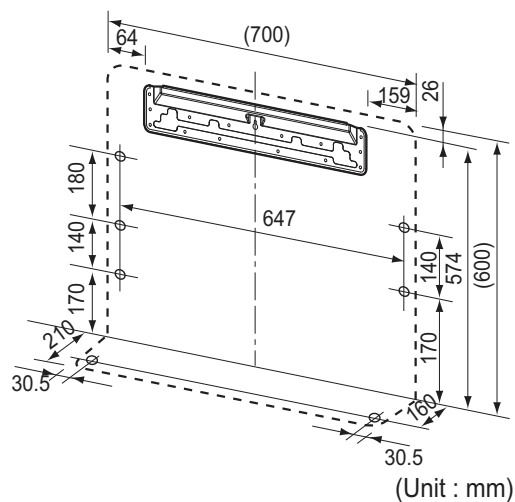
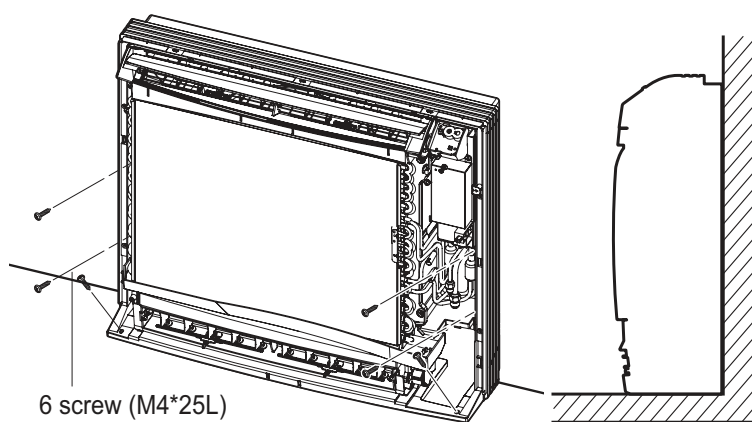
#### Notice

- The suggested shortest pipe length is 5m, in order to avoid noise from the outdoor unit and vibration.

### 4. Installing Indoor unit

#### 1) Installation on the Floor.

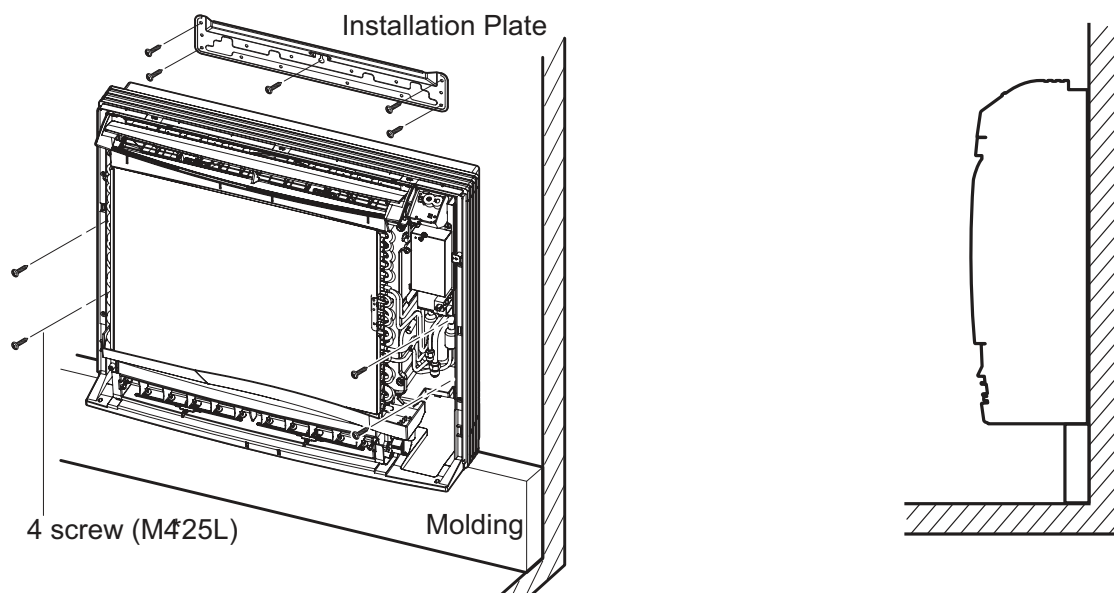
1. Fix up using 6 screws for floor installation.



#### 2) Installation on the Wall

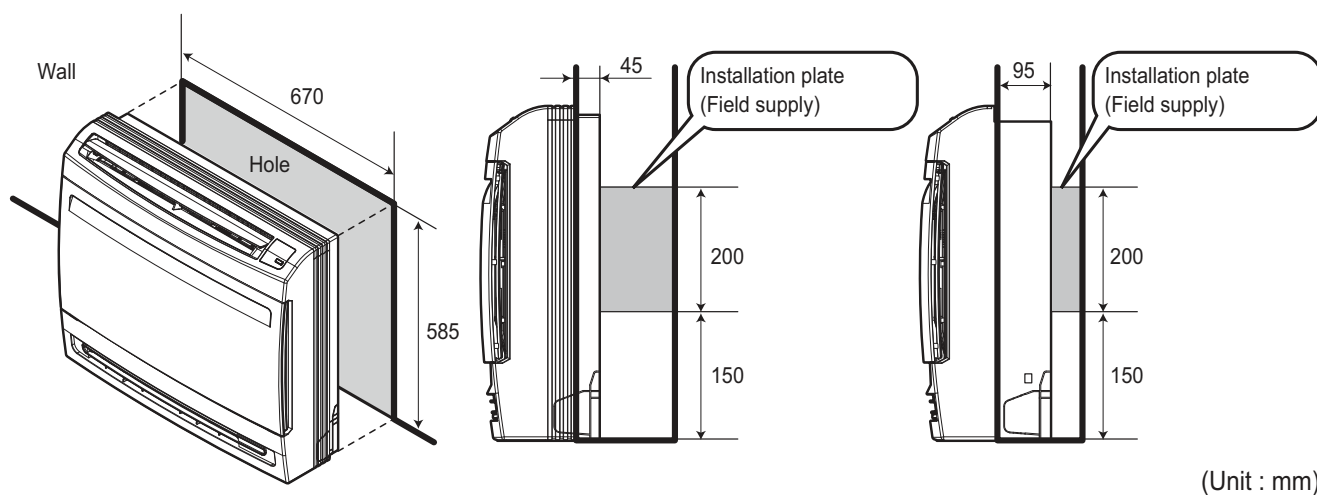
1. Fix up the installation plate using 5 screws and the indoor unit using 4 screws.
2. The installation plate should be fixed on a wall which can support the weight of the indoor unit.

## 8. Installation



### 3) Half concealed installation.

1. Make a wall hole of the size shown Fig-1.



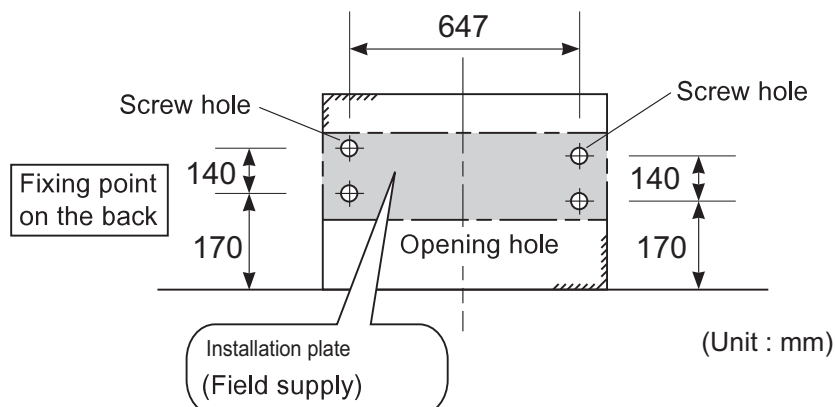
< Fig-1.>

1) Normal concealed

2) Deep concealed

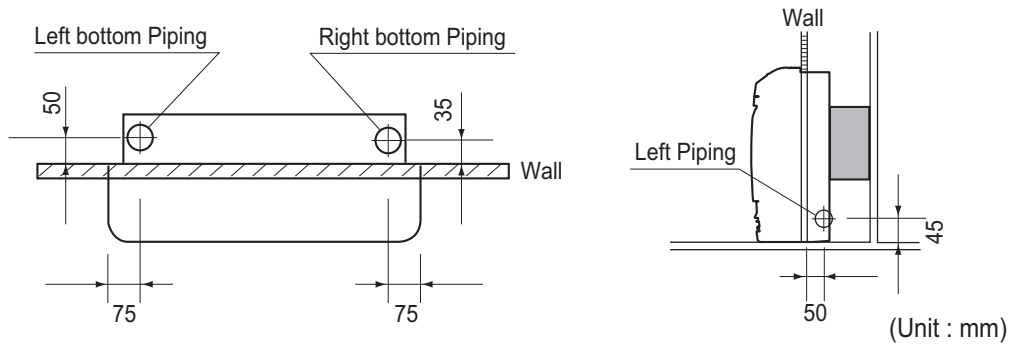
### 2. Installation of Installation plate for attaching main unit

- The rear of the unit can be fixed with screws at the points shown in the Fig-2. Be sure to install the supplemental plate in accordance with the depth of the inner wall.



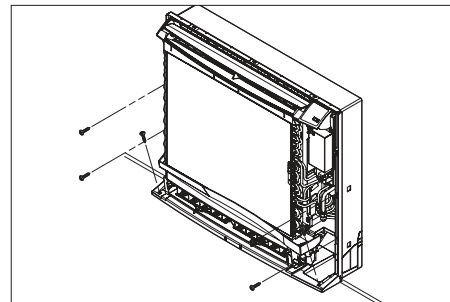
## 8. Installation

### 3. Piping Hole



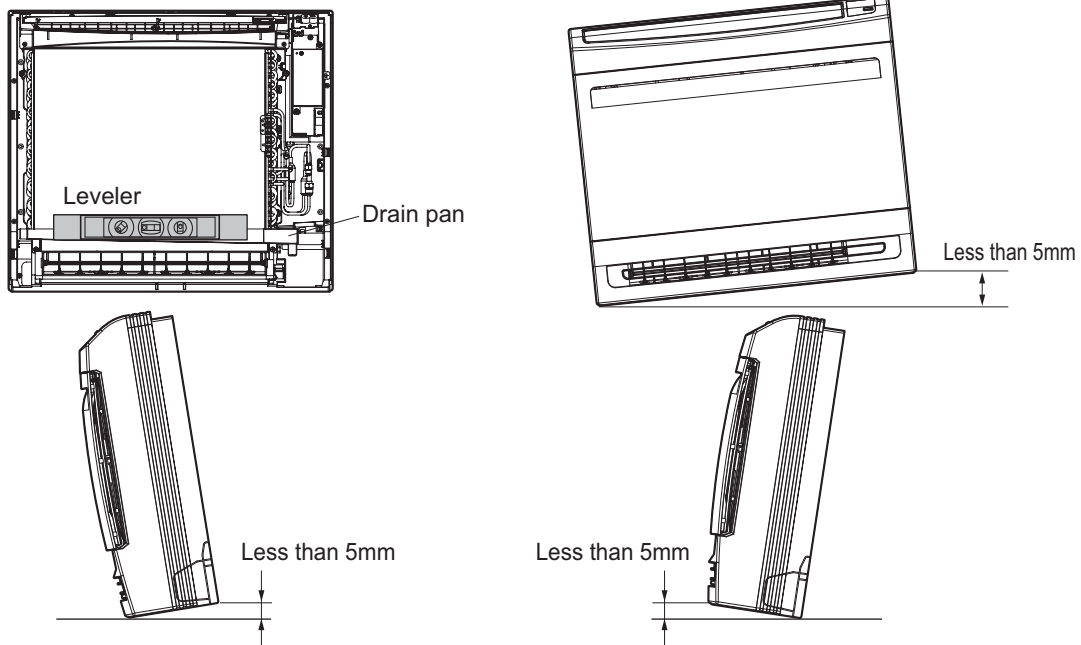
### 4. Remove the Deco Covers and Fixing Indoor Unit

- 1.Remove the Deco Covers.
- 2.Insert the Indoor Unit to the Wall hole.
- 3.Secure using 6 screws. (shown in the illustration)



### Notice

- Check the horizon of Indoor unit with the wall. Please use the Leveler on the drain pan guide.

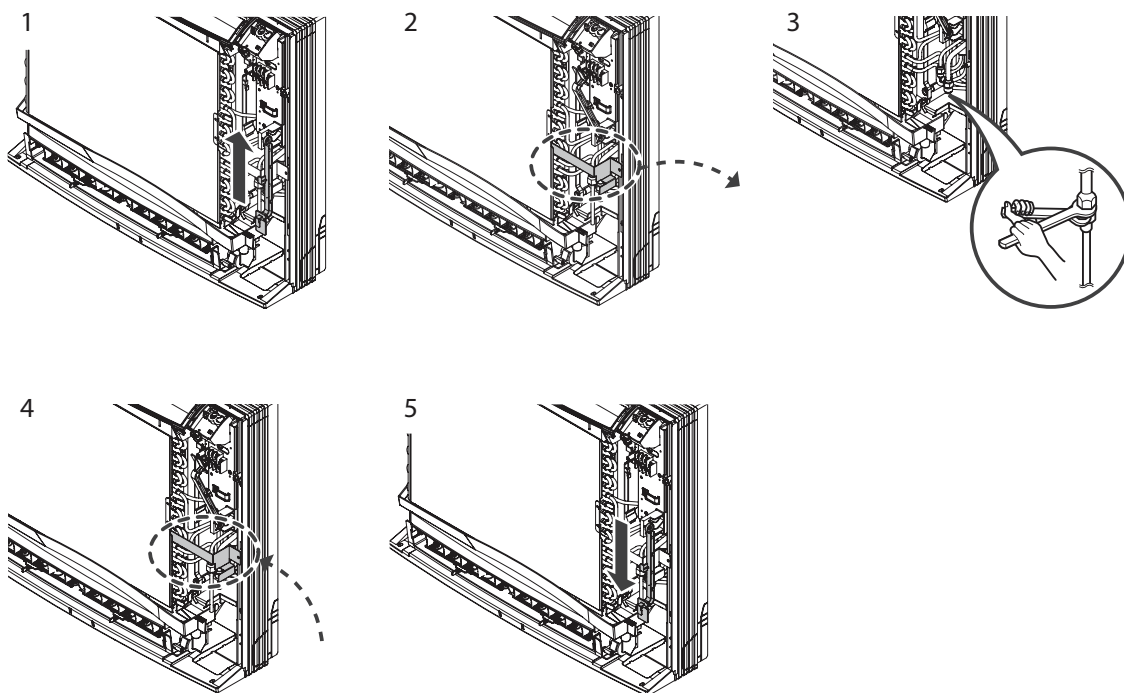


## 8. Installation

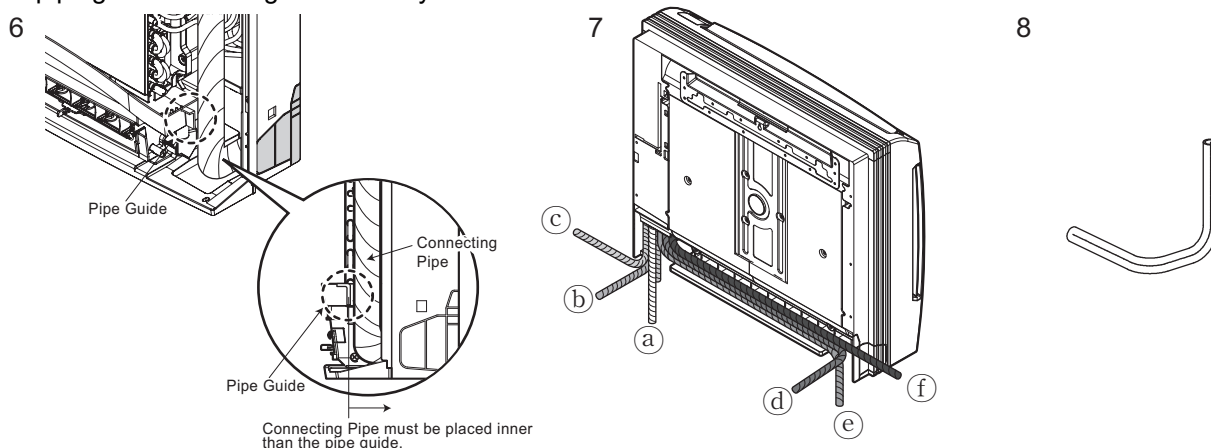
### 8.3 Connecting the Piping

When you connect the refrigerant pipe, it is easier that you connect the gas pipe first.

1. Hold up the Sensor Link.
2. Separate the Pipe Bracket (2 screws)
3. Connect the refrigerant pipe. (Refer to next page)
4. Assemble the Pipe Bracket (2 screws)
5. Put down the Sensor Link



6. After connecting, check the pipe arrangement as per illustration.
7. The piping can be arranged in six ways as shown in the illustration below.



#### ⚠ CAUTION

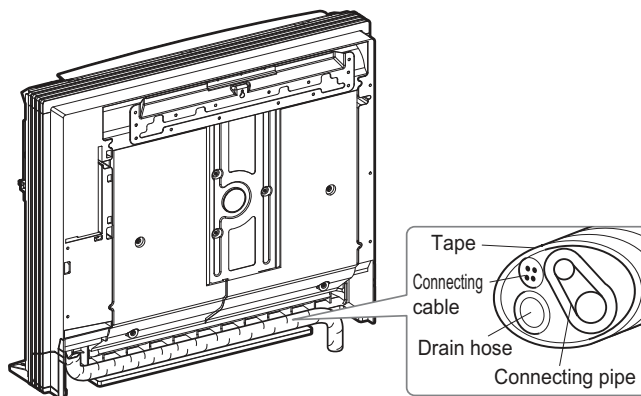
In case of © - (f), The pipe bending can be used in hand-operated bending machine. Make a pipe of the shape shown pic 8.

#### ⚠ CAUTION

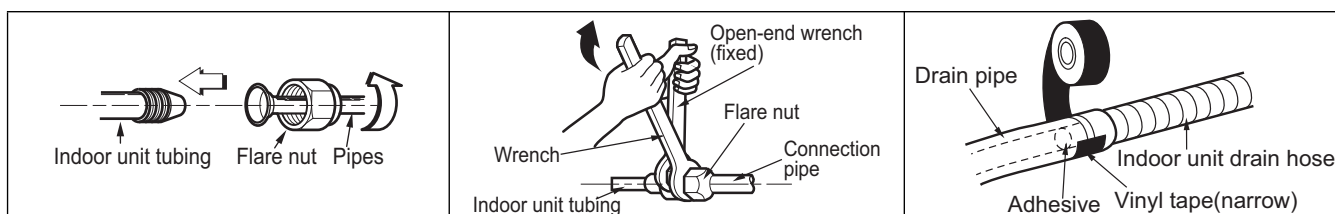
If the drain hose is routed inside the room insulate the hose with an insulation material\* sothat dripping from sweating (condensation) willnot damage furniture or floors.

## 8. Installation

- Foamed polyethylene or equivalent is recommended.



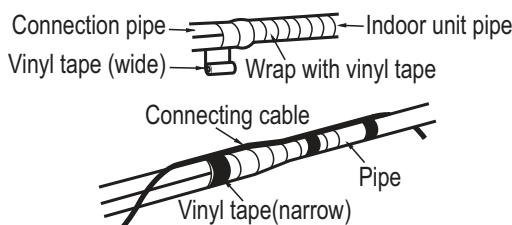
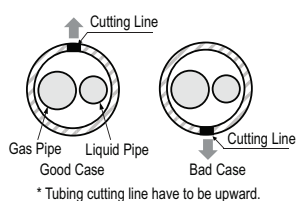
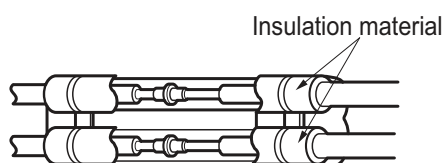
### ■ Connecting the installation pipe and drain hose



1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

### ■ Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward. Wrap the area which accommodates the rear piping housing section with vinyl tape.
3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.



### ⚠ CAUTION

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating condensation) will not damage furniture or floors.

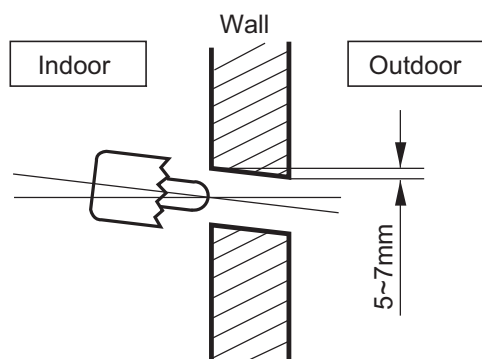
\* Foamed polyethylene or equivalent is recommended.

## 8. Installation

### 8.4 Drain piping connection

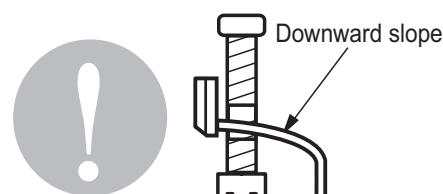
#### ◆ Drill a Hole in the wall

1. Drill the piping hole with a  $\varnothing$  70mm hole core drill.  
Drill the piping hole at either the right or the left with the holes slightly slanted to the outdoor side.

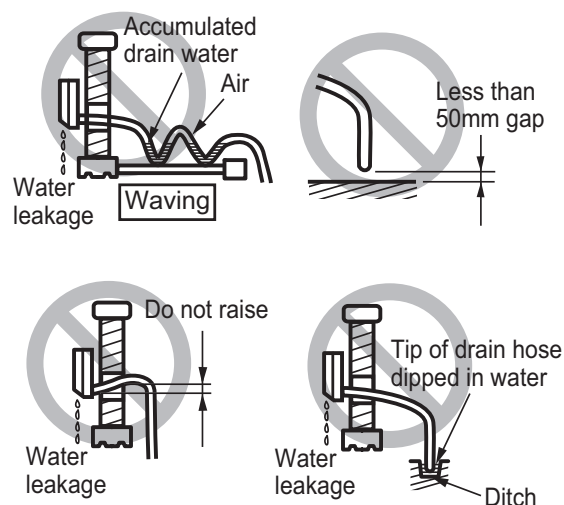


#### ◆ Drain Piping

1. The drain hose should point downward for easy drain flow



2. Do not make drain piping like the following.



\* The feature can be changed according to type of model.

### 8.5 Connecting cables between Indoor Unit and Outdoor Unit

#### 8.5.1 General instructions

- All field supplied parts and materials, electric works must conform to local codes. Use copper wire only.
- Follow the **"WIRING DIAGRAM"** attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down the power supply to the entire system must be installed.



## 8. Installation

After the confirmation of the above conditions, prepare the wiring as follows:

- Never fail to have separate power specially for the air conditioner.
- Provide a circuit breaker switch between power source and the unit.
- Confirm the Specification of power source.
- Confirm that electrical capacity is sufficient.
- Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- Confirm that the cable thickness is as specified in the power sources specification.  
(Particularly note the relation between cable length and thickness.)
- Do not install the leakage breaker in a place which is wet or moist.  
Water or moist may cause short circuit.
- The following troubles would be caused by voltage drop-down.
  - » Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
  - » Proper starting power is not given to the compressor.

### 8.5.2 Wiring connection

- Connect the wires to the terminals on the control board individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.
- In case of the system with multiple indoor units, mark each indoor unit as unit A, unit B, etc and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

### 8.5.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the cable(or thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel. In case that communication (transmission) cable is not needed to connect, fix the other side of the clamp with a screw strongly.

#### WARNING

- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

## 8. Installation

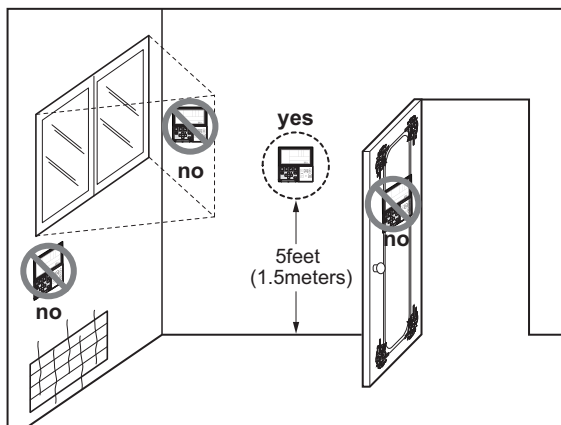
### 8.5.4 Wired Remote Controller Installation (Optional)

#### Note

- According to the type of model, applicable type of remote controller can be changed. Refer to the accessory list or installation manual of each model.

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.



- Do not install the remote controller where it can be affected by :**

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)





#### **Air Solution**

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<http://partner.lge.com>

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The specifications, designs, and information in this brochure are subject to change without notice.