

LG

MULTI/SINGLE
Indoor unit
R410A
0CTI0-10D(Replaces 0CTI0-10C)

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

◆ Multi / Standard Inverter Model

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)	8.0 (30)	10.0 (36)	12.5 (42)	14.0 (48)	15.0 (60)	19.0 (70)	23.0 (85)
Wall Mounted Unit(1)	Deluxe	SJ		○	○	○										
		SK						○	○							
	Standard plus	SJ	○	○	○	○	○		○	○						
		SK							○	○						
	Standard	SJ		○	○	○										
		SK							○	○						
Libero E		SV								◎	◎					
ART COOL Mirror		SJ		○	○	○										
		SK						○	○							
ART COOL		SF			○	○										
Ceiling Mounted Cassette	1-Way	TU			○	○										
	4-Way	TR	○	○	●	●										
		TQ						●								
		TP							●	◎						
		TN									◎					
		TM										◎	◎	◎		
	4-Way(2)	TQ						◎								
		TP							◎	◎						
Ceiling Concealed Duct	High Static Pressure	B9													◎	◎
	Middle Static Pressure	M1							●	●	◎					
		M2										◎	◎			
		M3												◎	◎	
	Low Static Pressure (Slim)	L1			●											
		L2			◎	●			●							
L3									●							
Ceiling & Floor		VE			●	●										
Ceiling Suspended Unit		VJ							●	●	◎					
		VK										◎				
		VL											◎	◎	◎	
Console		QA			●	●			●					◎	◎	◎
Floor Standing Unit		PT2												◎		

Note

1. Refer the Combination Table of Product Data Book for Outdoor Units.

- : Connectable with Multi model only.
- ◎ : Connectable with Standard Inverter model only.
- : Connectable with Multi or Standard Inverter model.

2. This product contains Fluorinated greenhouse gases.

◆ Compact Model

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)	8.0 (30)	10.0 (36)	12.5 (42)	14.0 (48)	15.0 (60)	19.0 (70)	23.0 (85)
Ceiling Concealed Duct	Middle Static Pressure(2)	BH						○	○							

Note

1. Refer the Combination Table of Product Data Book for Outdoor Units.

- : Connectable with Compact model (Single CAC) only.

2. This product contains Fluorinated greenhouse gases.

2. External Appearance

<p>• Wall Mounted Unit (1)</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>• Ceiling Concealed Duct – Middle static pressure</p> <p>ABNW18GM1A0 [CM18 N14] ABNW24GM1A0 [CM24 N14] ABNW30GM1A0 [UM30 N14] ABNW36GM2A0 [UM36 N24] ABNW42GM2A0 [UM42 N24] ABNW48GM3A0 [UM48 N34] ABNW60GM3A0 [UM60 N34]</p> <p>• Ceiling Concealed Duct - Middle static pressure (2)</p> <p>ABNW18GBHC0 [UB18C NH0] ABNW24GBHC0 [UB24C NH0]</p> <p>• Ceiling Concealed Duct – High static pressure</p> <p>ABNW70GB9A0 [UB70 N94] ABNW85GB9A0 [UB85 N94]</p>   
<p>• Wall Mounted Unit (Libero E)</p> <p>AJNW30GVLA0 [UJ30 NV2] AJNW36GVLA0 [UJ36 NV2]</p> 	<p>• Ceiling Concealed Duct – Low static pressure</p> <p>ABNH09GL1A2 [CB09L N12] ABNW09GL2A2 [CB09L N22] ABNH12GL2A2 [CB12L N22] ABNH18GL2A2 [CB18L N22] ABNH24GL3A2 [CB24L N32]</p> 
<p>• ART COOL</p> <p>AMNH09GAF*1 [MA09AH* NF1] AMNH12GAF*1 [MA12AH* NF1]</p>   <p>• Silver(V), Gold(G), White Silver(H), Red(E), Gallery(1)</p>	<p>• Ceiling & Floor</p> <p>AVNH09GELA2 [CV09 NE2] AVNH12GELA2 [CV12 NE2]</p> <p>• Ceiling Suspended Unit</p> <p>UVNH18GJLA2 [CV18 NJ2] UVNH24GJLA2 [CV24 NJ2] UVNH30GJLA2 [UV30 NJ2] UVNH36GKLA2 [UV36 NK2] UVNH42GLLA2 [UV42 NL2] UVNH48GLLA2 [UV48 NL2] UVNH60GLLA2 [UV60 NL2]</p> <p>• Console</p> <p>AQNH09GALA0 [CQ09 NA0] AQNH12GALA0 [CQ12 NA0] AQNH18GALA0 [CQ18 NA0]</p>  
<p>• Ceiling Mounted Cassette 1-way</p> <p>AMNH09GTUC0 [MT09AH NU1] AMNH12GTUC0 [MT11AH NU1]</p> 	<p>• Floor Standing Unit</p> <p>APNH48GTLA0 [UP48 NT2]</p> 
<p>• Ceiling Mounted Cassette 4-way</p> <p>AMNH05GTRA0 [MT06AH NR0] AMNH07GTRA0 [MT08AH NR0] ATNH09GRLE2 [CT09 NR2] ATNH12GRLE2 [CT12 NR2] ATNH18GQLE2 [CT18 NQ2] ATNH24GPLE2 [CT24 NP2] ATNH30GPLE2 [UT30 NP2] ATNH36GNLE2 [UT36 NN2] ATNH42GMLE2 [UT42 NM2] ATNH48GMLE2 [UT48 NM2] ATNH60GMLE2 [UT60 NM2]</p> <p>• Ceiling Mounted Cassette 4-way (2)</p> <p>ATNW18GQLA0 [CT18 NQ4] ATNW24GPLA0 [CT24 NP4] ATNW30GPLA0 [UT30 NP4]</p> 	<p>• ART COOL Mirror</p> <p>AMNW07GSJR0 [AM07BP NSJ] USNW09GJRZ0 [AM09BP NSJ] USNW12GJRZ0 [AM12BP NSJ] USNW18GKRZ0 [AM18BP NSK] AMNW24GSKR0 [AM24BP NSK]</p> 

3. Nomenclature

3.1 Factory Model Name

Model Name	AMN	W	15	G	E	B	A	0
No.	1	2	3	4	5	6	7	8

No.	Signification
1	A*N / E*N / U*N : Indoor units using R410A * Indicates Product type M : Only for Multi systems J, S : Wall Mounted unit / ARTCOOL Mirror T : Ceiling Mounted Cassette B : Ceiling Concealed Duct V : Ceiling & Floor / Ceiling Suspended Unit Q : Console P : Floor Standing Unit
2	Model type W/H : DC Inverter Heat pump
3	Nominal Capacity Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	Electrical rating G: 1Ø, 220-240V, 50 Hz / 1Ø, 220V, 60 Hz
5	Indoor unit type for A*N- / E*N- / U*N- series models Chassis name Indoor unit type for AMN- series models A : ART COOL S : Wall Mounted Unit / ART COOL Mirror T : Ceiling Mounted Cassette B, M : Ceiling Concealed Duct
6	Indoor unit type for A*N- / UVN series models L : Basic Indoor unit type for AMN-series models Chassis name Indoor unit type for ESN / USN series models 1 : Deluxe type 2 : Standard plus type 3 : Standard type R : ARTCOOL Mirror type Low / Middle Static duct 1,2,3 : Chassis name
7	Functions A : Basic, B : B2B function, C/L : Plasma, E : Elevation grille, Z : Ionizer Functions for Wall Mounted Unit (AMN-, ESN- series) L/Z : Ionizer + 4 Way Air flow + Wi-Fi B/F : Non-Ionizer + 4 Way Air flow + Wi-Fi A : Non-Ionizer + 2 Way Air flow Panel Color for ART COOL V : Silver, G : Gold, H : White Silver, E : Red, 1 : Gallery Functions for ARTCOOL Mirror (USN- series) Z : Ionizer + 4 Way Panel Color for ARTCOOL Mirror(AMN- series) R : Mirror Model type for Ceiling Concealed Duct A : Standard, C : Compact
8	Serial number

3. Nomenclature

3.2 Buyer Model Name (1)

Model Name	M	S	15	SQ	N	B	0
No.	1	2	3	4	5	6	7

No.	Signification
1	Connectable Outdoor unit type 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	Product type J : Wall Mounted Unit A : ARTCOOL T : Ceiling Mounted Cassette B, M : Ceiling Concealed Duct V : Ceiling & floor / Ceiling Suspended Unit Q : Console P : Floor Standing Unit
3	Nominal Capacity Ex) 7,000 Btu/h Class → '07', 18,000 Btu/h Class → '18'
4	Detailed product type AH* : ARTCOOL AH : Ceiling Mounted Cassette L : Ceiling Concealed Duct (Low Static) C : Compact
5	Indoor Unit / Outdoor Units N : Indoor Unit U : Outdoor Unit
6	Chassis name
7	Serial number

3. Nomenclature

3.3 Buyer Model Name (2)

■ Wall Mounted Unit (Deluxe, Standard, Standard plus), ARTCOOL Mirror

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

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

MULTI/SINGLE

Indoor unit

Product data

Wall Mounted Unit(1)

ART COOL

ART COOL Mirror

Ceiling Mounted cassette 1-way

Ceiling Mounted cassette 4-way

Ceiling Mounted cassette 4-way(2)

Ceiling concealed duct - High static pressure

Ceiling concealed duct - Middle static pressure

Ceiling concealed duct - Middle static pressure(2)

Ceiling concealed duct - Low static pressure

Ceiling & Floor / Ceiling Suspended Unit

Console

Floor Standing Unit

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 ₂ 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	PTVSAA0	-	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

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2. Some functions can be limited by remote controller.

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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	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 ₂ 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	PTVSAA0	-	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

◆ 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
	Auto Elevation Grille	X
Special Functions	Wi-Fi	X
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		X
Network Solution(LGAP)		X

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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 ₂ 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	PTVSAA0	-	X

Note

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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

■ Libero E

Category	Functions	AJNW30GVLA0 [UJ30 NV2] AJNW36GVLA0 [UJ36 NV2]
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	O (Manual)
	Airflow direction control (up & down)	O (Auto)
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	3 / 4 / 4
	Chaos wind(auto wind)	O
	Jet cool/heat	O / O
Air purifying	Swirl wind	X
	Triple filter	X
	Plasma air purifier	X
	Ionizer	X
Installation	Long-life prefilter (washable / anti-fungus)	O
	Drain pump	X
	E.S.P. control	X
	Electric heater	X
	High ceiling operation	X
Reliability	Auto Elevation Grille	X
	Hot start	O
Convenience	Self diagnosis	O
	Auto changeover	O
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control	X
	Sleep mode	O
	Timer(on/off)	O
Individual control	Timer(weekly)	X
	Two thermistor control	X
	Standard Wired remote controller	PQRCVSL0 / PQRCVSL0QW / PREMTB001 / PREMTBB01
	Premium Wired remote controller	PREMTA000 / PREMTA000A / PREMTA000B
	Simple wired remote controller	X
	Simple Wired remote controller(for hotel use)	X
Network Solution	Wireless remote controller	O
	General central controller (Non LGAP)	X
	Network Solution(LGAP)	O
	Simple Dry contact (outside AC 220V power source)	PQDSA / PDRYCB000
	2 Points Dry Contact (For setback)	PDRYCB400
	Dry contact for Thermostat	PDRYCB300
	Dry contact For Modbus	PDRYCB500
Special function kit	PI 485(for Indoor Unit)	X
	Zone controller	X
	CTI(Communication transfer interface)	X
	Electronic thermostat	X
	Independent Power Module	X
Others	CO ₂ Sensor	X
	Remote temperature sensor	X
	Group control wire	X

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.

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 ² (ft ²)	0.20 (2.15)	0.20 (2.15)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	7.5 / 6.1 / 4.9	7.7 / 6.4 / 5.0
		H / M / L	ft ³ /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 ² (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. <ul style="list-style-type: none">Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWBHeating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWBInterconnected 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 ² (ft ²)		0.20 (2.15)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	8.1 / 6.7 / 5.3	14.2 / 11.3 / 9.9
		H / M / L	ft ³ /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 ² (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				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 ² (ft ²)	0.28 (3.01)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	15.2 / 12.7 / 10.2
		H / M / L	ft ³ /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 ² (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 ² (ft ²)	0.19 (2.05)	0.19 (2.05)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	8.3 / 6.7 / 5.6	8.6 / 7.2 / 5.6
		H / M / L	ft ³ /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 ² (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. <ul style="list-style-type: none"> 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 ² (ft ²)		0.19 (2.05)	0.19 (2.05)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	9.2 / 7.4 / 5.6	9.6 / 8.1 / 5.6
		H / M / L	ft ³ /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 ² (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 ² (ft ²)		0.19 (2.05)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	10.0 / 8.5 / 6.1	14.2 / 11.3 / 9.9
		H / M / L	ft ³ /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 ² (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				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 ² (ft ²)	0.28 (3.01)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	15.2 / 12.7 / 10.2
		H / M / L	ft ³ /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 ² (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 x 10-3/32
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 ² (ft ²)		0.19 (2.05)	0.19 (2.05)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	8.6 / 7.2 / 5.6	9.2 / 7.4 / 5.6
		H / M / L	ft ³ /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 ² (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. <ul style="list-style-type: none"> 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 ² (ft ²)		0.19 (2.05)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	9.6 / 8.1 / 5.6	14.2 / 11.3 / 9.9
		H / M / L	ft ³ /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 ² (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 ² (ft ²)		0.28 (3.01)
Fan	Type	-		Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	15.2 / 12.7 / 10.2
		H / M / L	ft ³ /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 ² (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.

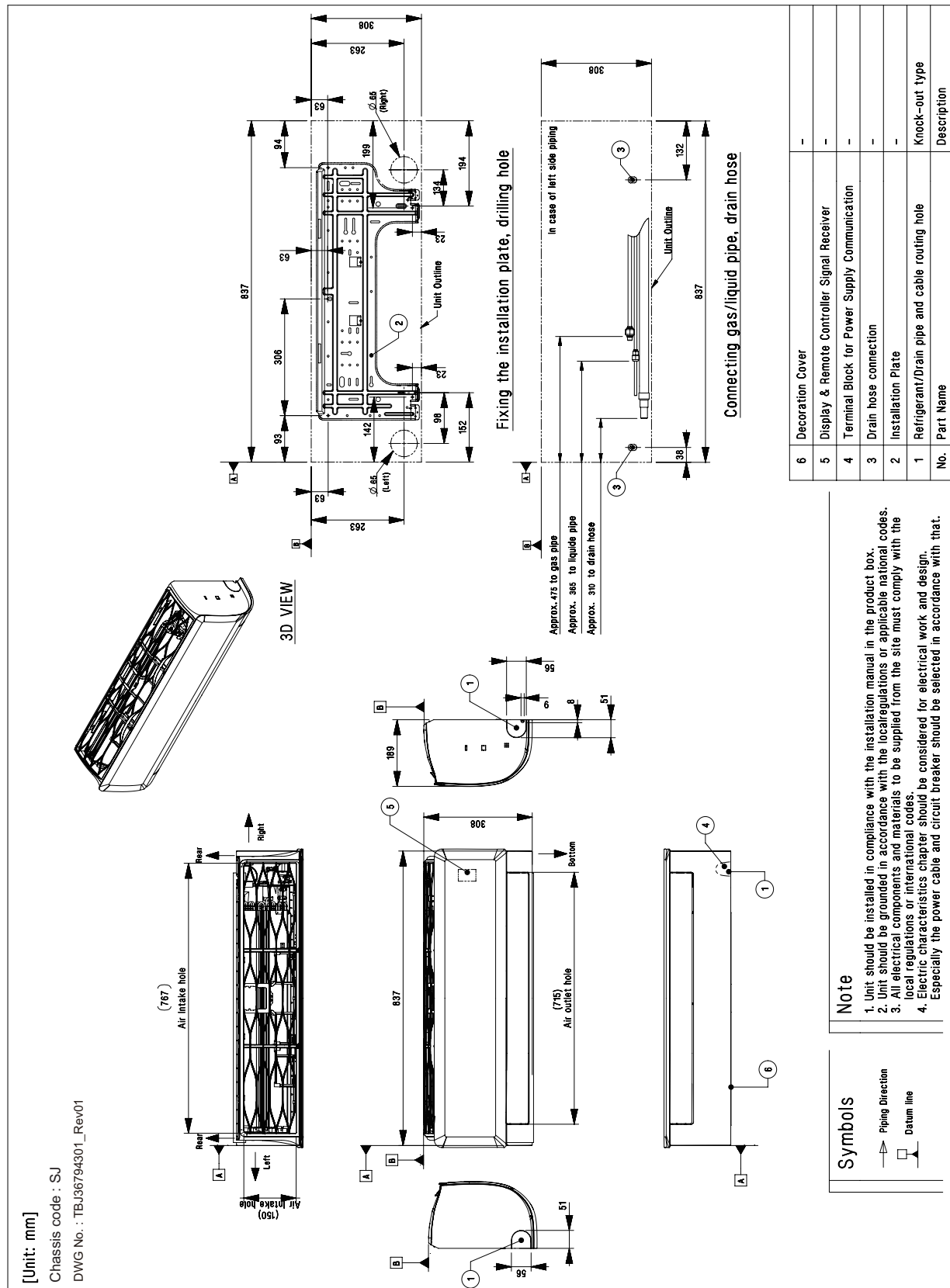
2. Specifications

■ Libero E

Model Name				AJNW30GVLA0 [UJ30 NV2]	AJNW36GVLA0 [UJ36 NV2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min./Nom./Max.		W x No.	50 / 100 / 140	60 / 120 / 160
Running Current			A	0.5	0.6
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	1,190 × 346 × 265	1,190 × 346 × 265
		W x H x D	inch	46-27/32 x 13-5/8 x 10-7/16	46-27/32 x 13-5/8 x 10-7/16
Net Weight	Body		kg (lbs)	15.7 (34.6)	16.0 (35.3)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 18 x 19) x 1 + (1 x 6 x 19) x 1	(2 x 18 x 19) x 1 + (1 x 6 x 19) x 1
	Face Area		m ² (ft ²)	0.34 (3.63)	0.34 (3.63)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	22.0 / 19.0 / 16.0	27.0 / 24.0 / 20.0
		H / M / L	ft ³ /min	777 / 671 / 565	953 / 847 / 706
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	82.1 x 1	102.6 x 1
Sound Pressure Level		H / M / L	dB(A)	45 / 42 / 40	48 / 45 / 41
Sound Power Level		Max.	dB(A)	61	63
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	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 ² (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.					

■ Deluxe (SJ Chassis)

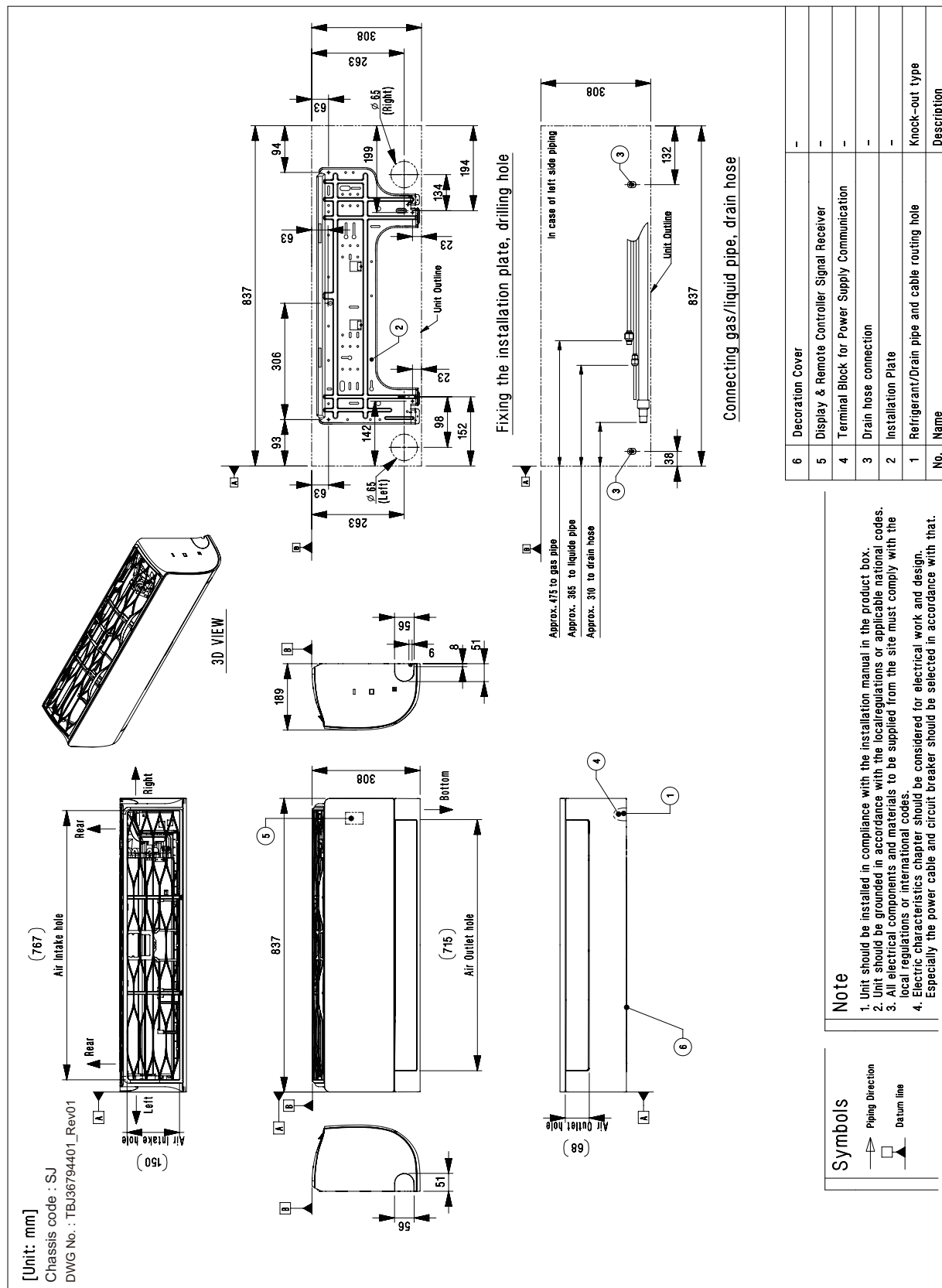
◆ AMNW07GSJL0 [DM07RP NSJ], ASNW09GJ1Z0 [DM09RP NSJ], ASNW12GJ1Z0 [DM12RP NSJ]



3. Dimensions

■ Standard Plus / Standard (SJ Chassis)

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

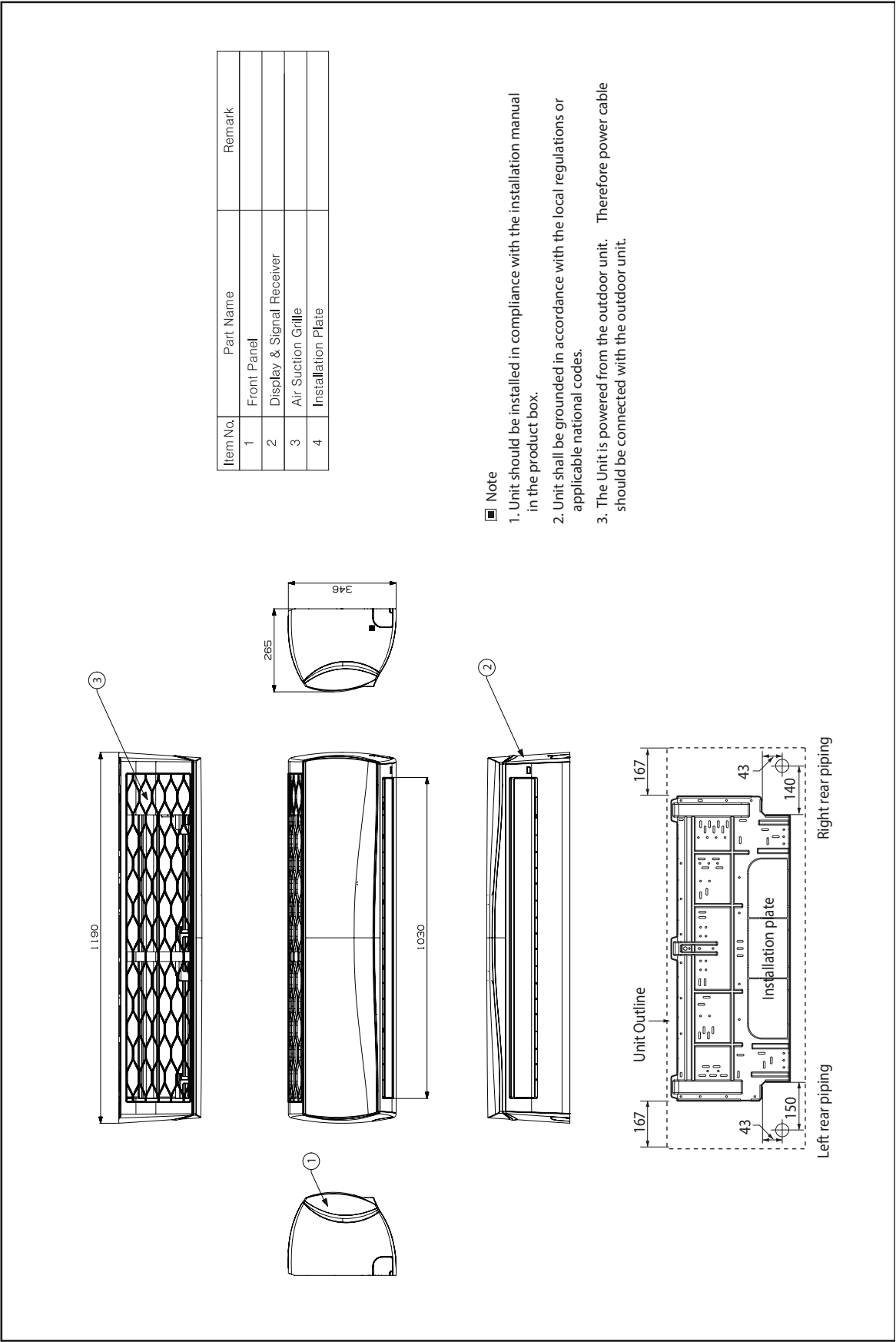


◆ ASNW18GK1Z0 [DM18RP NSK], ASNW24GK1Z0 [DM24RP NSK], ESNW18GK2F0 [PM18SP NSK], ESNW24GK2F0 [PM24SP NSK], ESNW18GK3A0 [PM18EP NSK], AMNW24GSKA0 [PM24EP NSK]



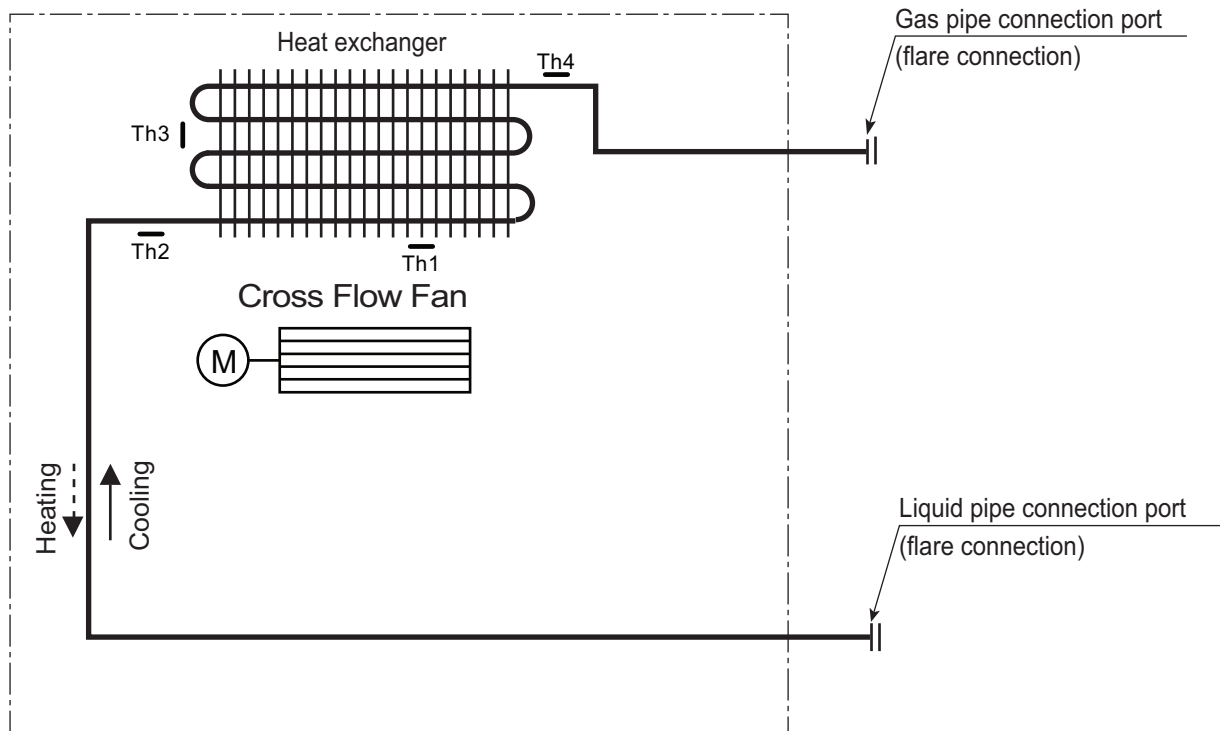
3. Dimensions

- Libero E (SV Chassis)
- ◆ AJNW30GVLA0 [UJ30 NV2], AJNW36GVLA0 [UJ36 NV2]



4. Piping diagrams

■ Models : Deluxe, Standard Plus, Standard

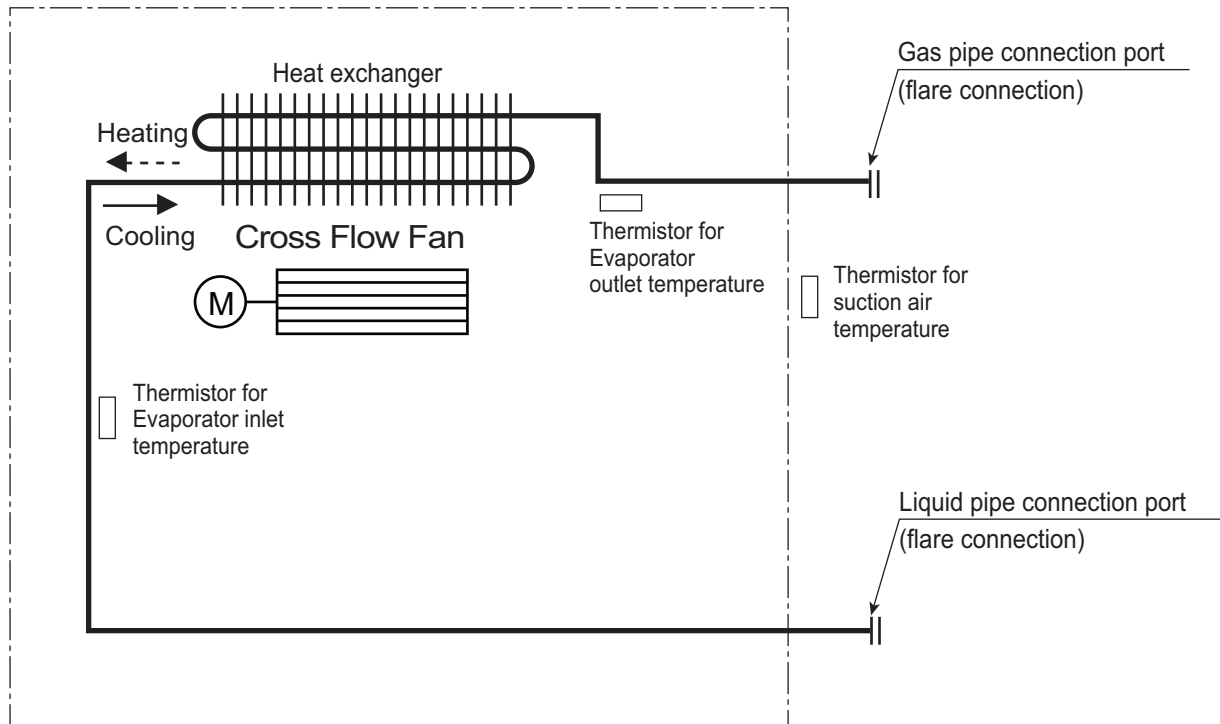


LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1
Th2	Thermistor for evaporator inlet temperature	
Th3*	Thermistor for evaporator middle temperature	CN-TH3
Th4	Thermistor for evaporator outlet temperature	CN-TH2

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

4. Piping diagrams

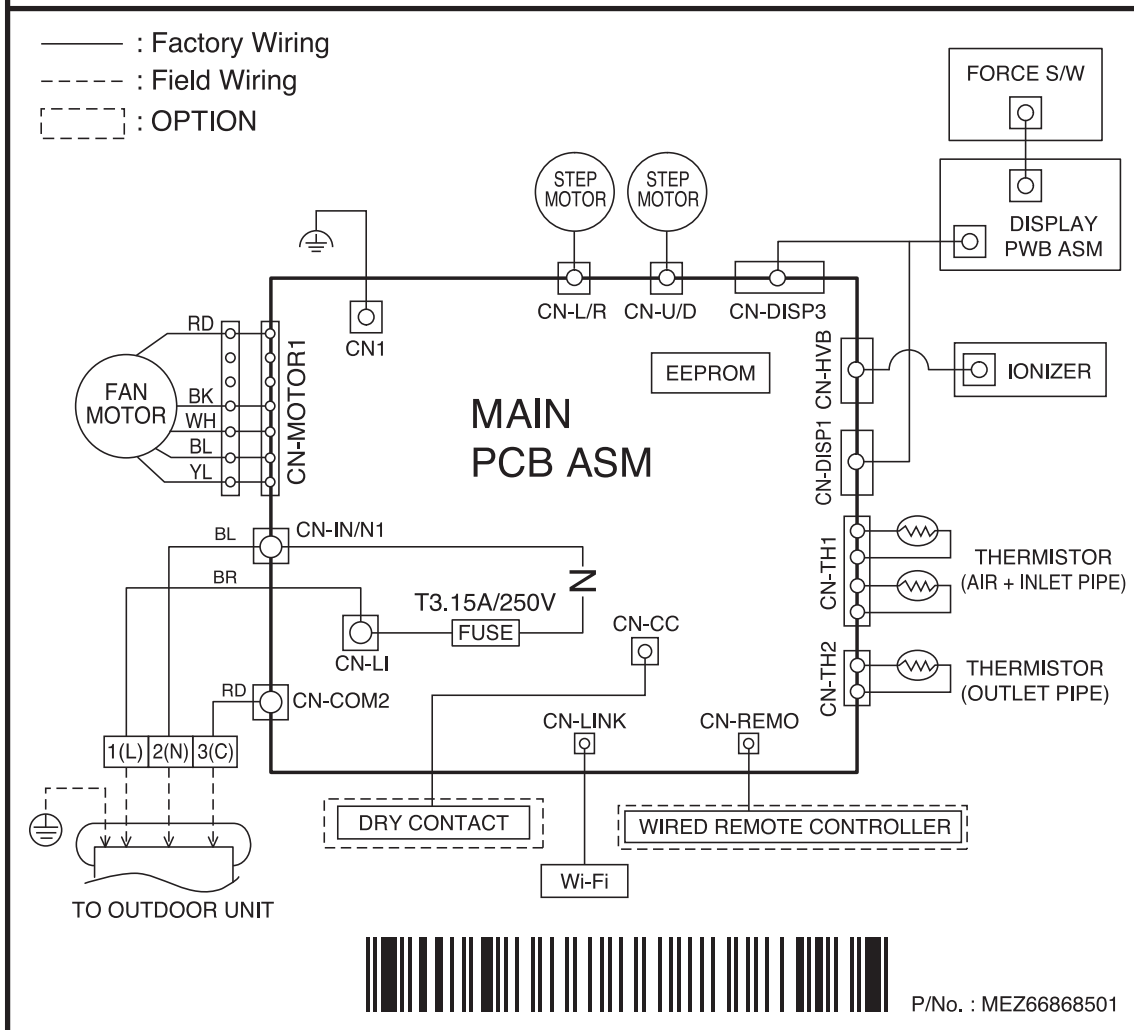
■ Models : Libero E



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

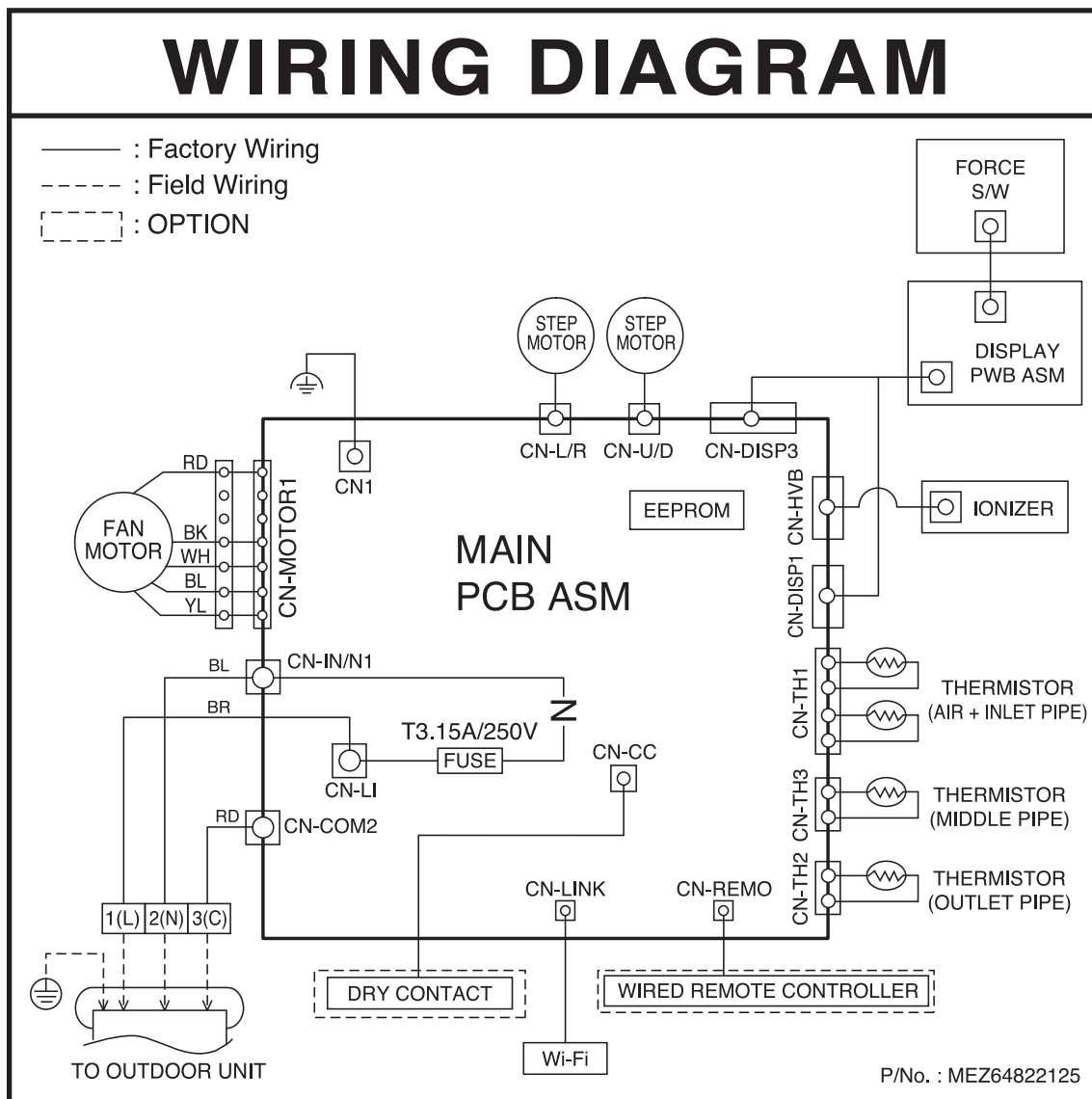
■ Deluxe

WIRING DIAGRAM



5. Wiring Diagrams

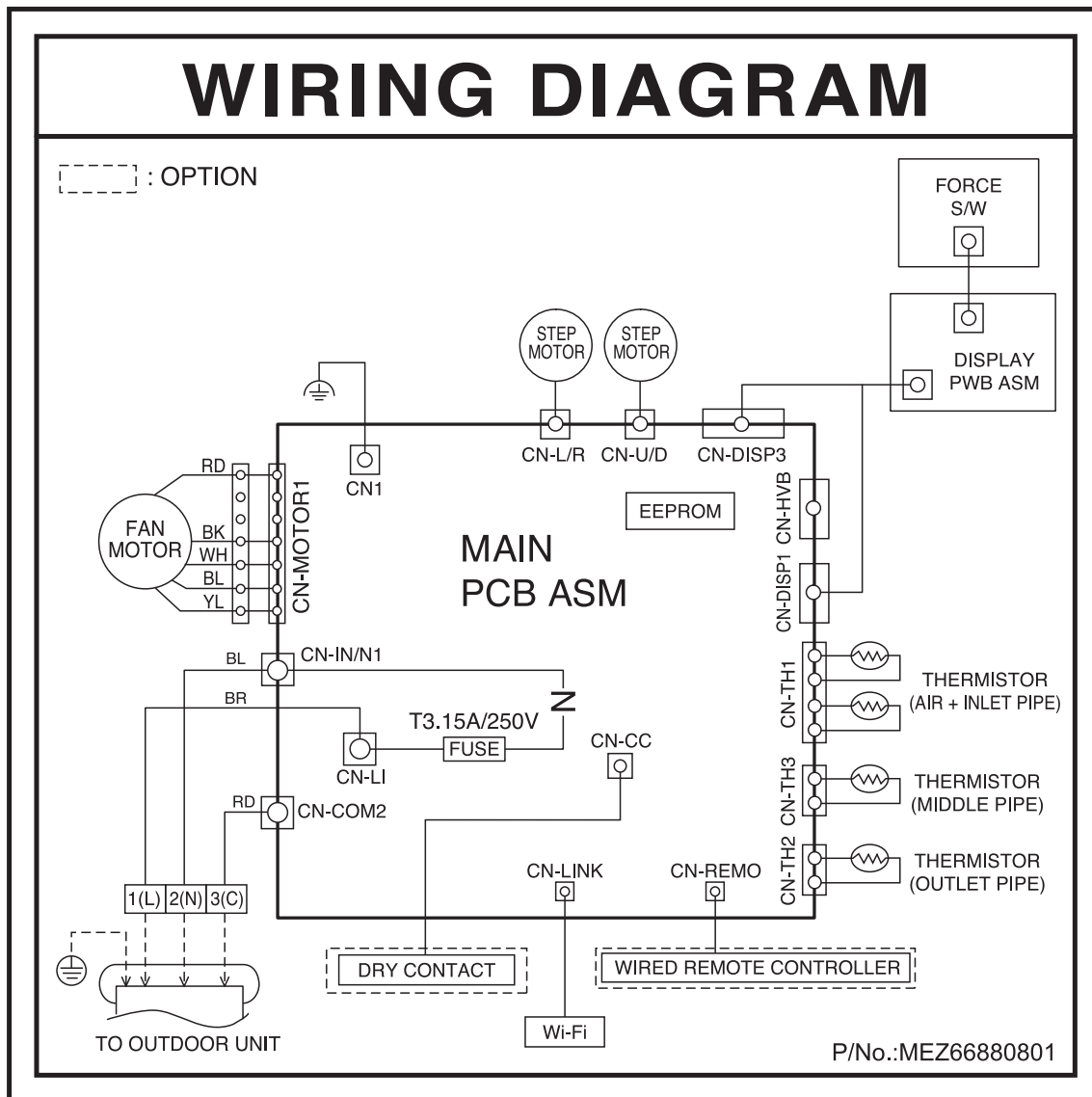
◆ ASNW09GJ1Z0 [DM09RP NSJ], ASNW12GJ1Z0 [DM12RP NSJ], ASNW18GK1Z0 [DM18RP NSK], ASNW24GK1Z0 [DM24RP NSK]



5. Wiring Diagrams

■ Standard plus

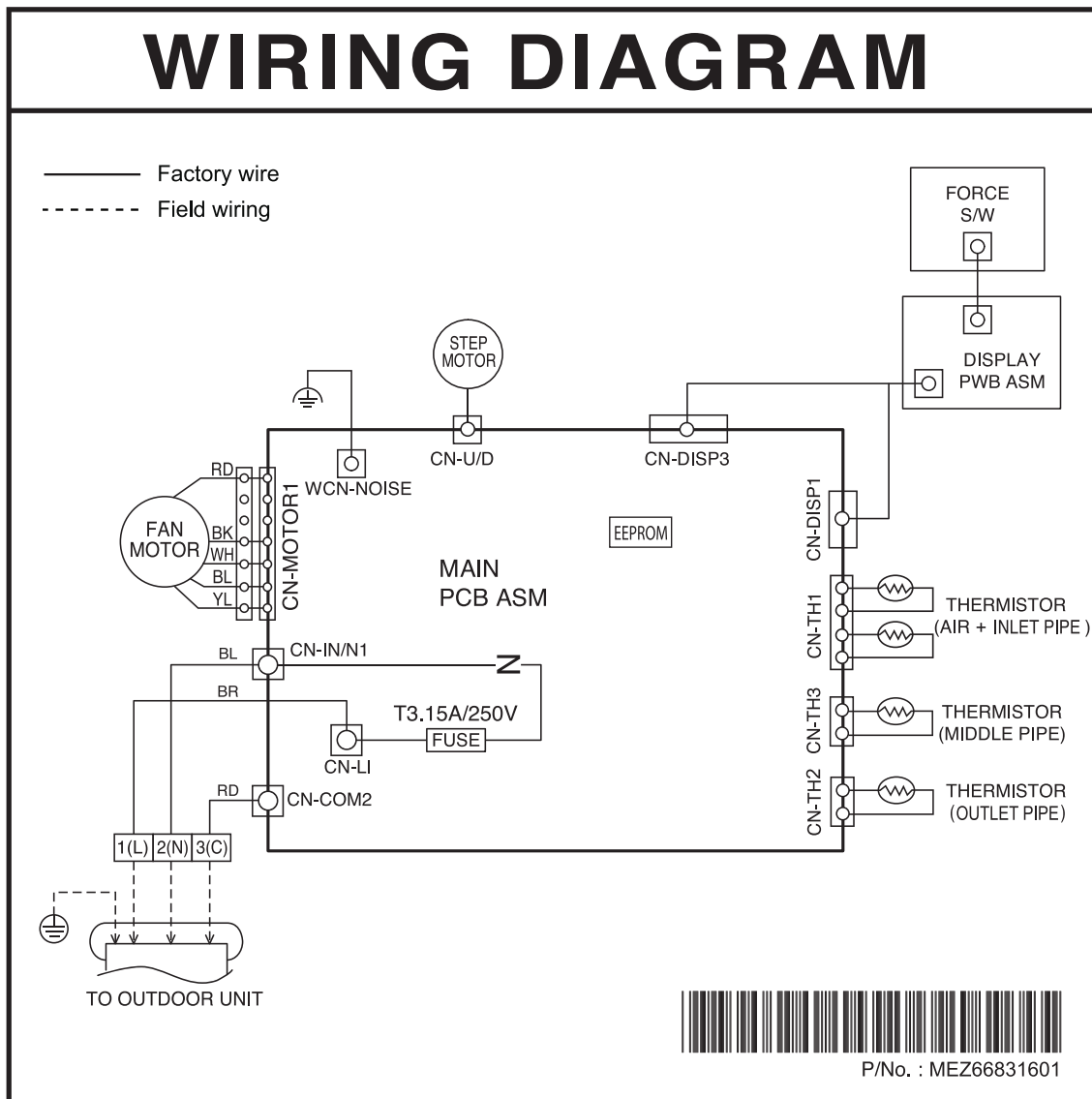
◆ AMNW05GSJB0 [PM05SP NSJ], AMNW07GSJB0 [PM07SP NSJ], ESNW09GJ2F0 [PM09SP NSJ], ESNW12GJ2F0 [PM12SP NSJ], AMNW15GSJB0 [PM15SP NSJ], ESNW18GK2F0 [PM18SP NSK], ESNW24GK2F0 [PM24SP NSK]



5. Wiring Diagrams

■ Standard

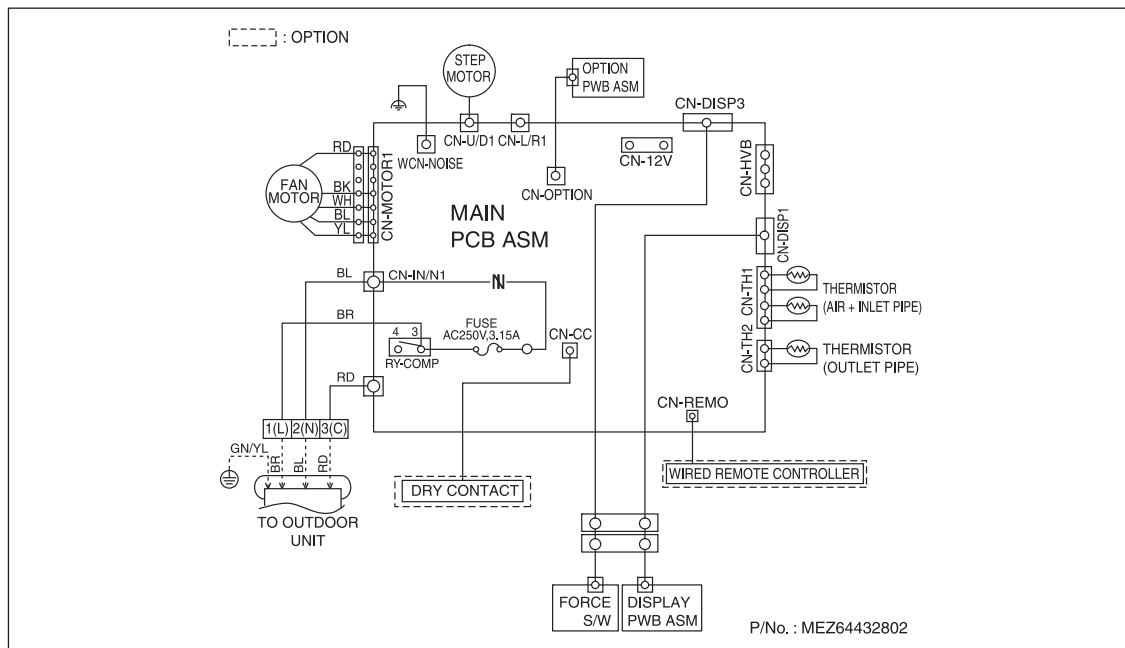
◆ AMNW07GSJA0 [PM07EP NSJ], ESNW09GJ3A0 [PM09EP NSJ], ESNW12GJ3A0 [PM12EP NSJ], ESNW18GK3A0 [PM18EP NSK], AMNW24GSKA0 [PM24EP NSK]



5. Wiring Diagrams

■ Libero-E

◆ AJNW30GVLA0 [UJ30 UV2], AJNW36GVLA0 [UJ36 NV2]



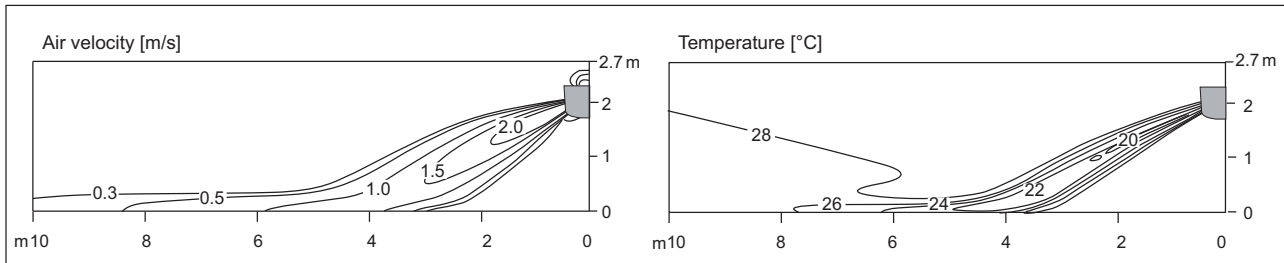
6. Air flow and temperature distributions (reference data)

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

◆ Cooling

Side View

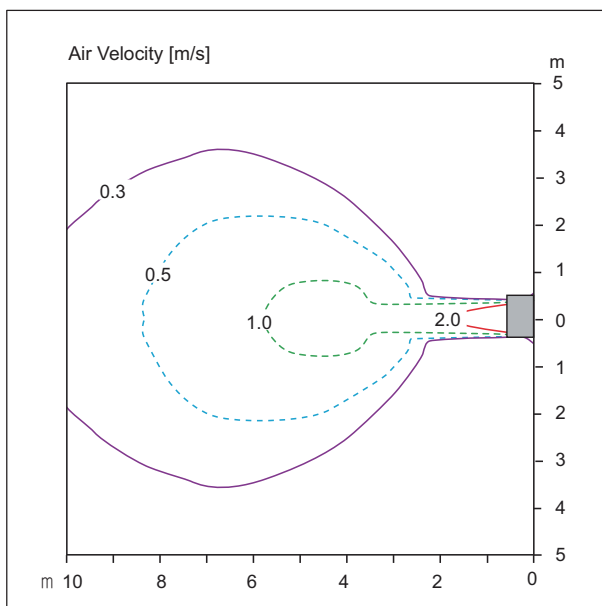
Discharge angle: 35°



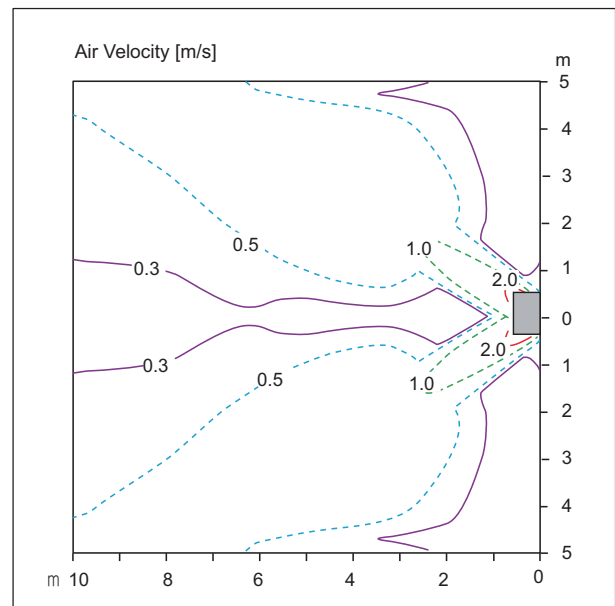
- Vertical Louver : Center
- Fan speed : Super High

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

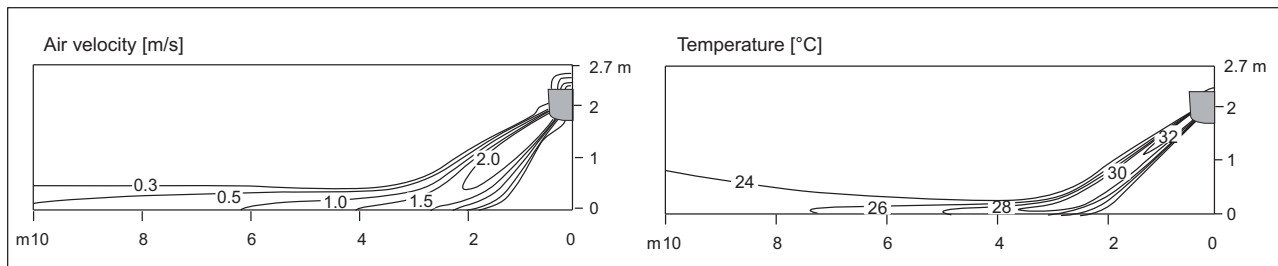
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

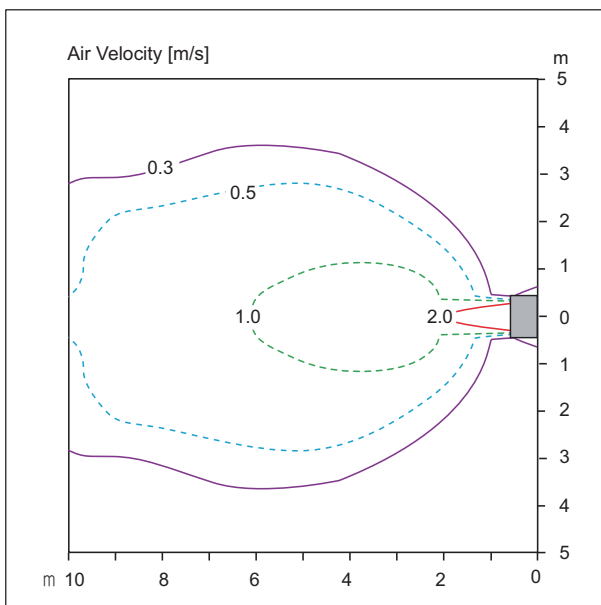
Discharge angle: 55°



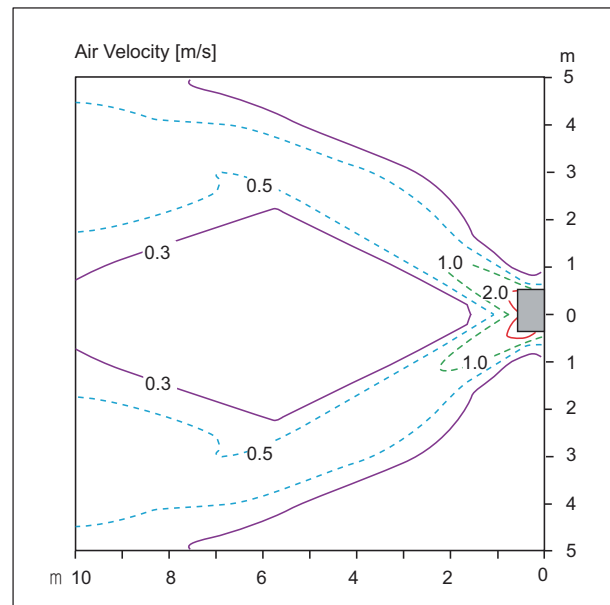
- Vertical Louver : Center
- Fan speed : Super High

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.

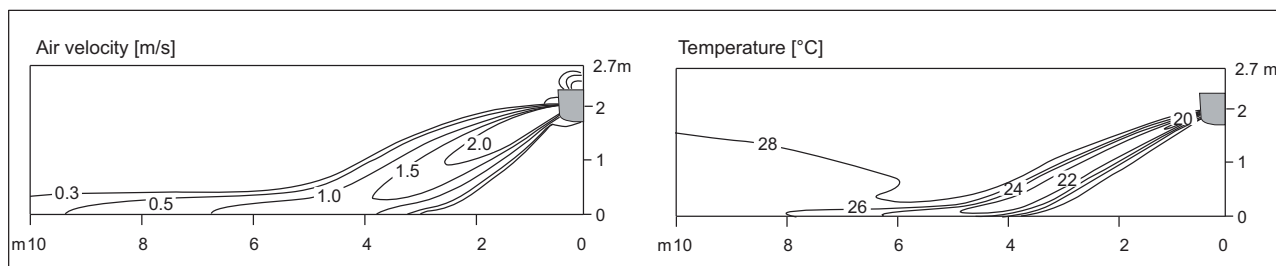
6. Air flow and temperature distributions (reference data)

■ **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

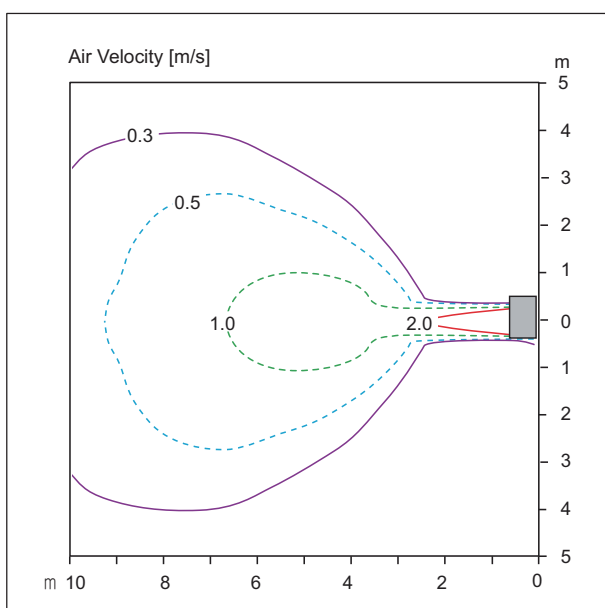
Discharge angle: 35°



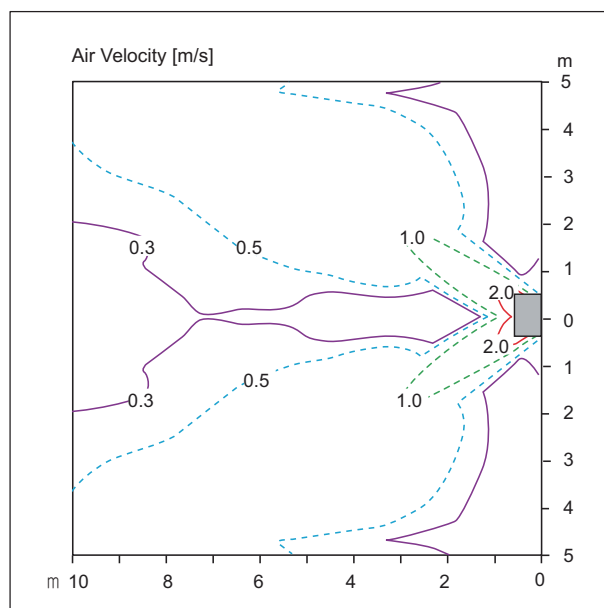
- Vertical Louver : Center
- Fan speed : Super High

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

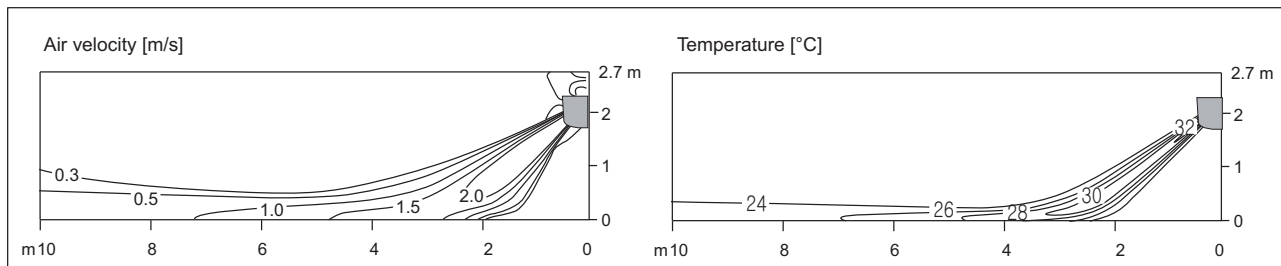
- These figures are accordance with normal certain condition and environment.
 (Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

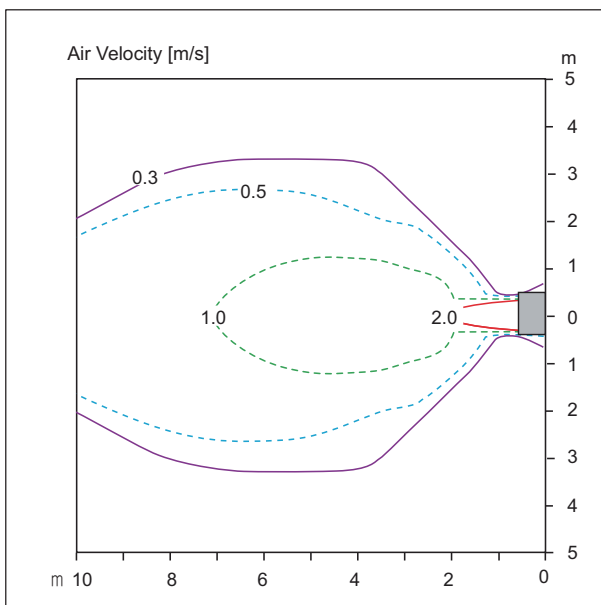
Discharge angle: 55°



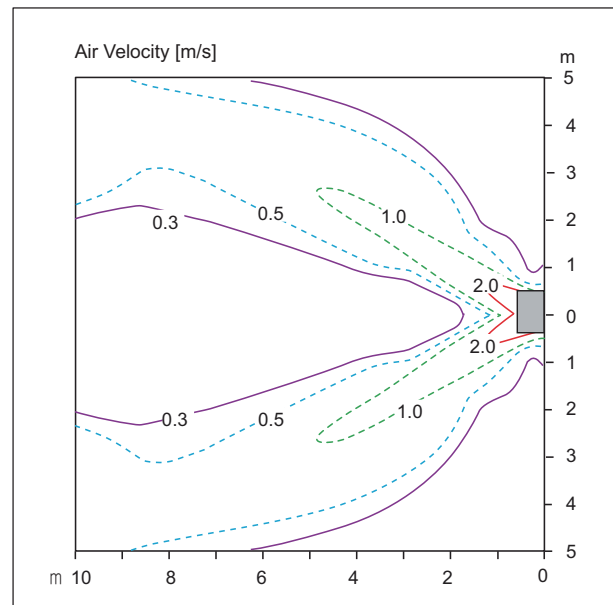
- Vertical Louver : Center
- Fan speed : Super High

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.

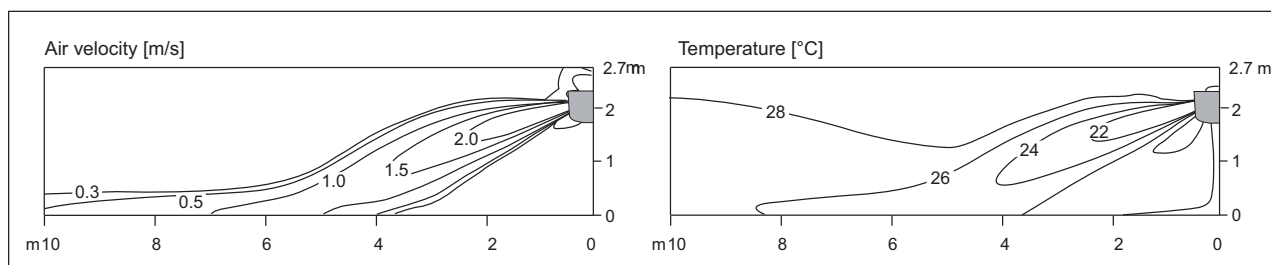
6. Air flow and temperature distributions (reference data)

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

◆ Cooling

Side View

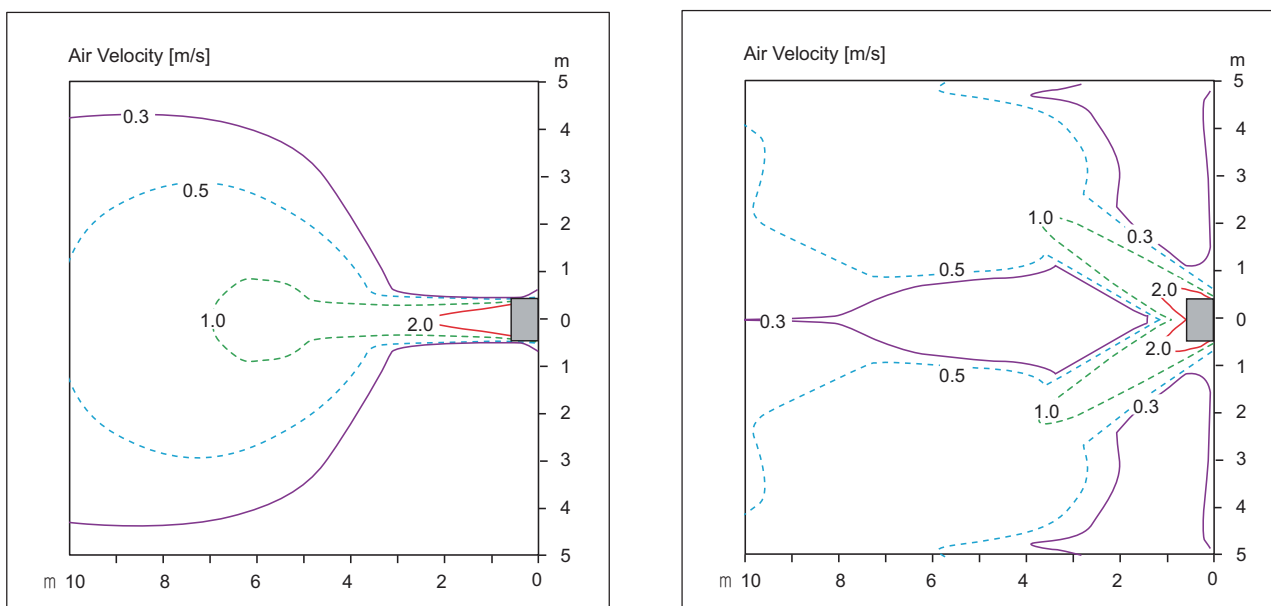
Discharge angle: 25°



- 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

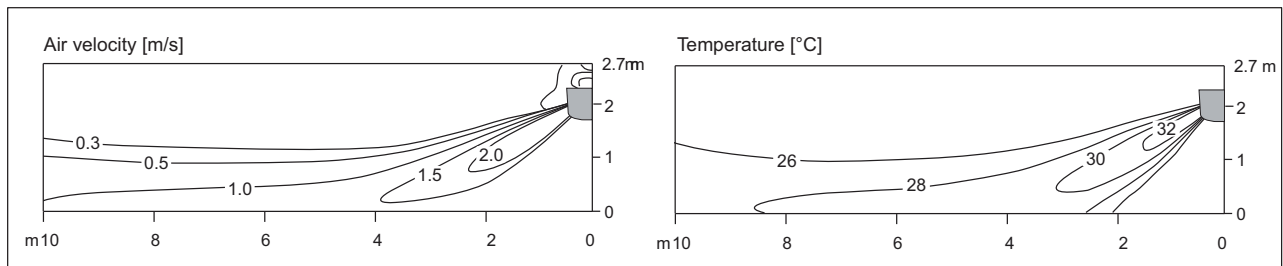
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

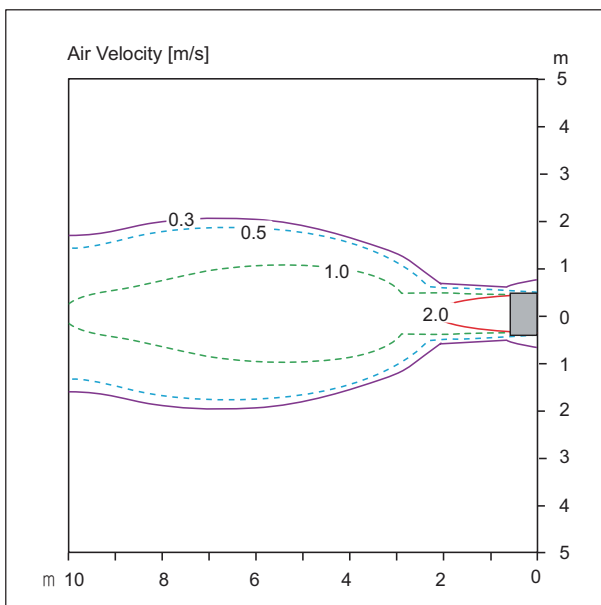
Discharge angle: 45°



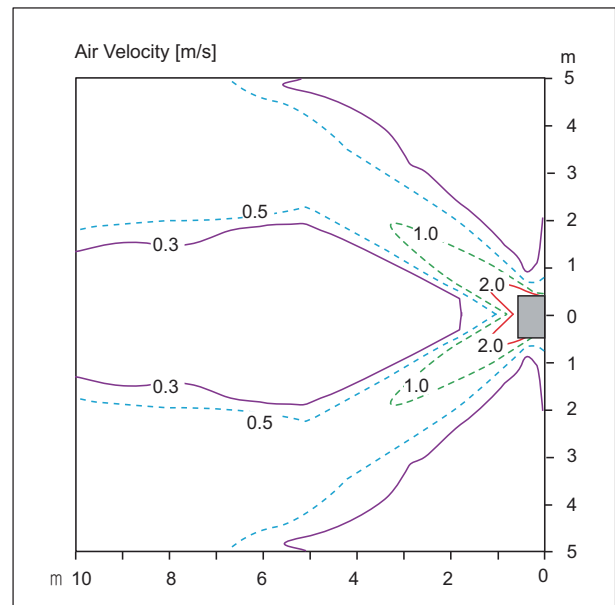
- Vertical Louver : Center
- Fan speed : Super High

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.

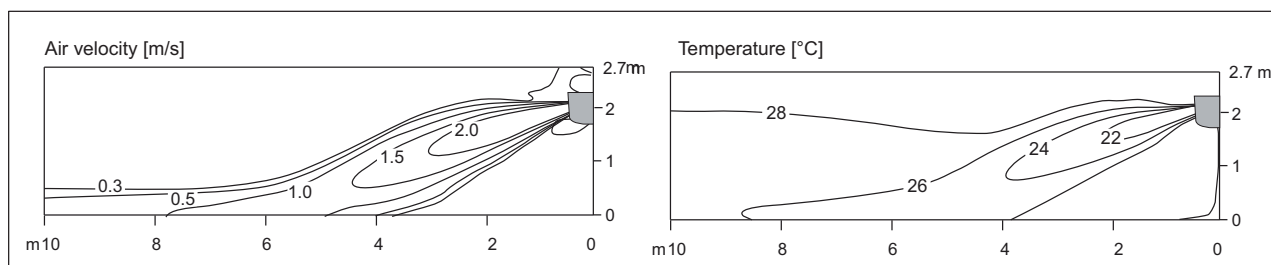
6. Air flow and temperature distributions (reference data)

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

◆ Cooling

Side View

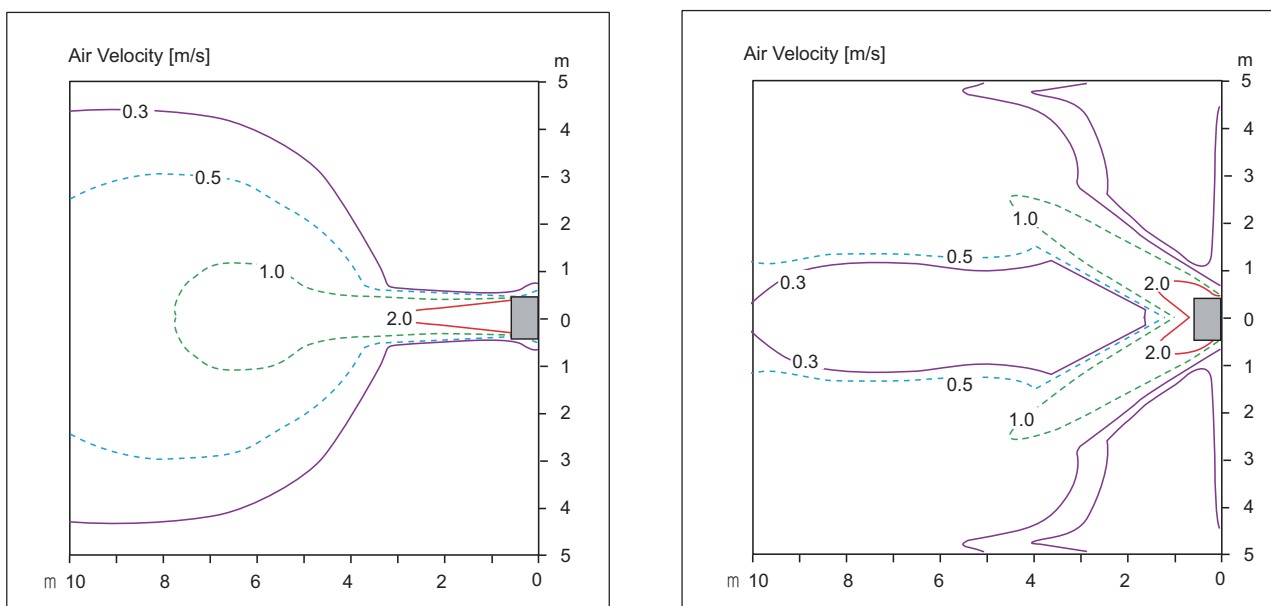
Discharge angle: 25°



- 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

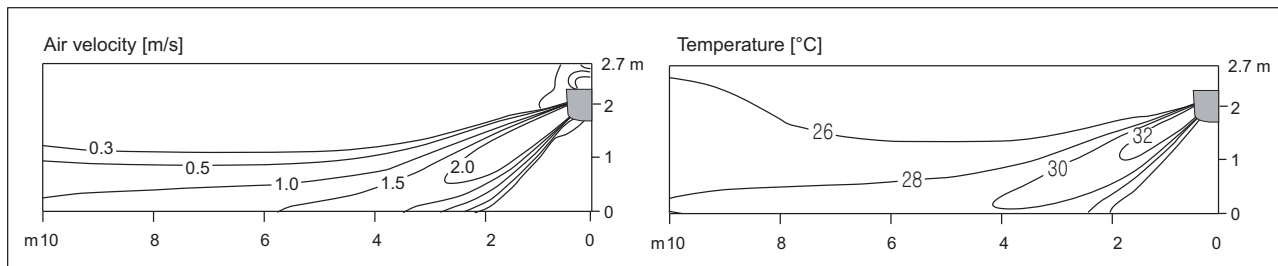
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

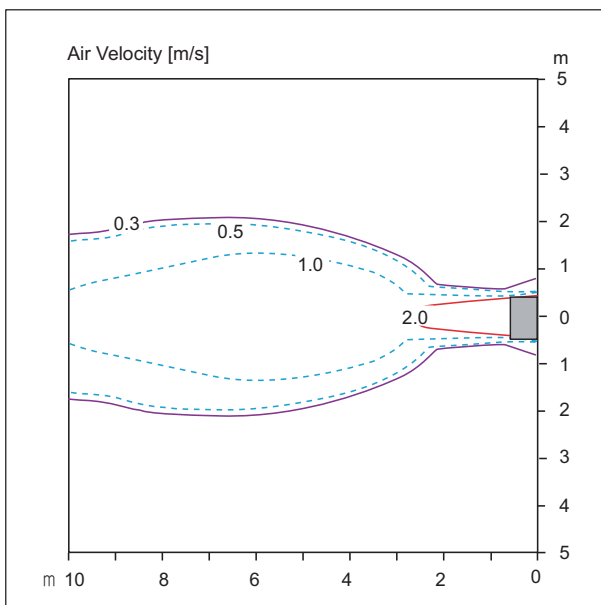
Discharge angle: 45°



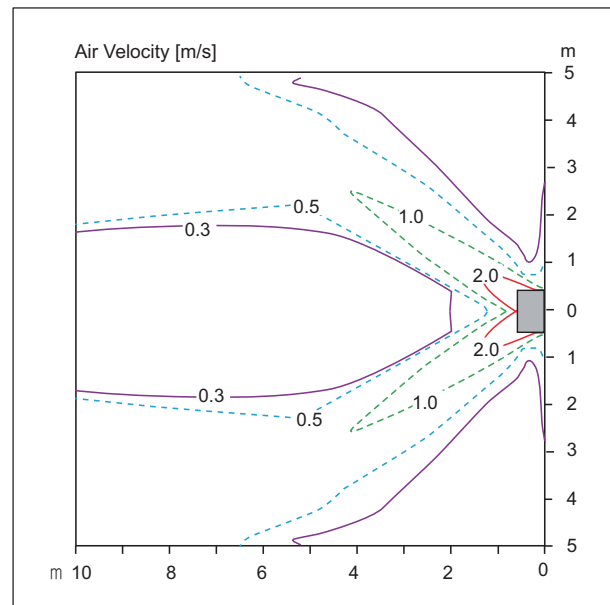
- Vertical Louver : Center
- Fan speed : Super High

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

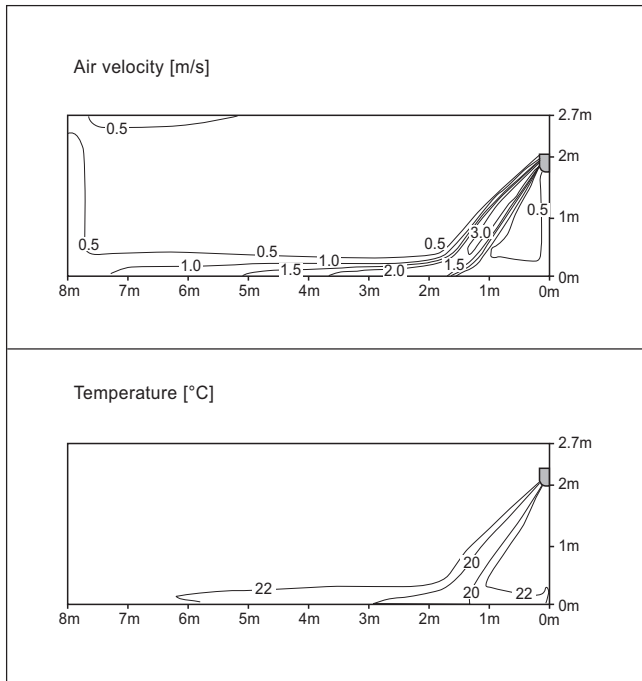
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

■ Model : AJNW30GVLA0 [UJ30 NV2]

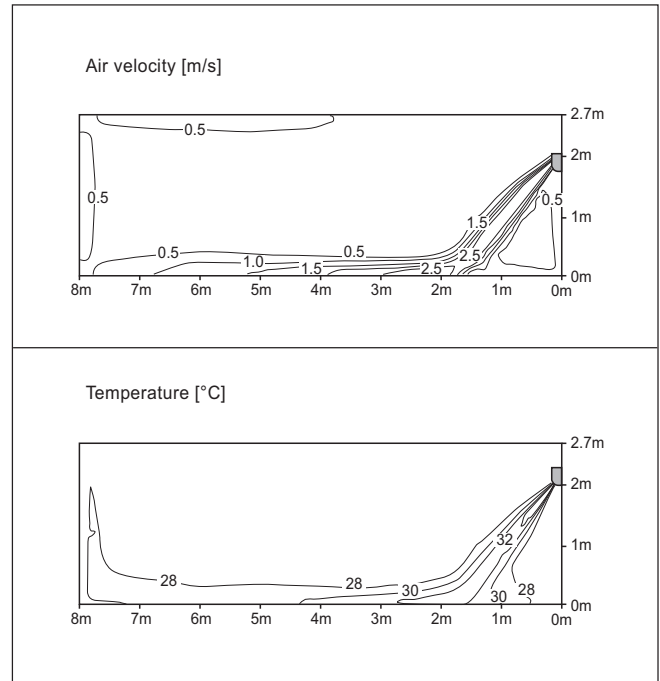
Cooling

Discharge angle: 25°



Heating

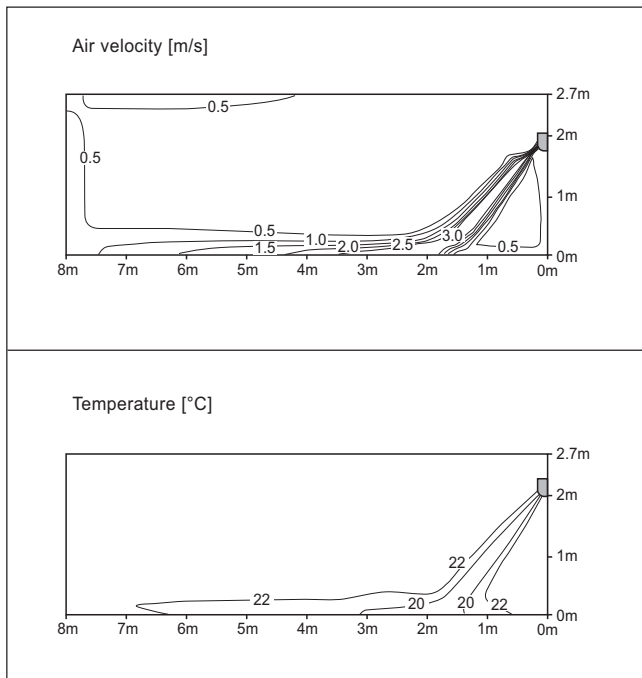
Discharge angle: 35°



■ Model : AJNW36GVLA0 [UJ36 NV2]

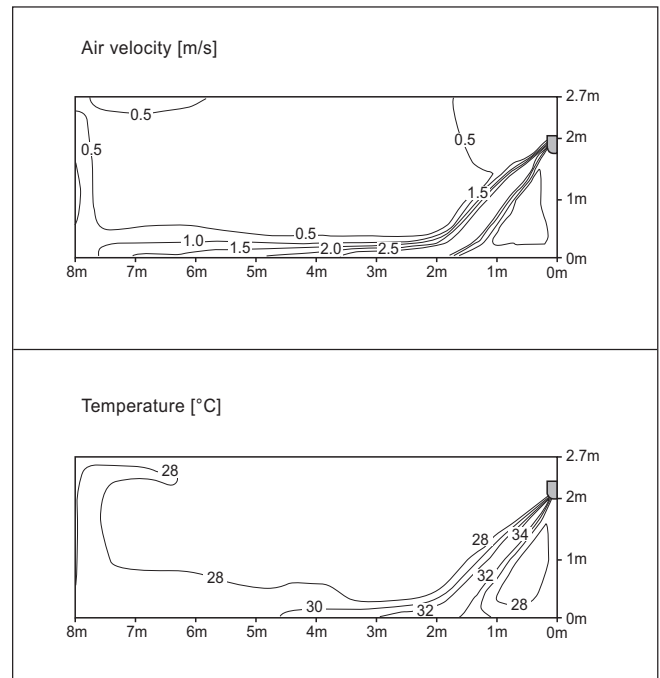
Cooling

Discharge angle: 25°



Heating

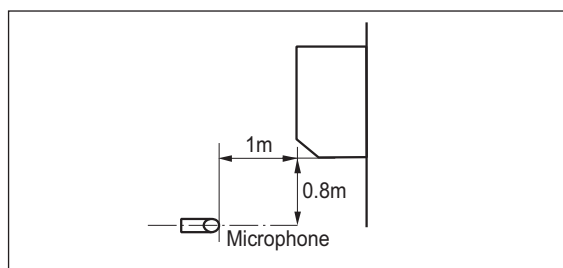
Discharge angle: 35°



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

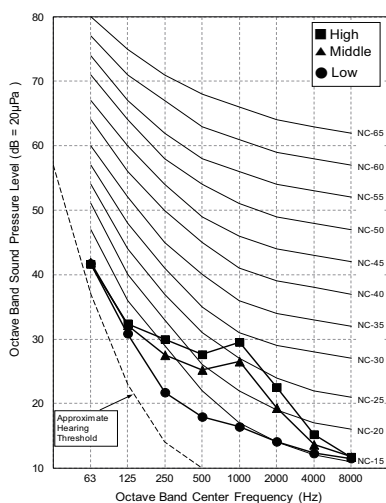
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW05GSJB0 [PM05SP NSJ]	34	31	27
AMNW07GSJB0 [PM07SP NSJ]	35	32	27
ESNW09GJ2F0 [PM09SP NSJ]	36	33	27
ESNW12GJ2F0 [PM12SP NSJ]	40	35	27
AMNW15GSJB0 [PM15SP NSJ]	41	36	29
ESNW18GK2F0 [PM18SP NSK]	44	38	35
ESNW24GK2F0 [PM24SP NSK]	46	41	36

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

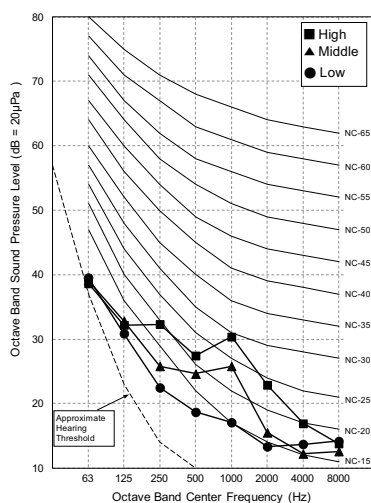
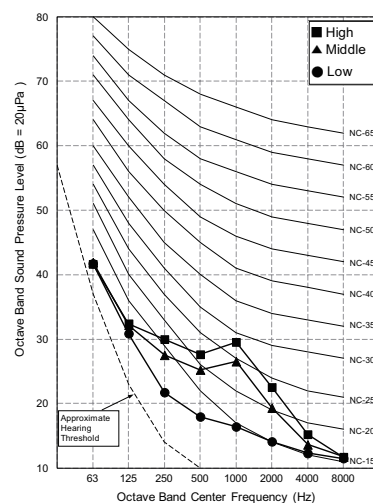
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AJNW30GVLA0 [UJ30 NV2]	45	42	40
AJNW36GVLA0 [UJ36 NV2]	48	45	41

7. Sound levels

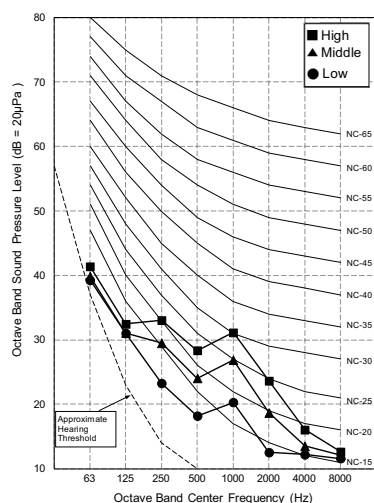
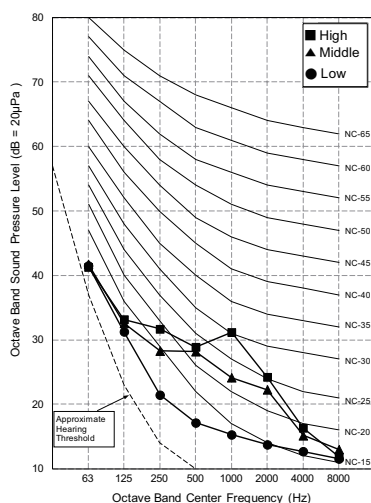
AMNW05GSJB0 [PM05SP NSJ]



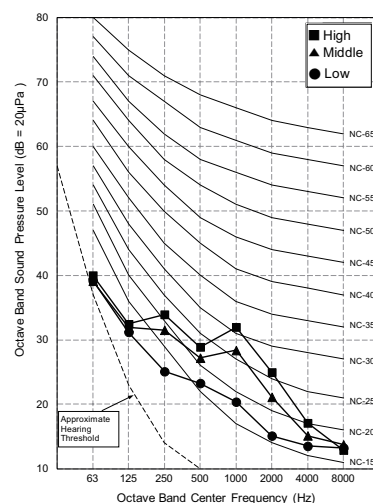
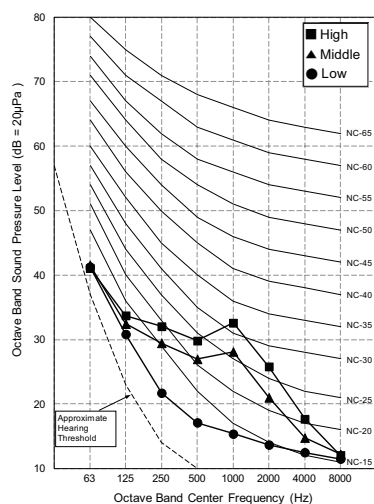
AMNW07GSJL0 [DM07RP NSJ]

AMNW07GSJB0 [PM07SP NSJ]
AMNW07GSJA0 [PM07EP NSJ]

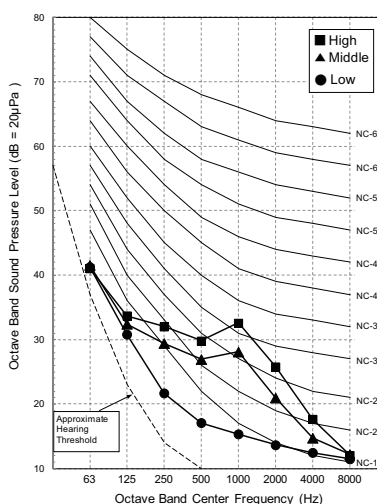
ASNW09GJ1Z0 [DM09RP NSJ]

ESNW09GJ2F0 [PM09SP NSJ]
ESNW09GJ3A0 [PM09EP NSJ]

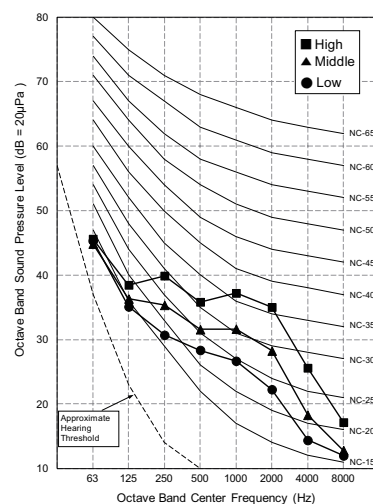
ASNW12GJ1Z0 [DM12RP NSJ]

ESNW12GJ2F0 [PM12SP NSJ]
ESNW12GJ3A0 [PM12EP NSJ]

AMNW15GSJB0 [PM15SP NSJ]

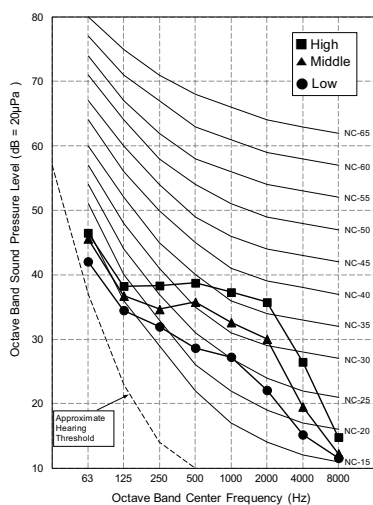


ASNW18GK1Z0 [DM18RP NSK]

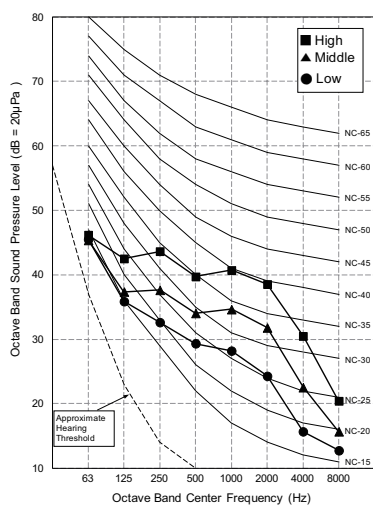


7. Sound levels

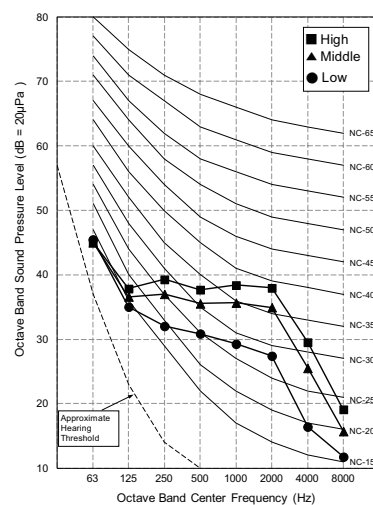
**ESNW18GK2F0 [PM18SP NSK]
ESNW18GK3A0 [PM18EP NSK]**



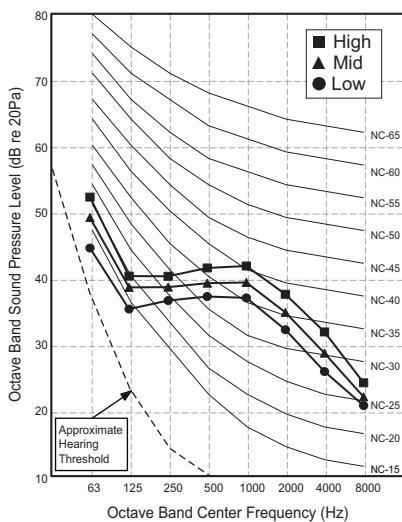
ASNW24GK1Z0 [DM24RP NSK]



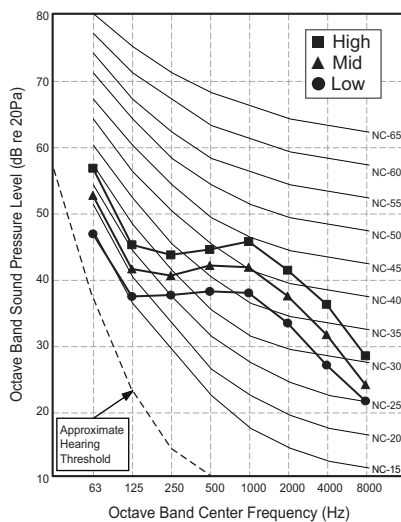
**ESNW24GK2F0 [PM24SP NSK]
AMNW24GSKA0 [PM24EP NSK]**



AJNW30GVLA0 [UJ30 NV2]



AJNW36GVLA0 [UJ36 NV2]



7. Sound levels

7.2 Sound power level

Note

1. Data is valid at diffuse field condition.
2. Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
3. Sound level can be increased in static pressure mode or used air guide.
4. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient).
5. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
6. 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

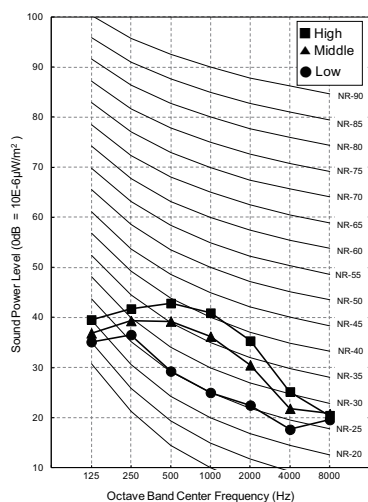
Model	Sound power Levels [dB(A)]
AMNW05GSJB0 [PM05SP NSJ]	57
AMNW07GSJB0 [PM07SP NSJ]	57
ESNW09GJ2F0 [PM09SP NSJ]	57
ESNW12GJ2F0 [PM12SP NSJ]	57
AMNW15GSJB0 [PM15SP NSJ]	57
ESNW18GK2F0 [PM18SP NSK]	59
ESNW24GK2F0 [PM24SP NSK]	65

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

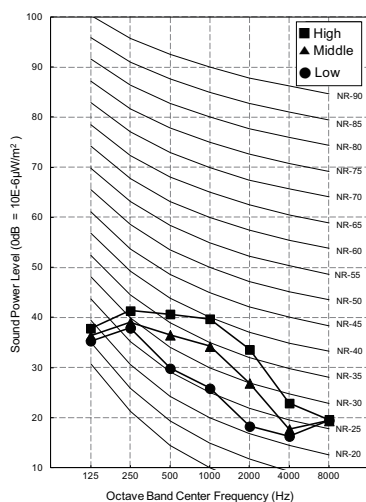
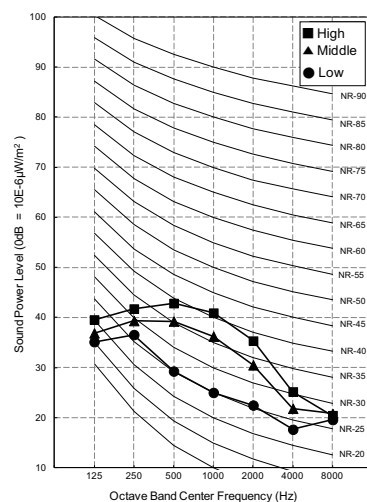
Model	Sound power Levels [dB(A)]
AJNW30GVLA0 [UJ30 NV2]	61
AJNW36GVLA0 [UJ36 NV2]	63

7. Sound levels

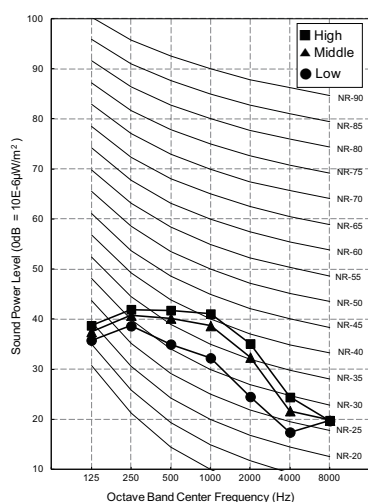
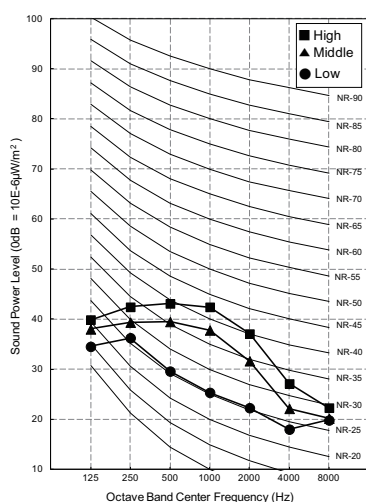
AMNW05GSJB0 [PM05SP NSJ]



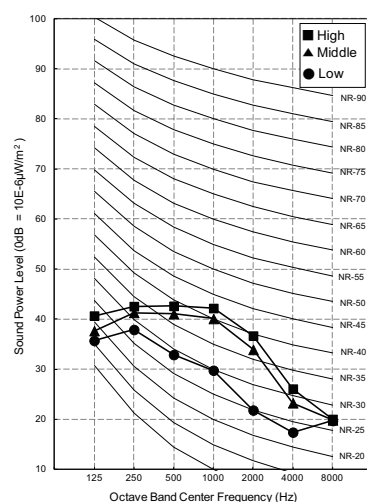
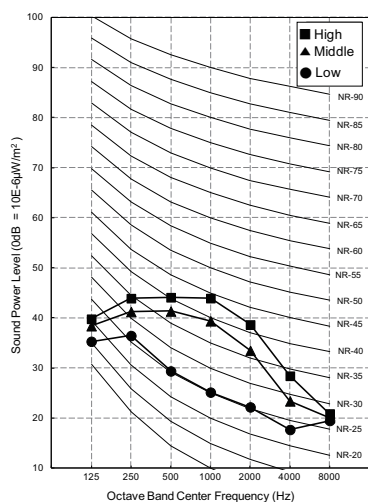
AMNW07GSJL0 [DM07RP NSJ]

AMNW07GSJB0 [PM07SP NSJ]
AMNW07GSJA0 [PM07EP NSJ]

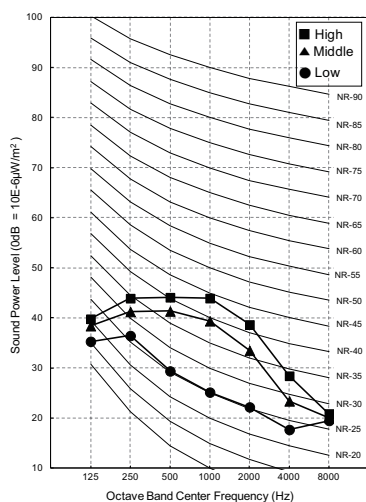
ASNW09GJ1Z0 [DM09RP NSJ]

ESNW09GJ2F0 [PM09SP NSJ]
ESNW09GJ3A0 [PM09EP NSJ]

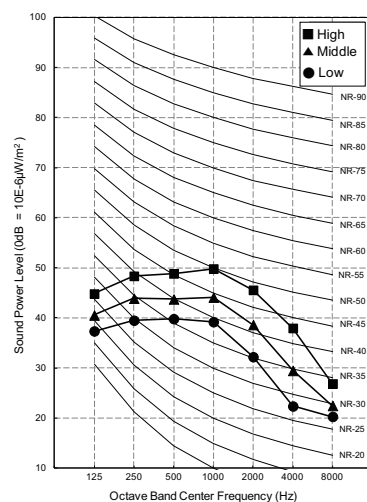
ASNW12GJ1Z0 [DM12RP NSJ]

ESNW12GJ2F0 [PM12SP NSJ]
ESNW12GJ3A0 [PM12EP NSJ]

AMNW15GSJB0 [PM15SP NSJ]

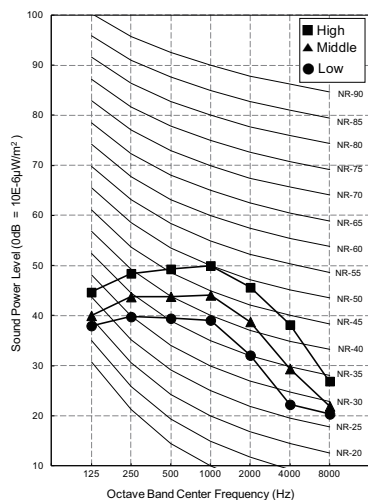


ASNW18GK1Z0 [DM18RP NSK]

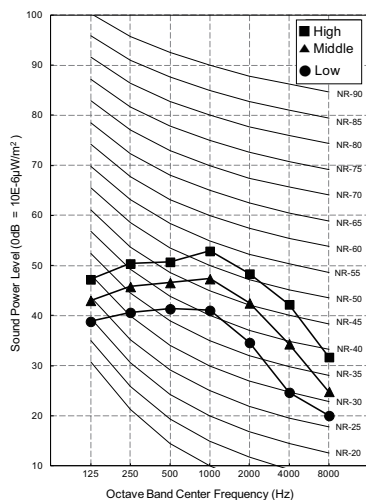


7. Sound levels

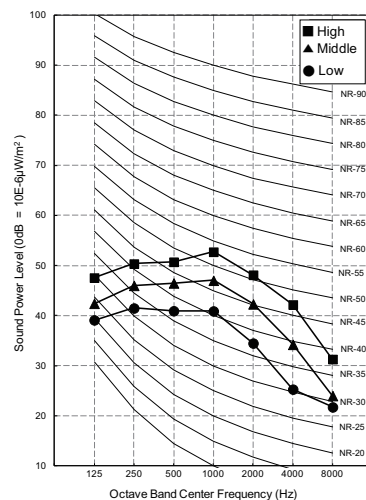
**ESNW18GK2F0 [PM18SP NSK]
ESNW18GK3A0 [PM18EP NSK]**



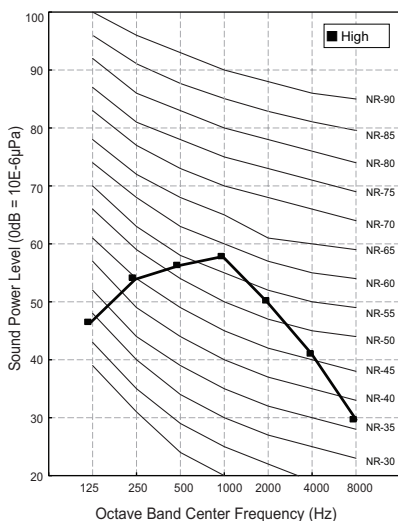
ASNW24GK1Z0 [DM24RP NSK]



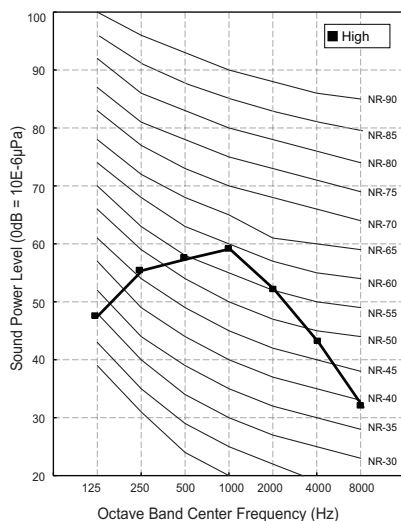
**ESNW24GK2F0 [PM24SP NSK]
AMNW24GSKA0 [PM24EP NSK]**



AJNW30GVLA0 [UJ30 NV2]



AJNW36GVLA0 [UJ36 NV2]

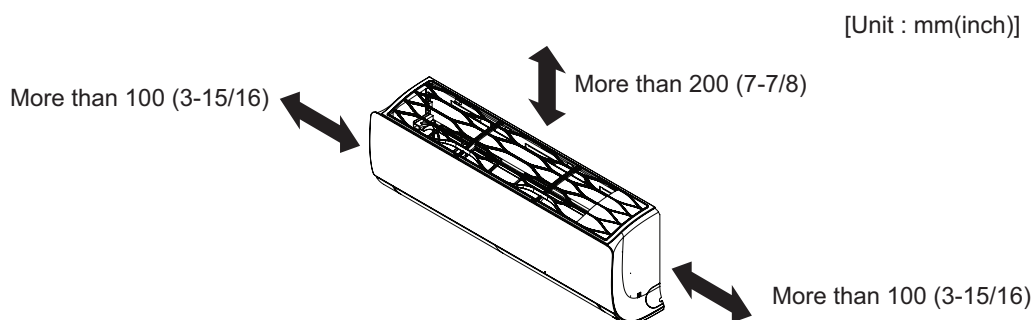


8. Installation

- 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 unit must be installed indoor area.
- 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.

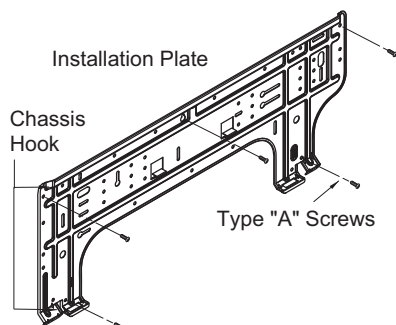


8. Installation

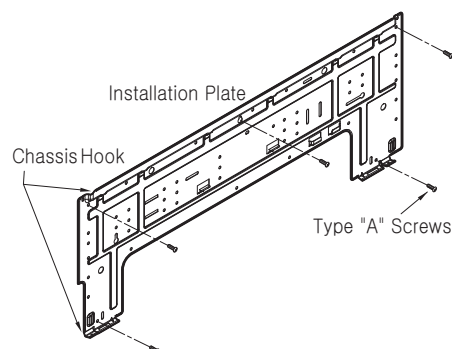
■ Fixing Installation Plate

- 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

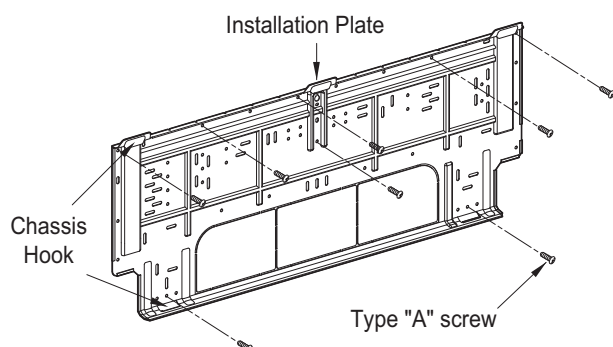


SK Chassis



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

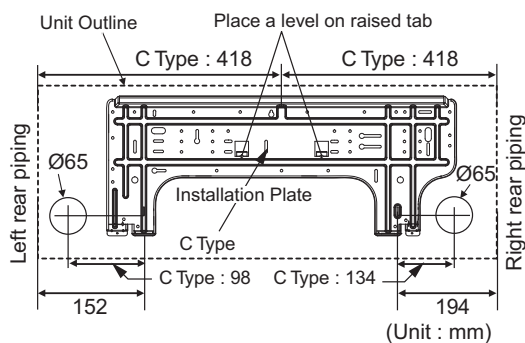
SV Chassis



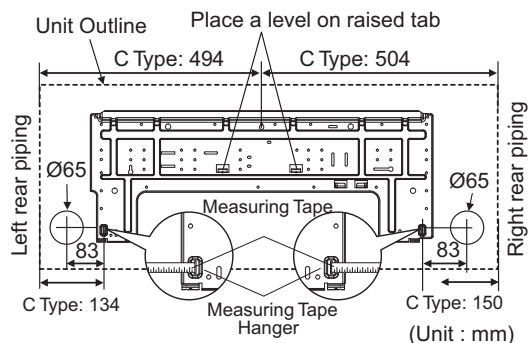
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

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

SJ chassis



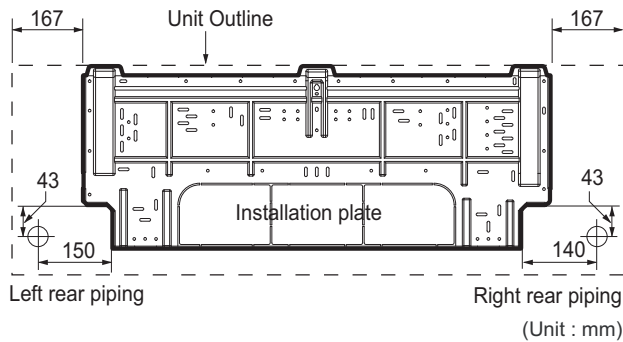
SK chassis



* 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.

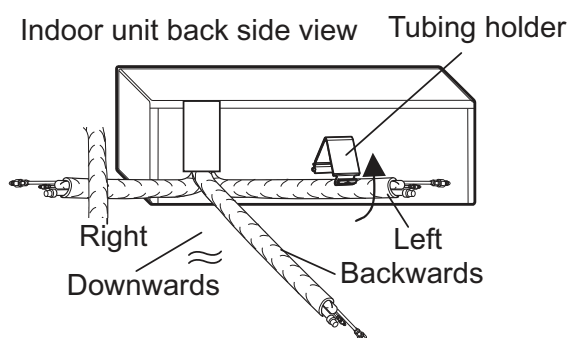
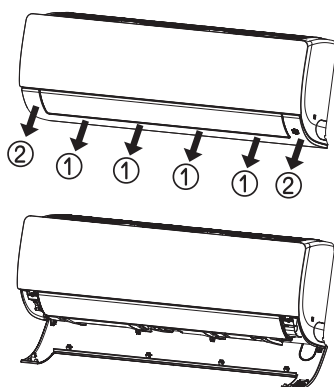
8. Installation

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.



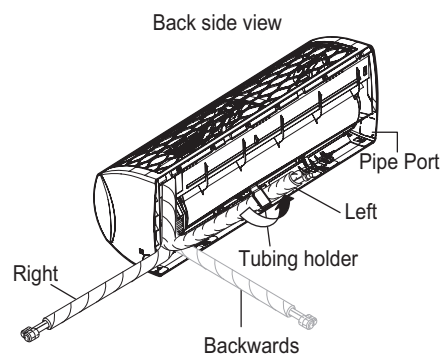
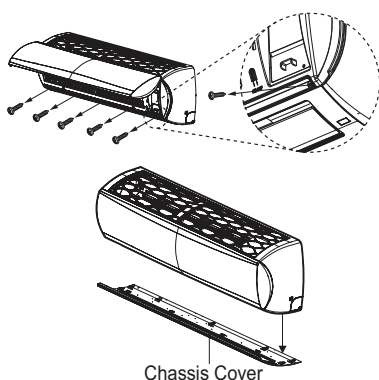
※ The feature can be changed according to type of model.

* 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.

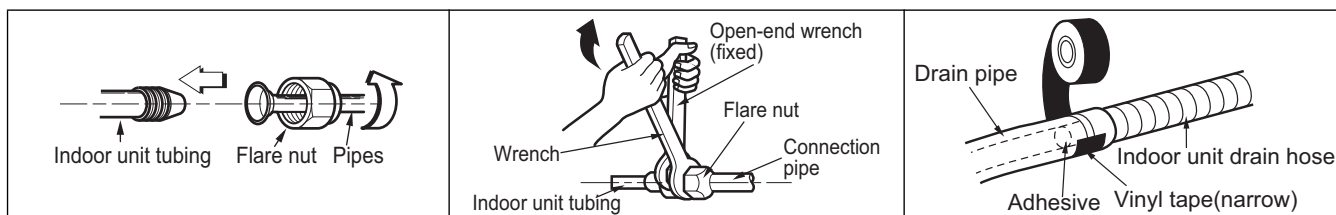


* The feature can be changed according to type of model.

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

8. Installation

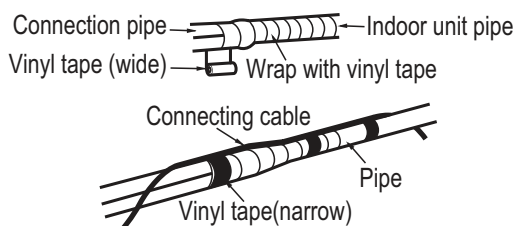
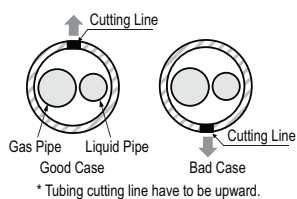
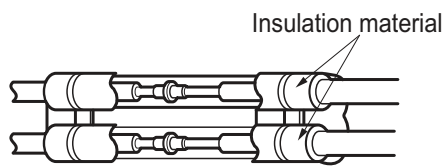
■ Connecting the installation pipe and drain hose



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

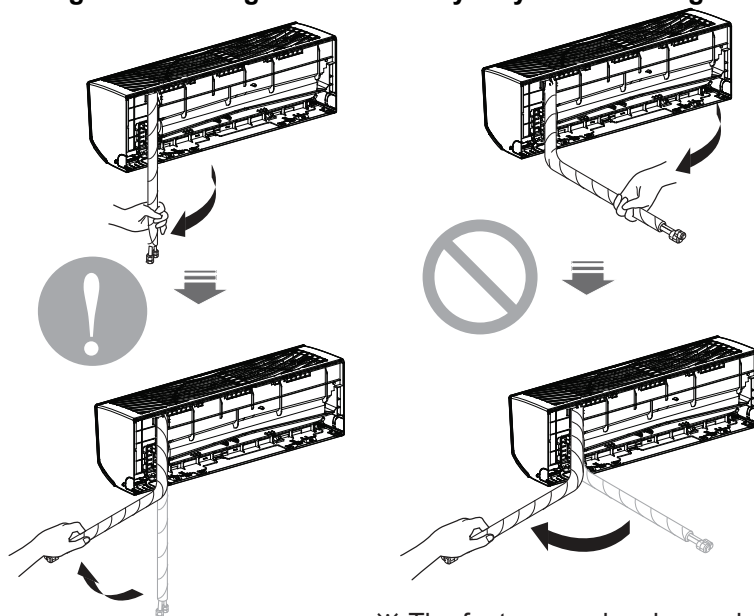
If the drain hose is routed inside the room insulate the hose with an insulation material* so that dripping from sweating condensation) will not damage furniture or floors.

* 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.

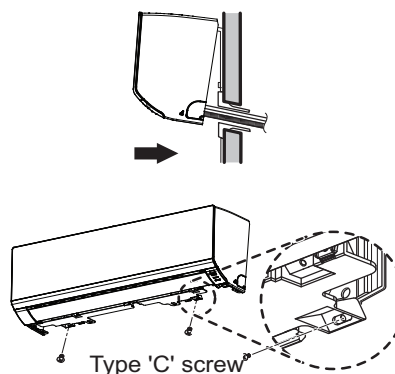


* The feature can be changed according to type of model.

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.

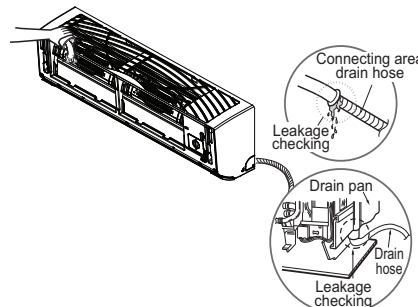
CAUTION

- 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.

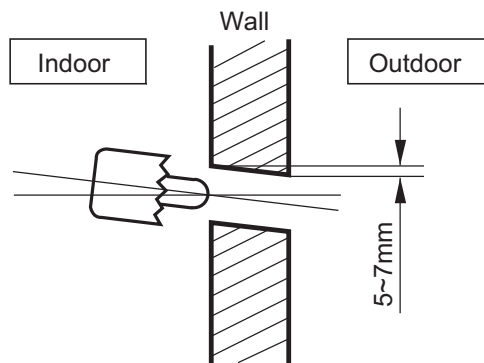


* The feature can be changed according to type of model.

8. Installation

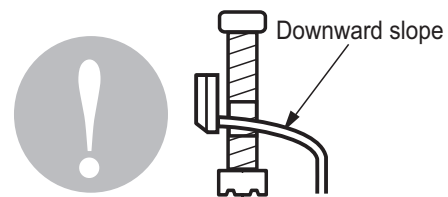
◆ Drill a Hole in the wall

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.

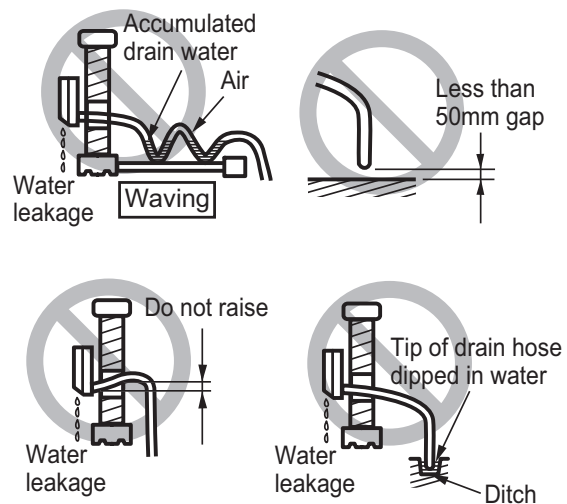


◆ Drain Piping

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

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

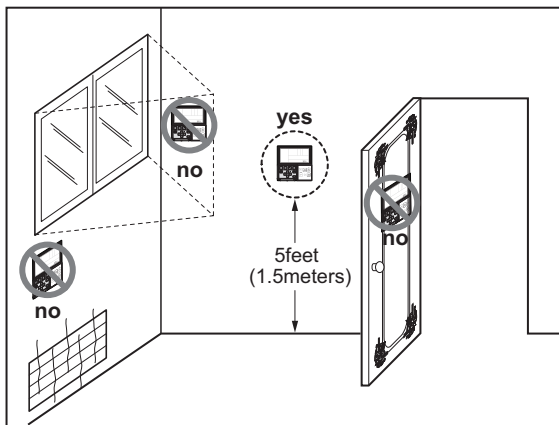
⚠ WARNING

- 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	AMNH09GAF*1 [MA09AH* NF1] AMNH12GAF*1 [MA12AH* 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	X
	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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AMNH09GAF*1 [MA09AH* NF1] AMNH12GAF*1 [MA12AH* NF1]
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	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 ₂ 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. 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))

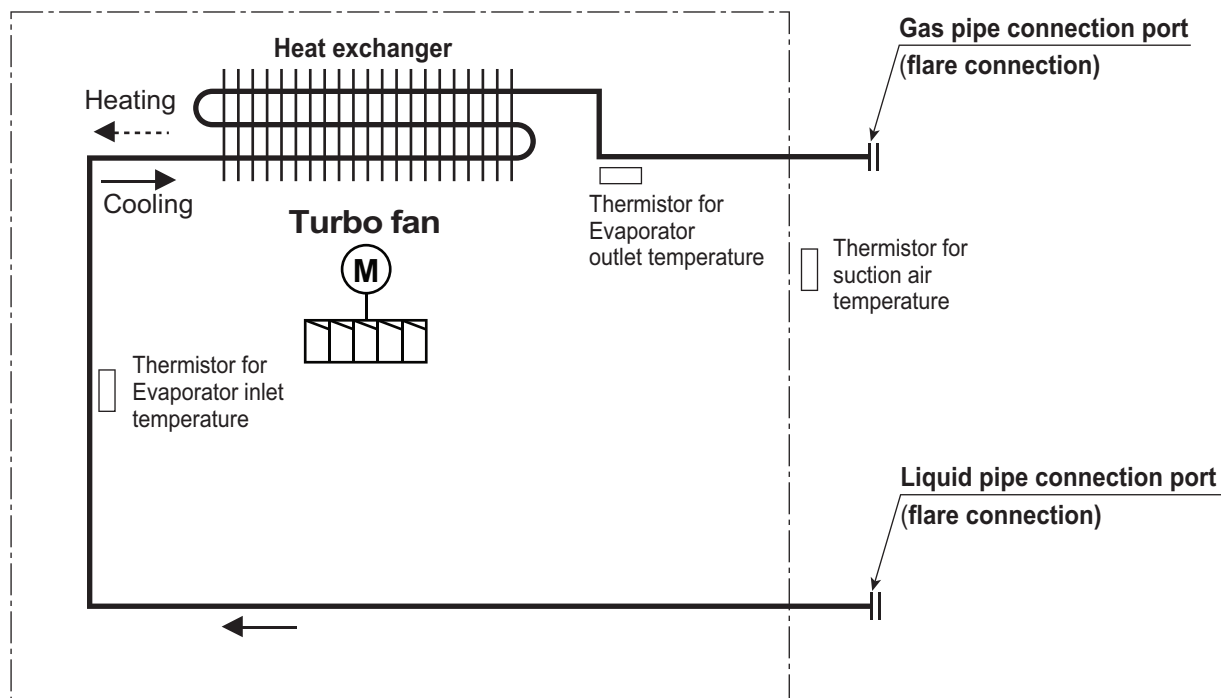
2. Specifications

Model Name				AMNH09GAF*1 [MA09AH* NF1]	AMNH12GAF*1 [MA12AH* 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	0.1	0.1
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 ² (ft ²)	0.18 (1.92)	0.18 (1.92)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	7.7 / 5.9 / 4.4	8.9 / 7.3 / 5.6
		H / M / L	ft ³ /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		Max.	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 ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

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

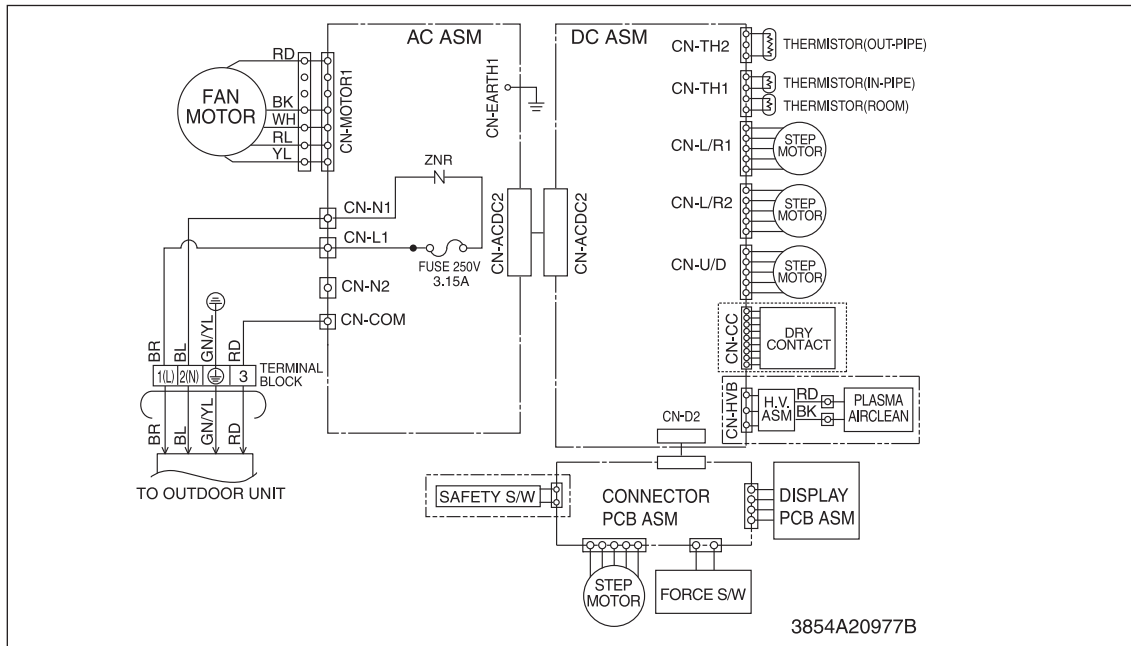
◆ Refrigerant pipe connection port diameters

[Unit : mm (inch)]

Model	Gas	Liquid
AMNH09GAF*1 [MA09AH* NF1] AMNH12GAF*1 [MA12AH* NF1]	Ø9.52 (3/8)	Ø6.35 (1/4)

5. Wiring Diagrams

■ Models : AMNH09GAF*1 [MA09AH* NF1], AMNH12GAF*1 [MA12AH* NF1]

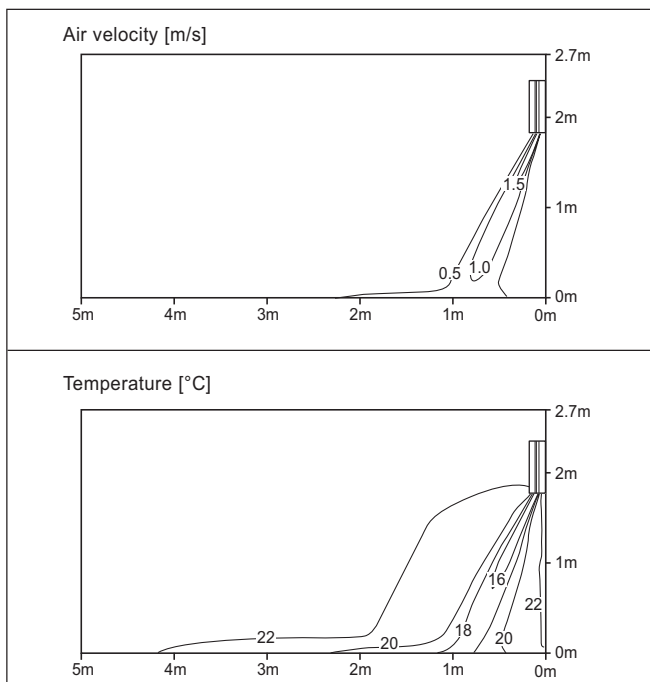


6. Air flow and temperature distributions (reference data)

■ Model : AMNH09GAF*1 [MA09AH* NF1]

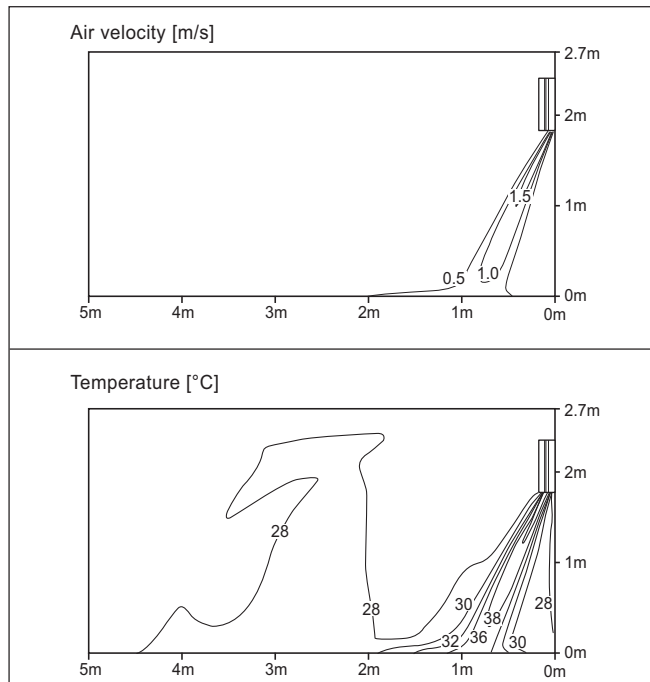
Cooling

Discharge angle: 20°



Heating

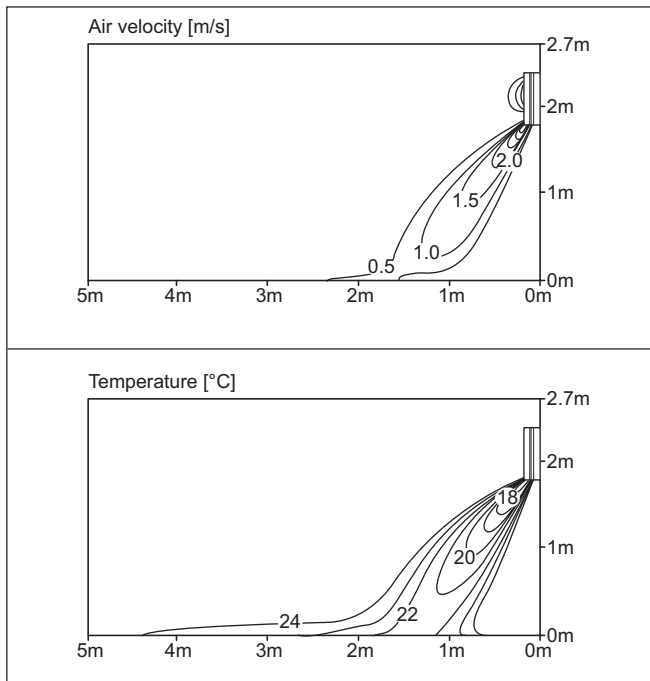
Discharge angle: 20°



■ Model : AMNH12GAF*1 [MA12AH* NF1]

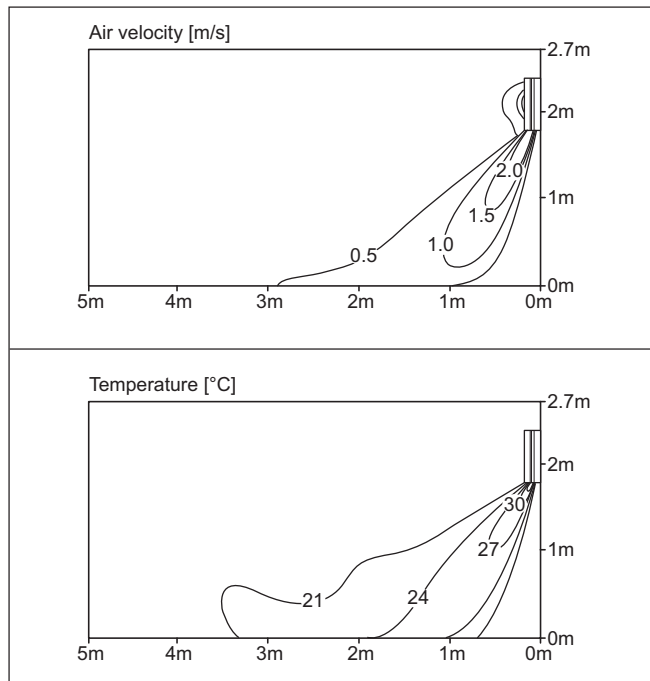
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



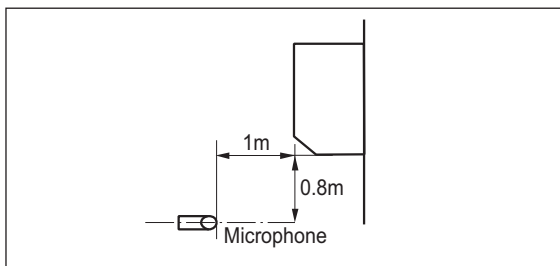
Note

- 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

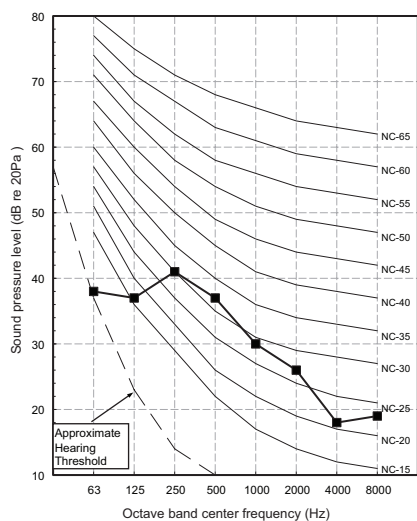


Note

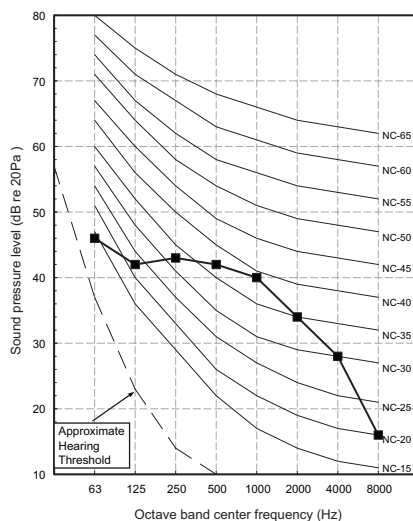
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNH09GAF*1 [MA09AH* NF1]	38	32	27
AMNH12GAF*1 [MA12AH* NF1]	44	38	32

AMNH09GAF*1 [MA09AH* NF1]



AMNH12GAF*1 [MA12AH* NF1]



7. Sound levels

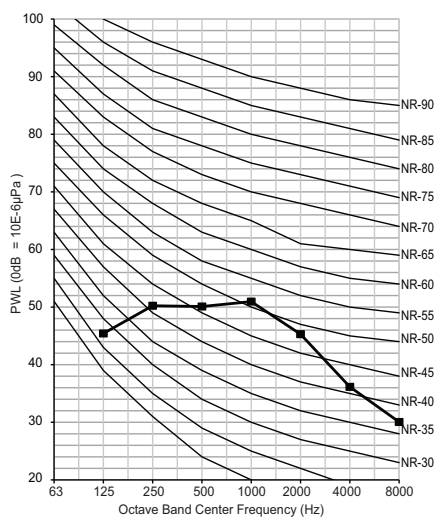
7.2 Sound power level

Note

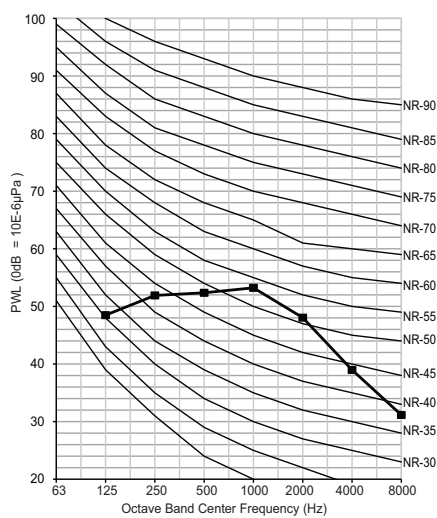
1. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
2. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound power level [dB(A)]
	H
AMNH09GAF*1 [MA09AH* NF1]	52
AMNH12GAF*1 [MA12AH* NF1]	54

AMNH09GAF*1 [MA09AH* NF1]

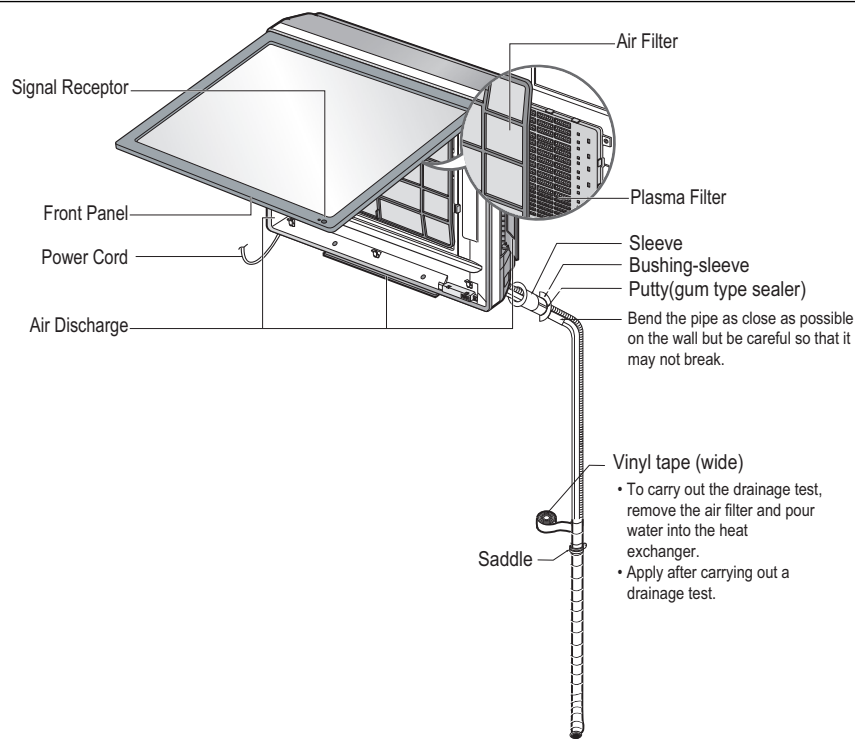


AMNH12GAF*1 [MA12AH* NF1]



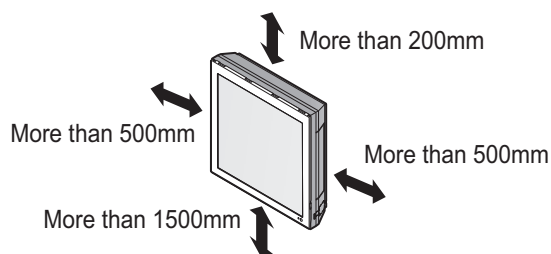
8. Installation

- 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

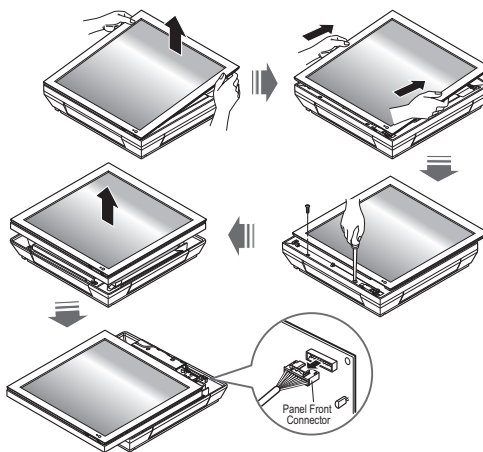
- Install the indoor unit on the wall where the height from the floors is more than 1.5 meters.

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

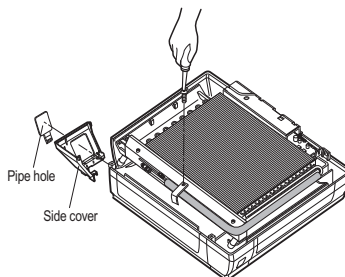


2. Removing pipe cover and side cover

- 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.

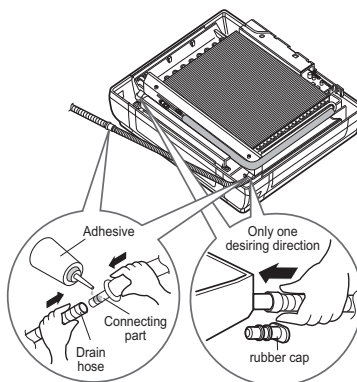


When connecting pipe path through rear wall, don't remove the hole.

8. Installation

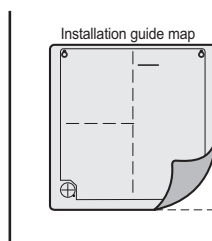
3. Drain hose junction

- 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.

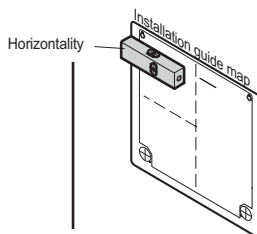


4. Sticking the installation guide map and fixing indoor unit

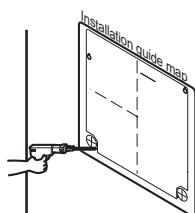
- 1) Put up the installation guide map on the desired surface.



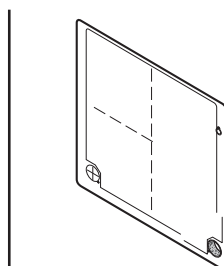
- 2) Check the level by horizontal mete and fix lightly the map by adhesive tape.



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

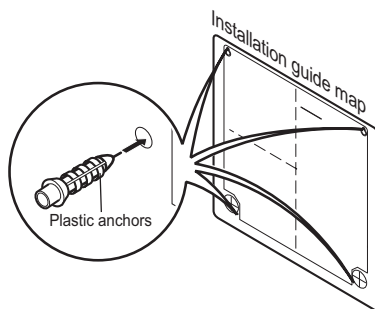


- 4) Drill the piercing part for connecting pipe as diameter 50mm. (In case of piercing rear surface)

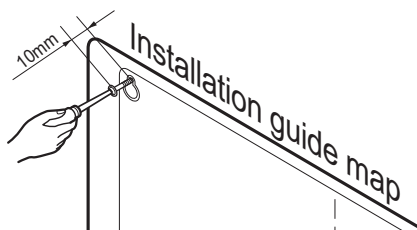


8. Installation

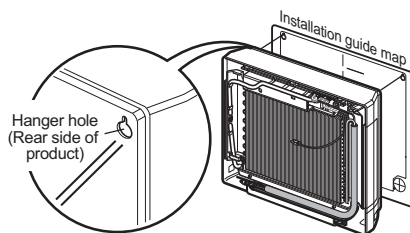
- 5) Drive the four plastic anchors into drilled points.



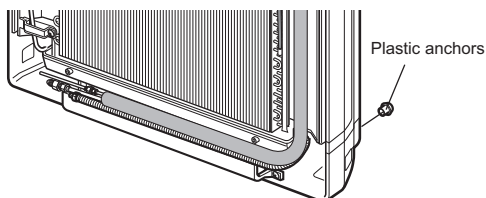
- 6) First, drive the two points of the upper parts by screws. (Leave 10mm for hanging product)



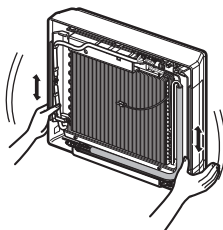
- 7) Hang the hole of product at the upper screws. (at this time, remove the map) (Make sure the product do not fall down)



- 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.



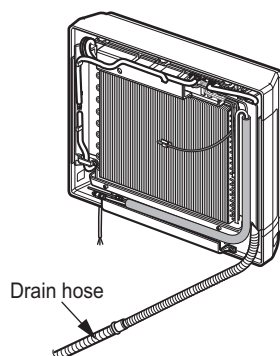
- 10) If nothing is wrong till now then connect the pipe and the wire.
(Refer to the installation manual reference)

8. Installation

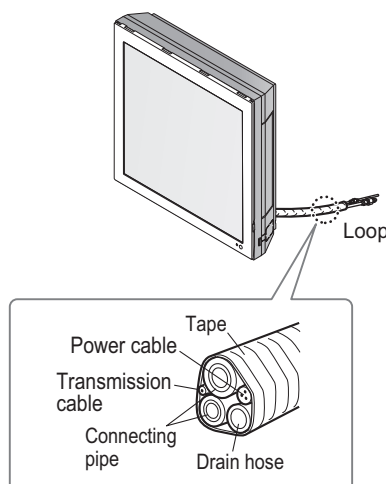
8.3 Connection of piping

- 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



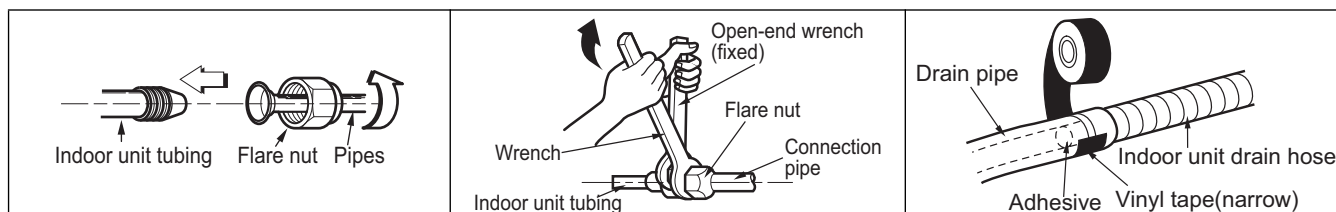
2. Tape the tubing, drain hose and the connecting cable. Make sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause drain pan to overflow inside the unit.



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

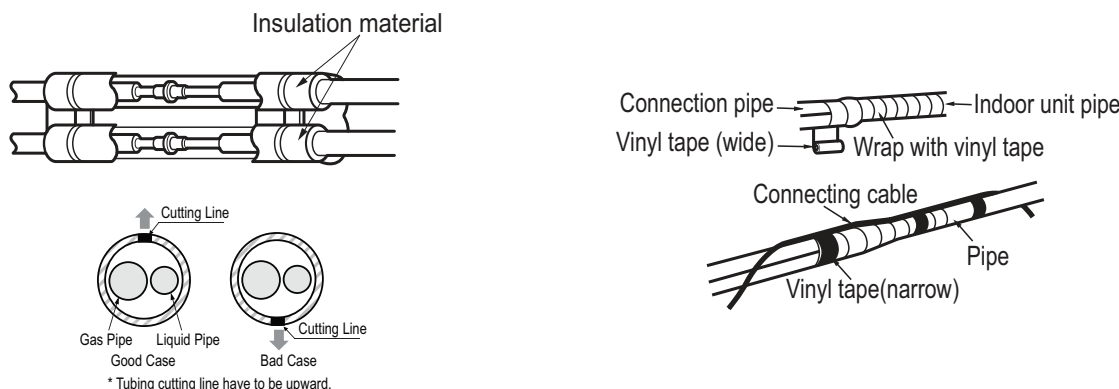


- Align the center of the pipes and sufficiently tighten the flare nut by hand.
- Tighten the flare nut with a wrench.
- When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

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.

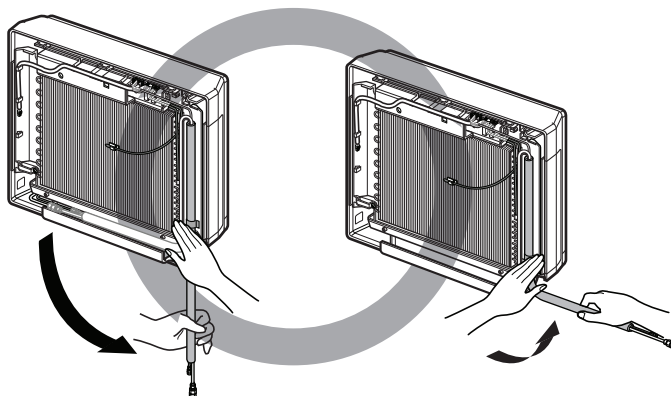
⚠ WARNING

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.

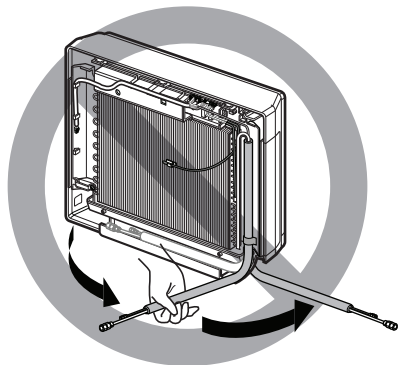


2. Bend the tubing to the right side of chassis.

8. Installation

- **Wrong method**

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

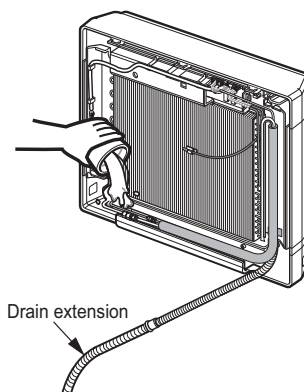


8. Installation

8.4 Checking the drainage

◆ To check the drainage.

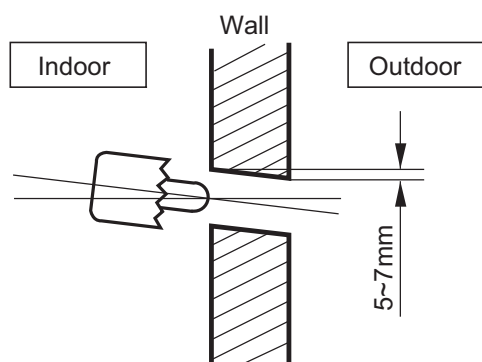
1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.
3. Do not use 'Anti freezing solution.



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

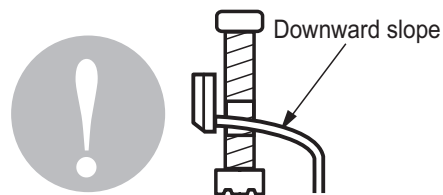
◆ Drill a Hole in the wall

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.

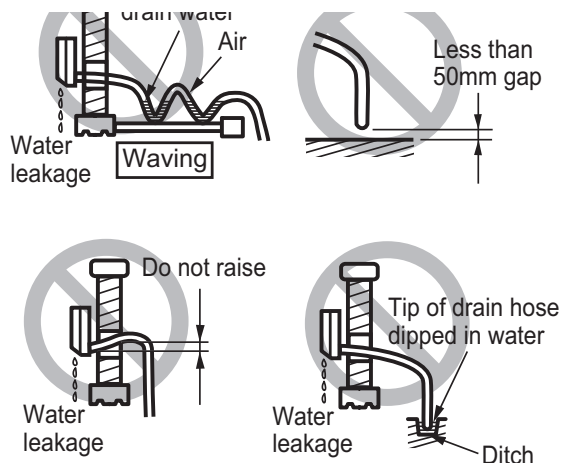


◆ Drain Piping

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



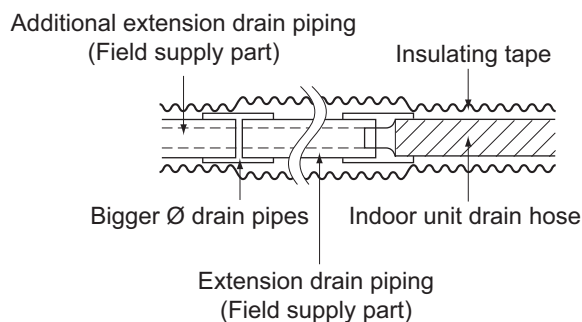
2. Do not make drain piping like the following.



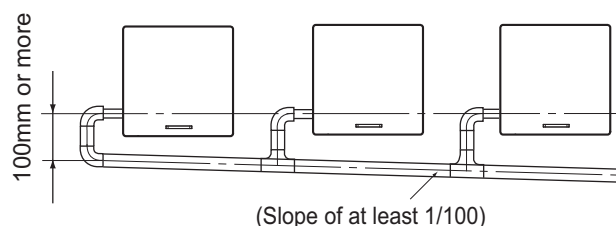
* The feature can be changed according to type of model.

8. Installation

- 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 indoors.



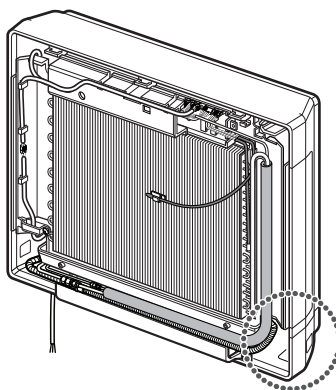
- Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose size or bigger.
- In case of converging multiple drain pipes, install them referring to figure.



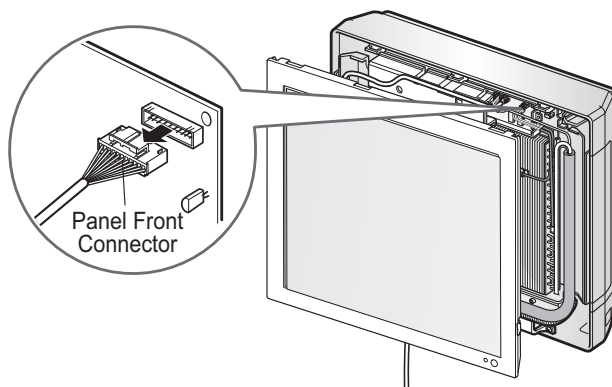
- Select diameter of drain piping which adapts to the capacity of the unit connected

8.5 Front panel assembly

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

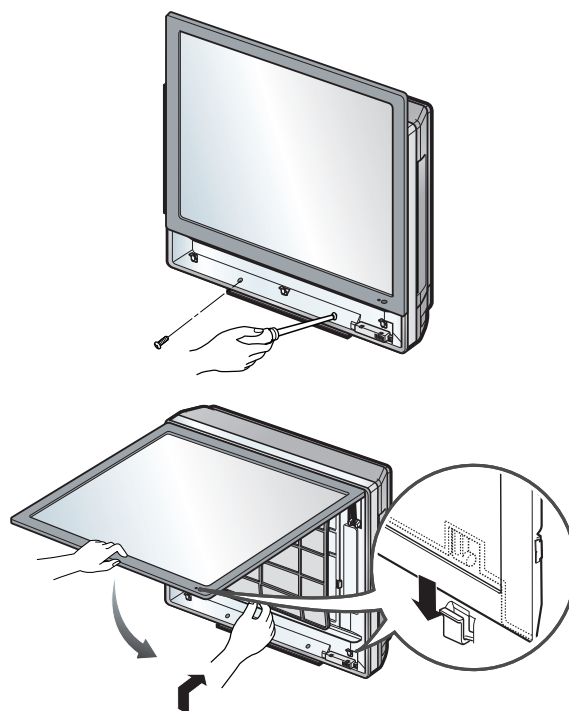


- Assemble connecting lead wire with controller and first fix the upper part of panel front then match the lower part of panel front



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

8. Installation



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.**

8. Installation

- 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 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] USNW12GJRZ0 [AM12BP NSJ], USNW18GKRZ0 [AM18BP NSK] AMNW24GSKR0 [AM24BP 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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AMNW07GSJR0 [AM07BP NSJ] USNW09GJRZ0 [AM09BP NSJ] USNW12GJRZ0 [AM12BP NSJ] USNW18GKRZ0 [AM18BP NSK] AMNW24GSKR0[AM24BP 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 ₂ 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. 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 ² (ft ²)		0.19 (2.05)	0.19 (2.05)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	8.6 / 7.2 / 5.6	9.2 / 7.4 / 5.6
		H / M / L	ft ³ /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	Max.	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 ² (AWG)	4C × 1.0 (18)	4C × 1.0 (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

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		m ² (ft ²)	0.19 (2.05)
Fan	Type		-	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	9.6 / 8.1 / 5.6
		H / M / L	ft ³ /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		Max.	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 ² (AWG)		4C × 1.0 (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

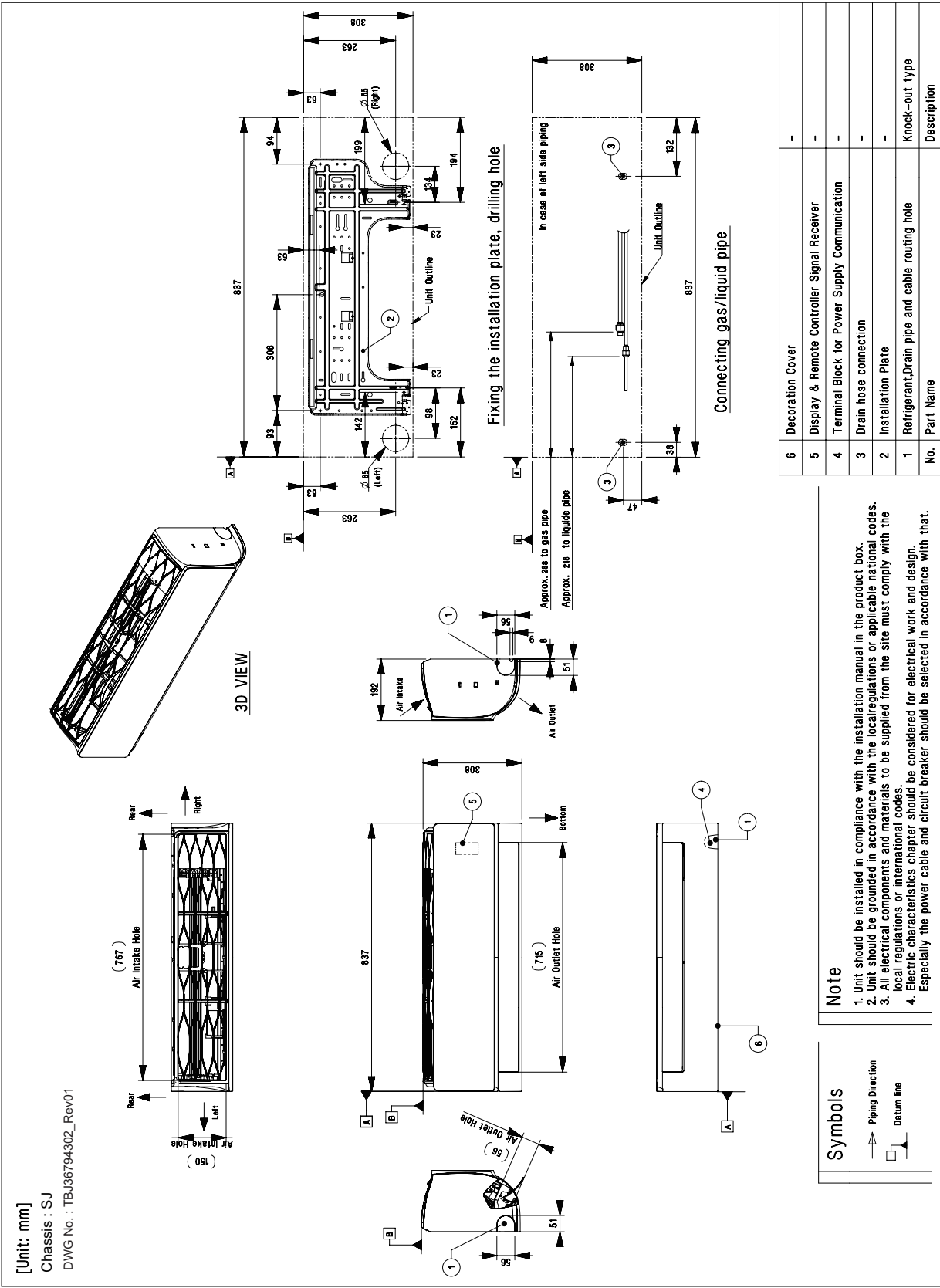
Model Name				USNW18GKRZ0 [AM18BP NSK]	AMNW24GSKR0 [AM24BP NSK]
Power Supply		V, Ø, Hz		220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Capacity	Cooling	kW		5.0	6.6
	Heating	kW		5.8	7.5
Power Input	Min./Nom./Max.	W		26 / 39 / 60	27 / 45 / 60
Running Current	Min./Nom./Max.	A		0.22 / 0.28 / 0.40	0.24 / 0.33 / 0.40
Exterior Color code			-	Munsell 7.5PB 0.2/20 (RAL 9005)	
Dimensions	Body	W × H × D	mm	998 × 345 × 212	998 × 345 × 212
		W × H × D	inch	39-9/32 × 13-19/32 × 8-11/32	39-9/32 × 13-19/32 × 8-11/32
	Shipping	W × H × D	mm	1,080 × 422 × 281	1,080 × 422 × 281
		W × H × D	inch	42-17/32 × 16-5/8 × 11-1/16	42-17/32 × 16-5/8 × 11-1/16
Weight	Body	kg (lbs)		13.2 (29.1)	14.0 (30.9)
	Shipping	kg (lbs)		17.6 (38.8)	18.0 (39.7)
Heat Exchanger	(Row×Column×Fins per inch) × No.	-		(2 × 16 × 20) × 1 + (1 × 8 × 22) × 1	(2 × 16 × 20) × 1 + (1 × 8 × 22) × 1
	Face Area	m ² (ft ²)		0.28 (3.01)	0.28 (3.01)
Fan	Type	-		Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	14.2 / 11.3 / 9.9	15.2 / 12.7 / 10.2
		H / M / L	ft ³ /min	501 / 399 / 350	537 / 449 / 360
Fan Motor	Type	-		BLDC	BLDC
	Output	W × No.		60 × 1	60 × 1
Sound Pressure Level	H / M / L	dB(A)		44 / 38 / 35	46 / 41 / 36
Sound Power Level	Max.	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	
			-	Thermal Protector for Fan Motor	
Connections Method			-	Flared	Flared
Power and Communication Cable (included Earth)		No. × mm ² (AWG)		4C × 1.0 (18)	4C × 1.0 (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

3. Dimensions

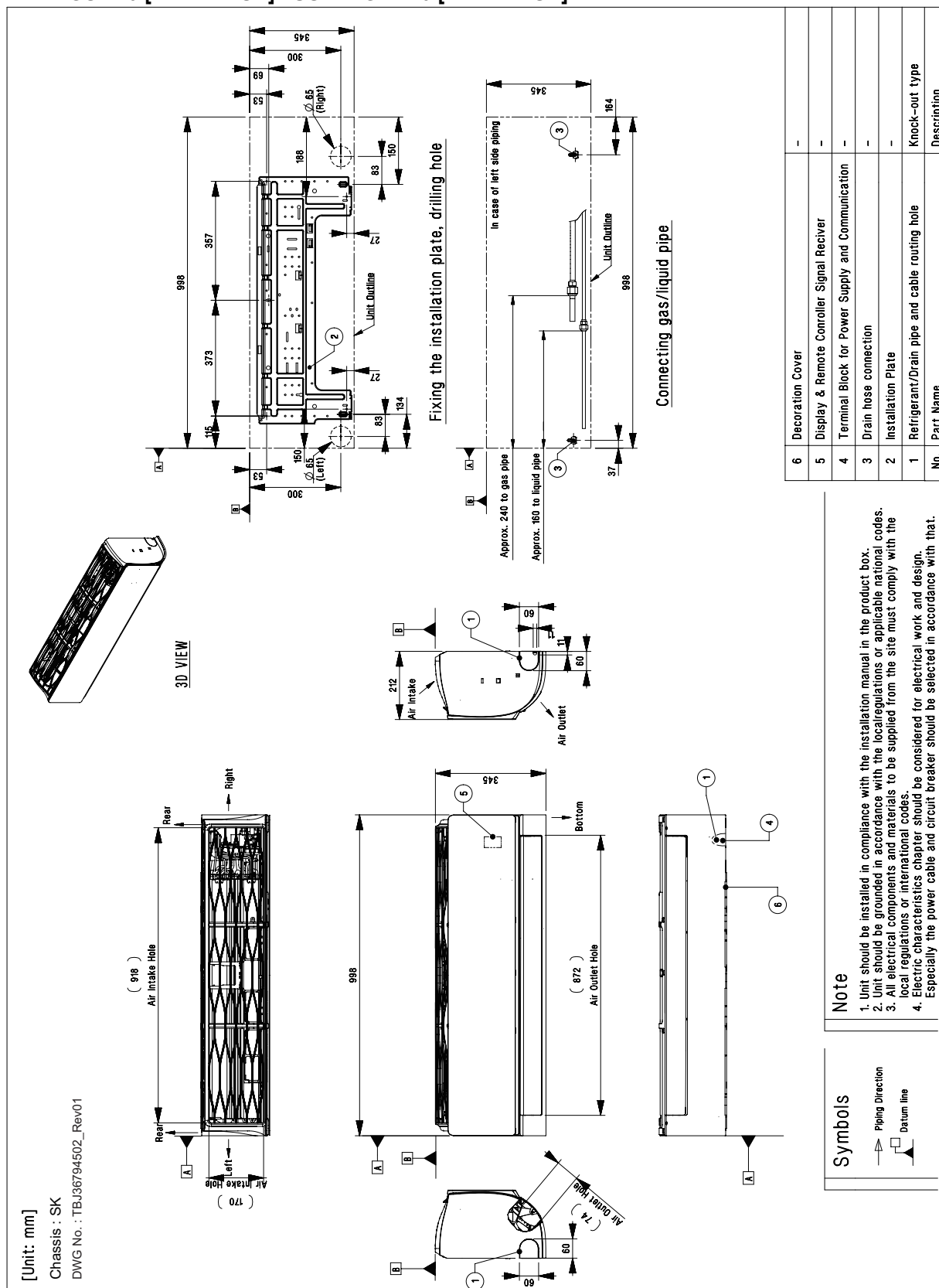
◆ ARTCOOL Mirror (SJ Chassis)
AMNW-GSJR0 [AM-BP NSJ] / USNW-GJRZ0 [AM-BP NSJ]



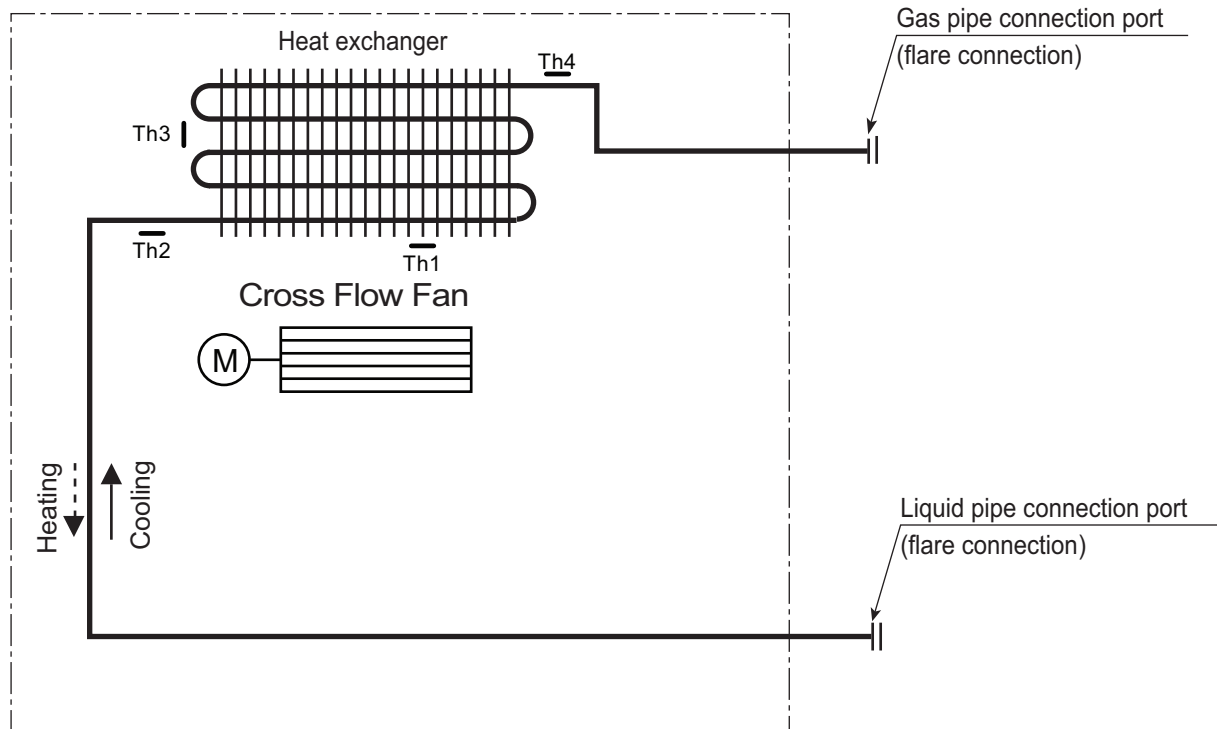
3. Dimensions

◆ ARTCOOL Mirror (SK Chassis)

AMNW-GSKR0 [AM-BP NSK] / USNW-GKRZ0 [AM-BP 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

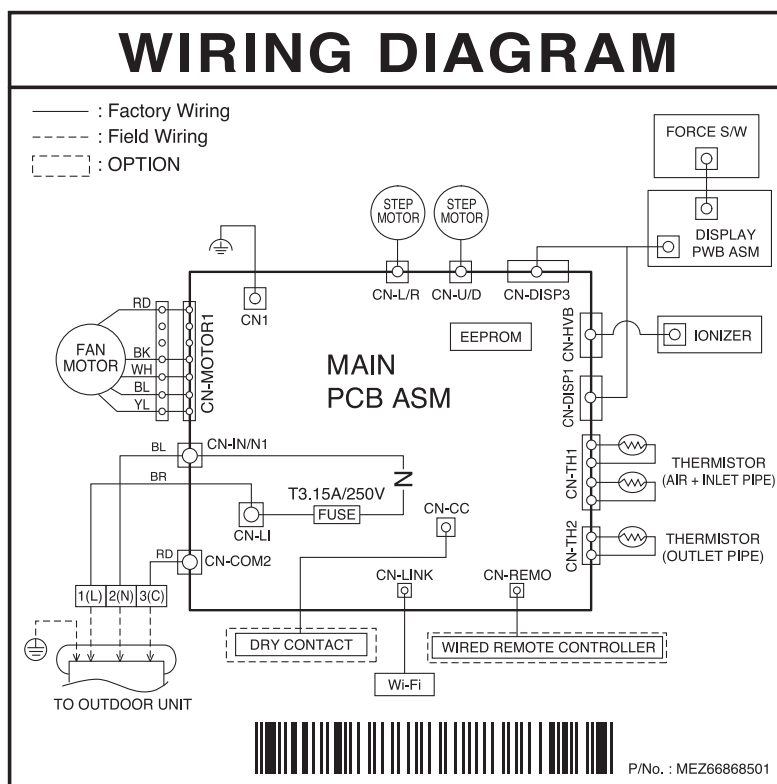
- * : AMNW07GSJR0 [AM07BP NSJ], AMNW24GSKR0 [AM24BP NSK] models are not available.

◆ Refrigerant pipe connection port diameters

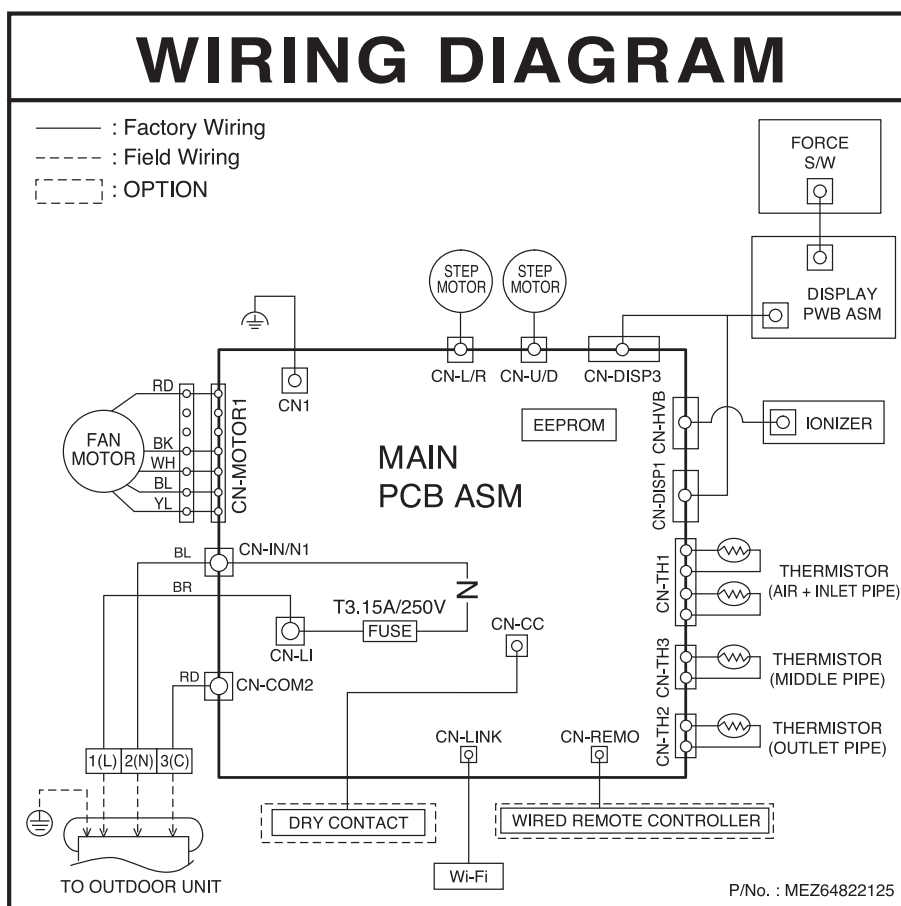
Model	Gas [mm(inch)]	Liquid [mm(inch)]
AMNW07GSJR0 [AM07BP NSJ] USNW09GJRZ0 [AM09BP NSJ] USNW12GJRZ0 [AM12BP NSJ]	Ø9.52 (3/8)	Ø6.35 (1/4)
USNW18GKRZ0 [AM18BP NSK] AMNW24GSKR0 [AM24BP NSK]	Ø12.7 (1/2)	

5. Wiring Diagrams

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



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



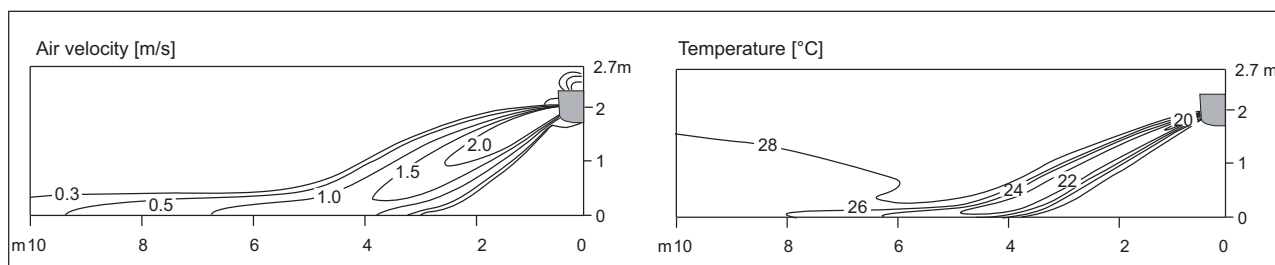
6. Air flow and temperature distributions (reference data)

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

◆ Cooling

Side View

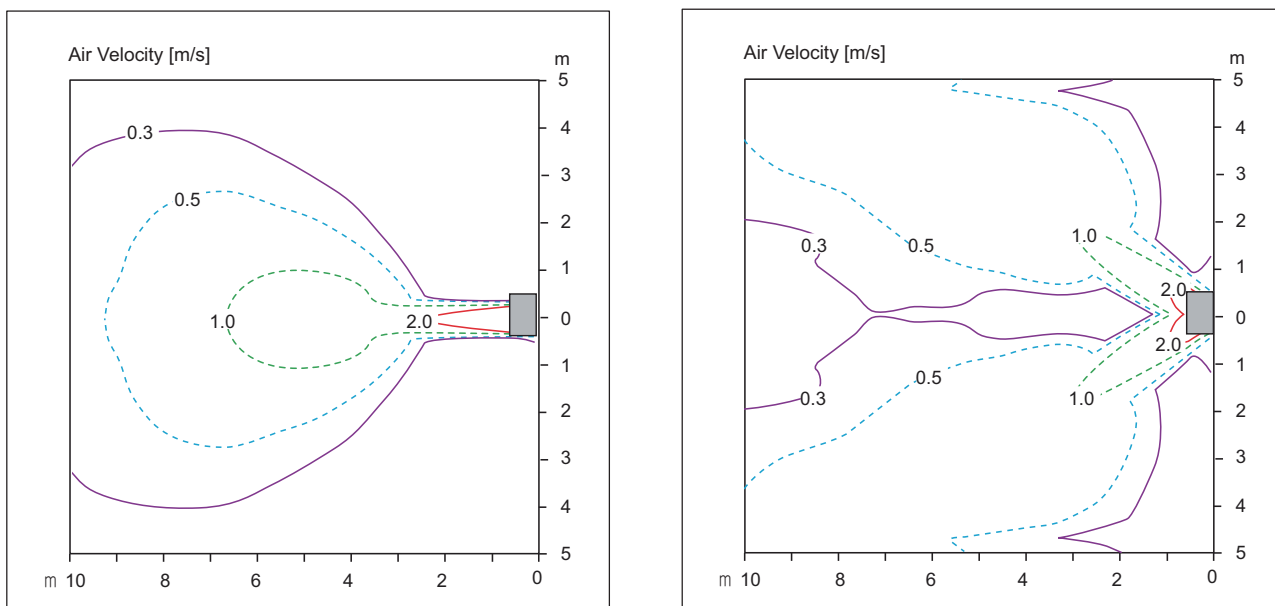
Discharge angle: 35°



- 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

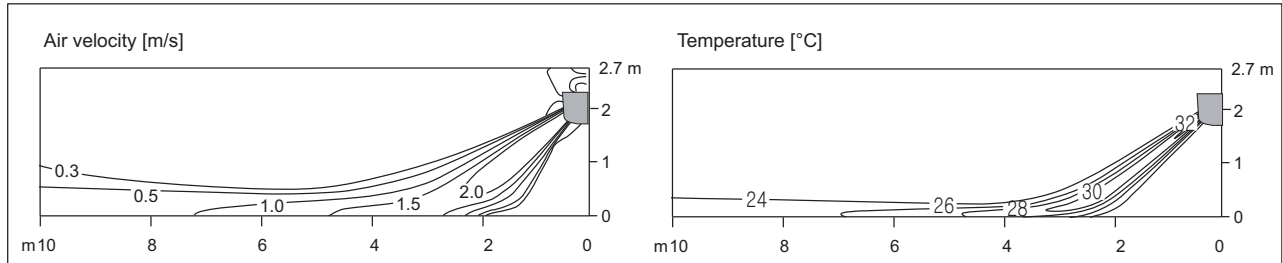
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

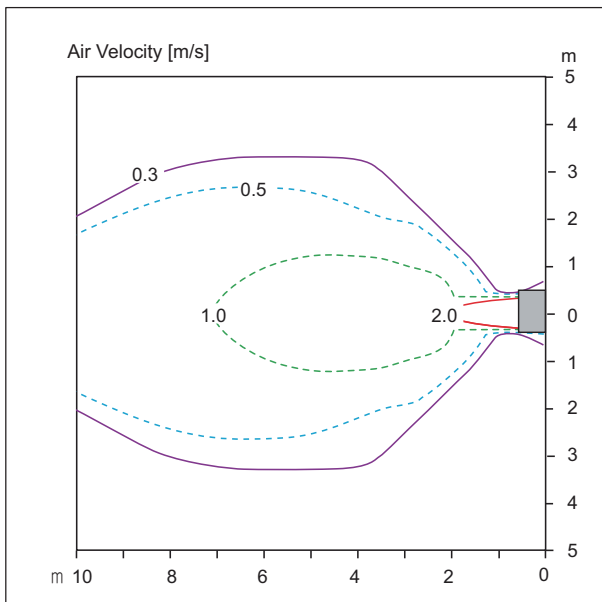
Discharge angle: 55°



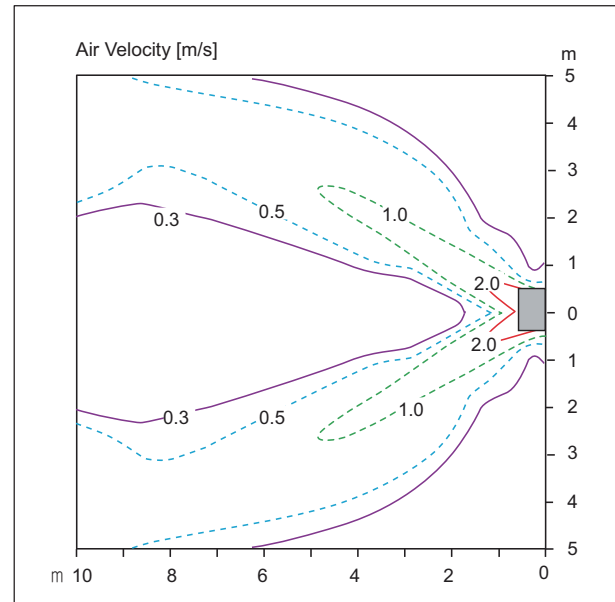
- Vertical Louver : Center
- Fan speed : Super High

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.

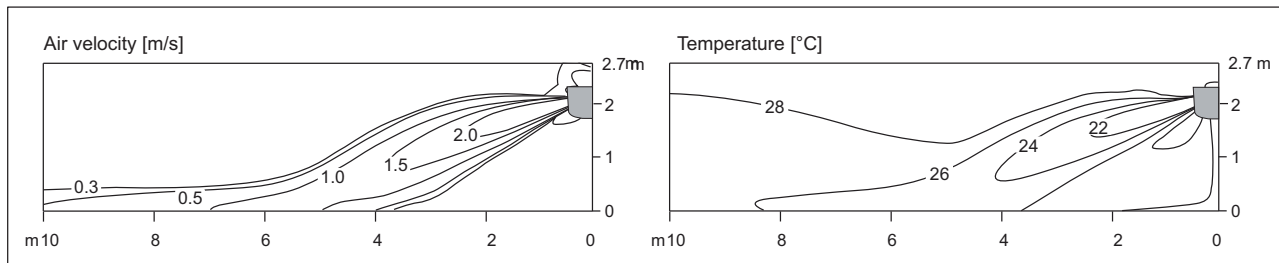
6. Air flow and temperature distributions (reference data)

■ Models : USNW18GKRZ0 [AM18BP NSK]

◆ Cooling

Side View

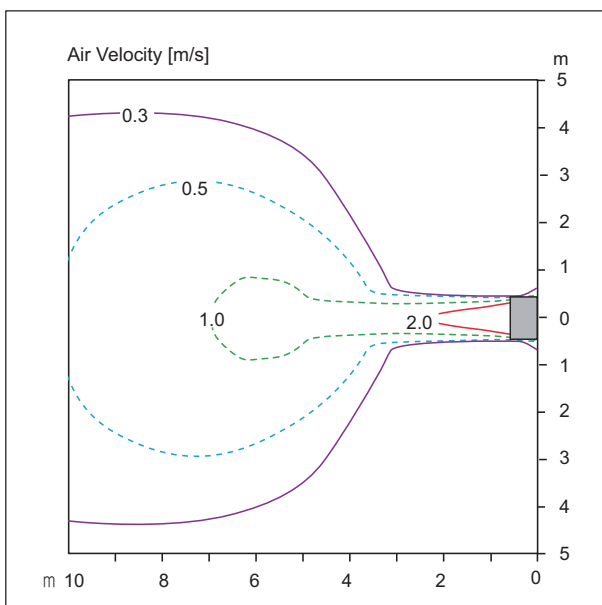
Discharge angle: 25°



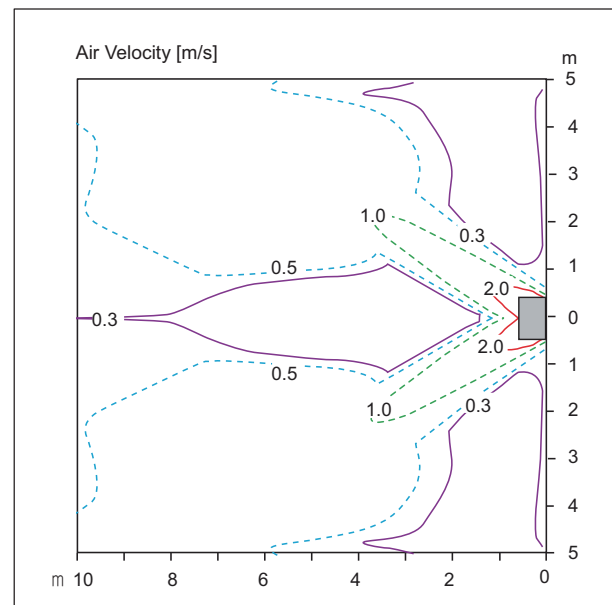
- Vertical Louver : Center
- Fan speed : Super High

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

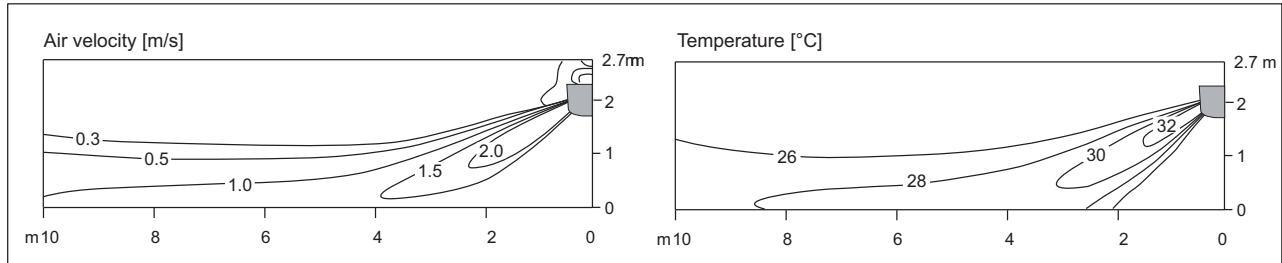
- These figures are accordance with normal certain condition and environment. (Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

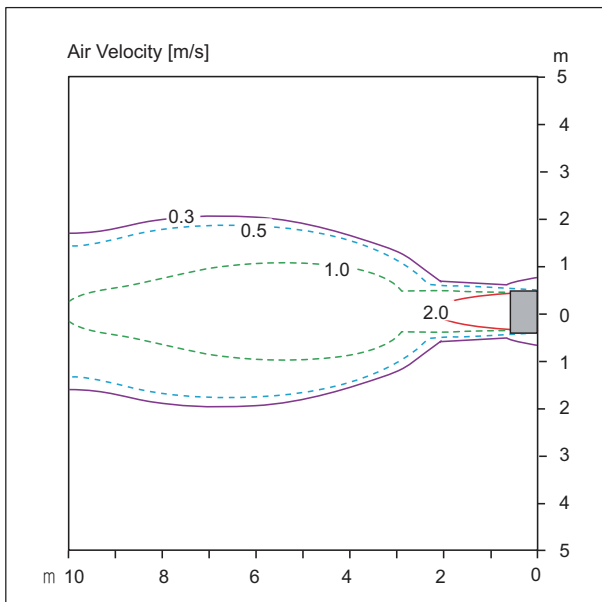
Discharge angle: 45°



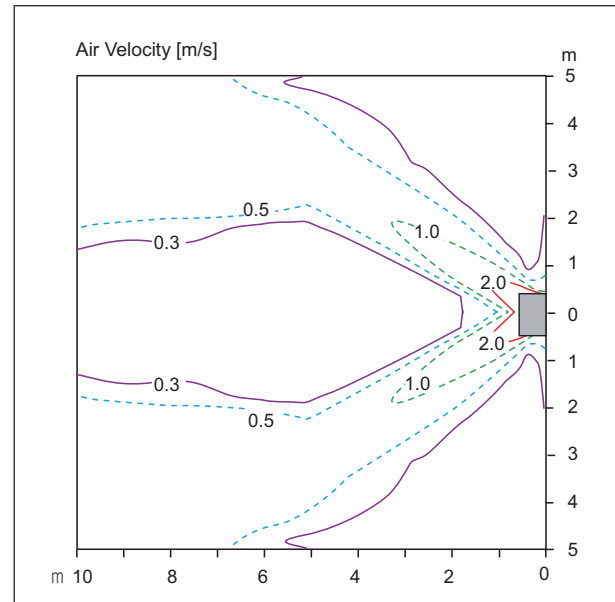
- Vertical Louver : Center
- Fan speed : Super High

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.

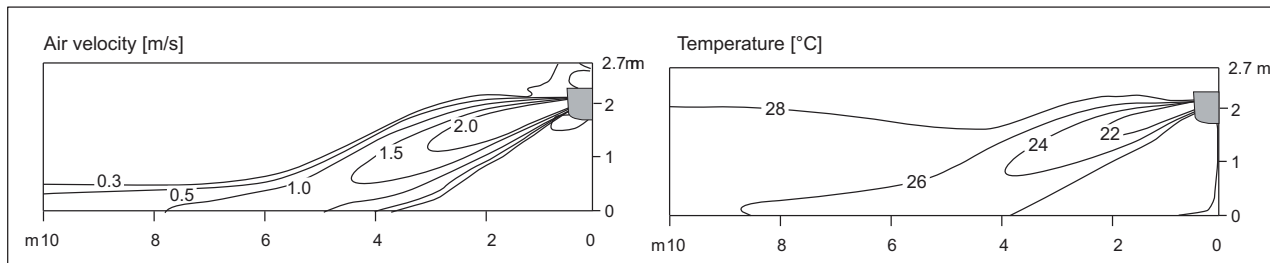
6. Air flow and temperature distributions (reference data)

■ Models : AMNW24GSKR0 [AM24BP NSK]

◆ Cooling

Side View

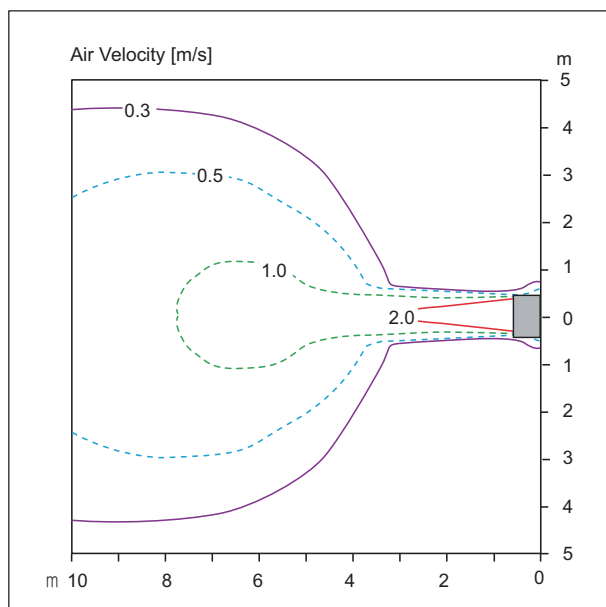
Discharge angle: 25°



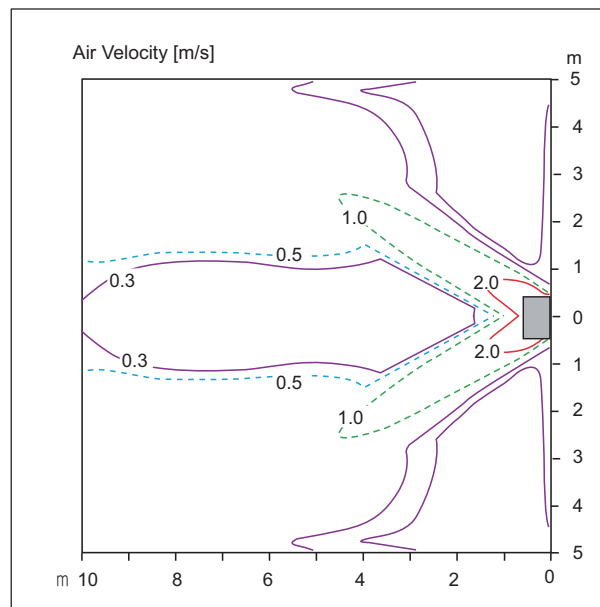
- Vertical Louver : Center
- Fan speed : Super High

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

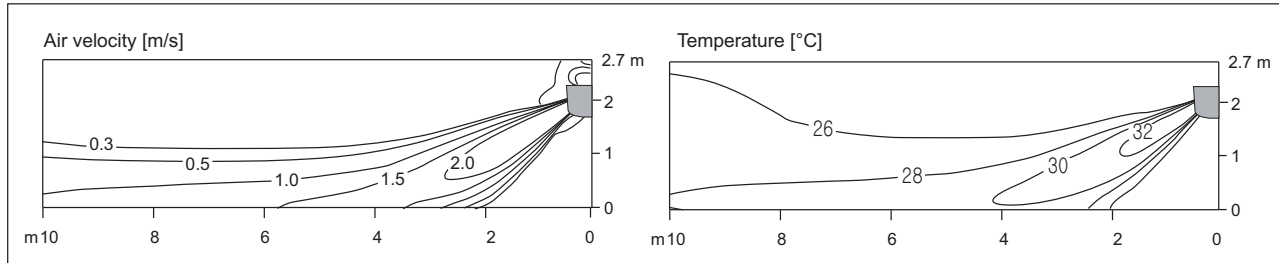
- These figures are accordance with normal certain condition and environment. (Airflow step is 'Super High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

◆ Heating

Side View

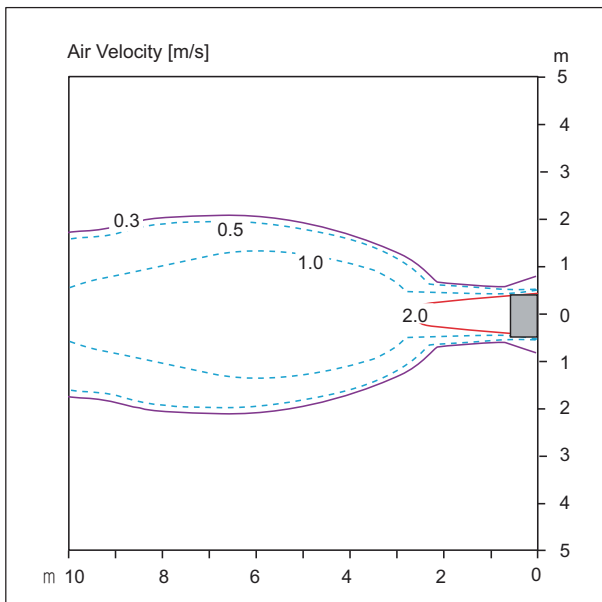
Discharge angle: 45°



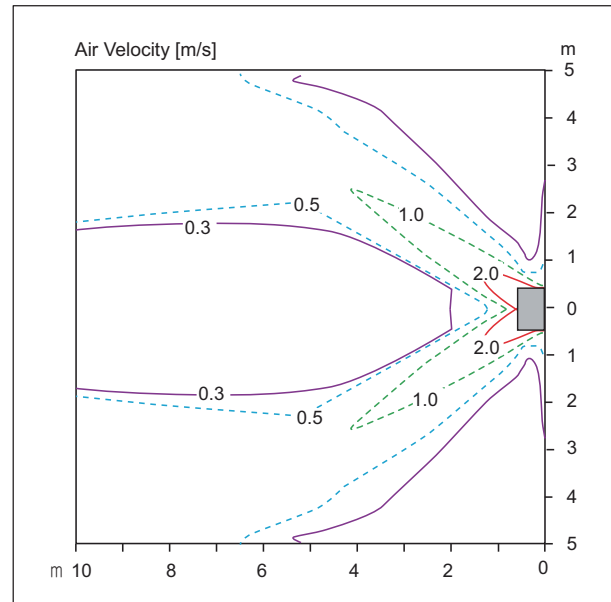
- Vertical Louver : Center
- Fan speed : Super High

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

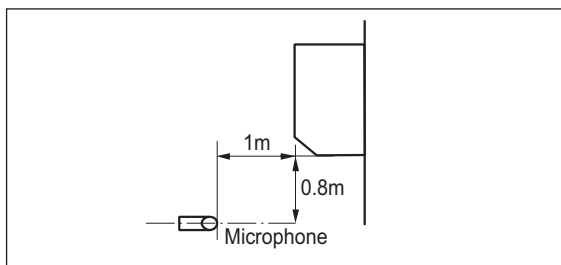
Note

- 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.

7. Sound levels

7.1 Sound pressure level

Overall

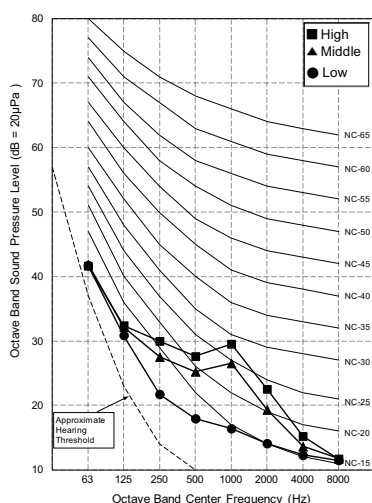


Note

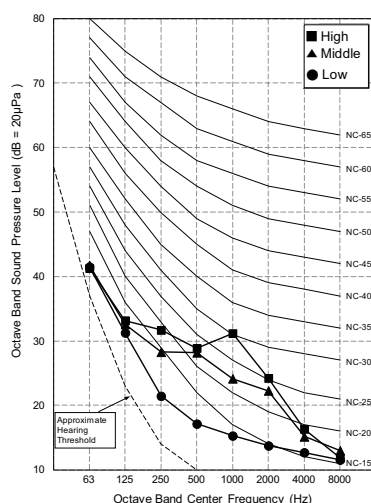
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
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.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNW07GSJR0 [AM07BP NSJ]	35	32	27
USNW09GJRZ0 [AM09BP NSJ]	36	33	27
USNW12GJRZ0 [AM12BP NSJ]	40	35	27
USNW18GKRZ0 [AM18BP NSK]	44	38	35
AMNW24GSKR0 [AM24BP NSK]	46	41	36

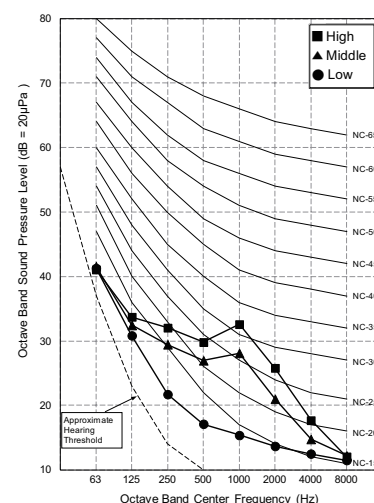
AMNW07GSJR0 [AM07BP NSJ]



USNW09GJRZ0 [AM09BP NSJ]

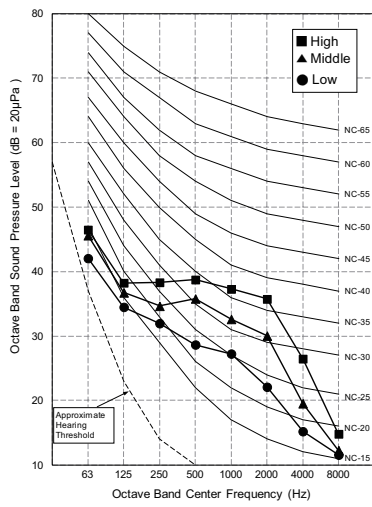


USNW12GJRZ0 [AM12BP NSJ]

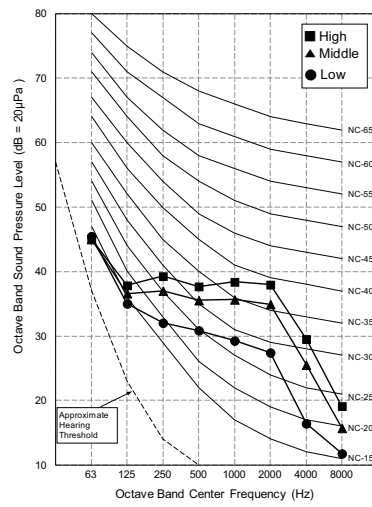


7. Sound levels

USNW18GKRZ0 [AM18BP NSK]



AMNW24GSKR0 [AM24BP NSK]



7. Sound levels

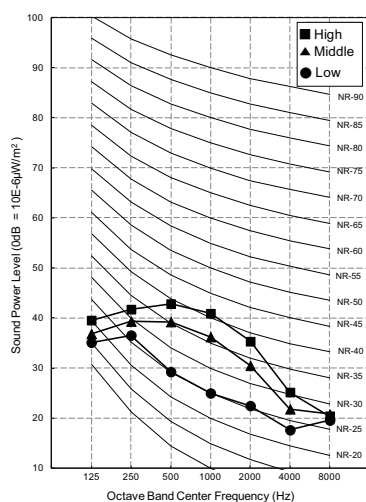
7.2 Sound power level

Note

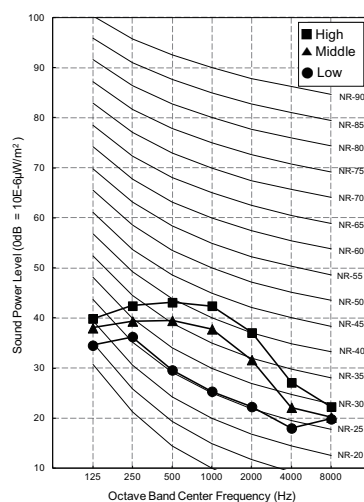
- Data is valid at diffuse field condition
- Data is valid at nominal operating condition
- Sound level can be increased in static pressure mode or used air guide.
- Sound power level is measured on the rated condition in the reverberation rooms.
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$

Model	Sound power Levels [dB(A)]
	H
AMNW07GSJR0 [AM07BP NSJ]	57
USNW09GJRZ0 [AM09BP NSJ]	57
USNW12GJRZ0 [AM12BP NSJ]	57
USNW18GKRZ0 [AM18BP NSK]	59
AMNW24GSKR0 [AM24BP NSK]	65

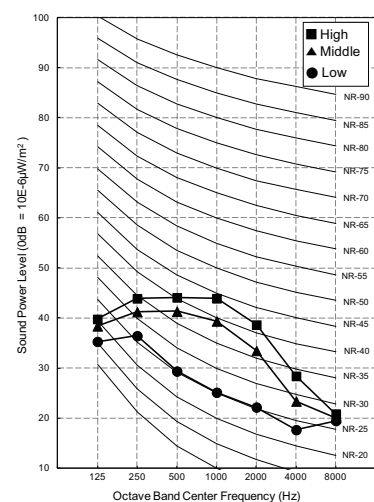
AMNW07GSJR0 [AM07BP NSJ]



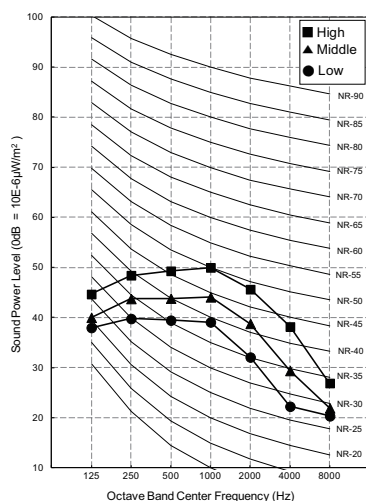
USNW09GJRZ0 [AM09BP NSJ]



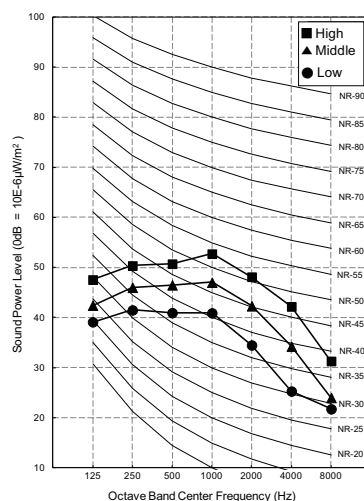
USNW12GJRZ0 [AM12BP NSJ]



USNW18GKRZ0 [AM18BP NSK]



AMNW24GSKR0 [AM24BP NSK]

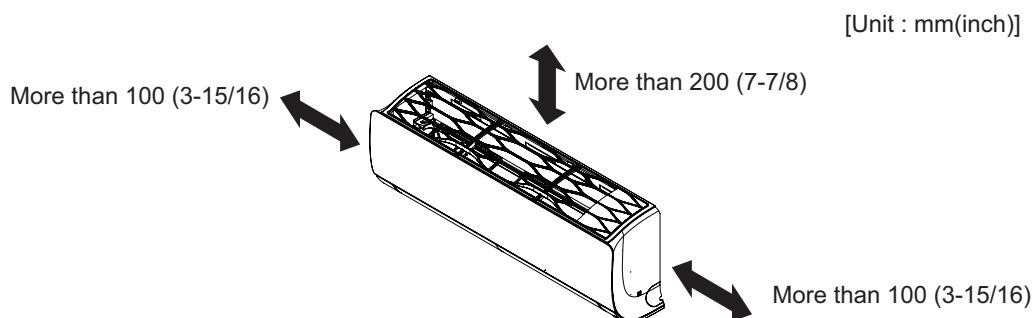


8. Installation

- 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.

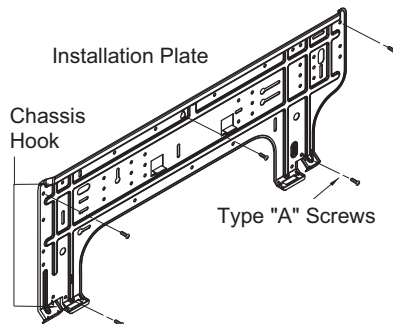


8. Installation

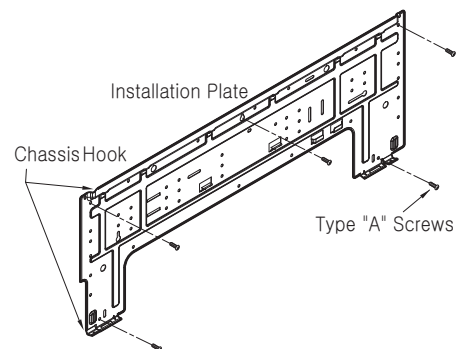
■ Fixing Installation Plate

- 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

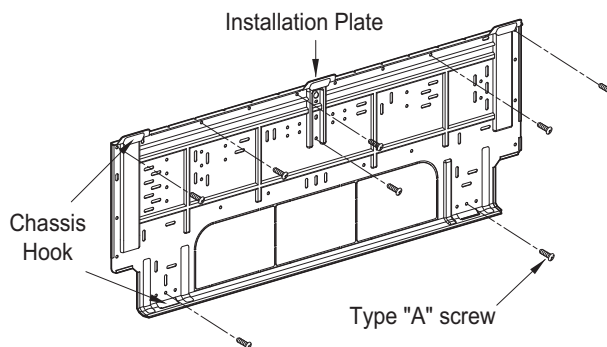


SK Chassis



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

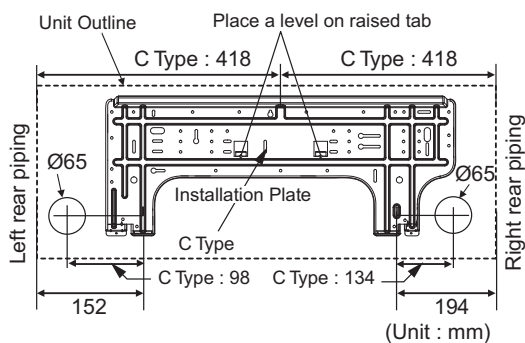
SV Chassis



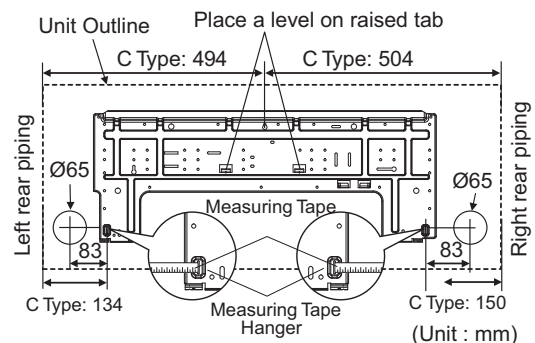
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.

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

SJ chassis



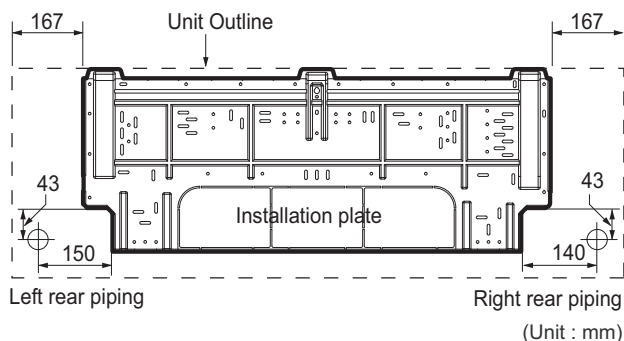
SK chassis



* 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

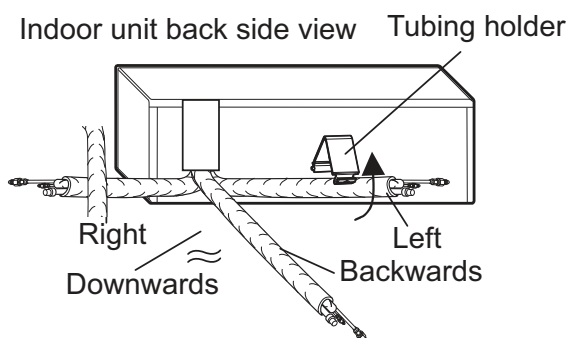
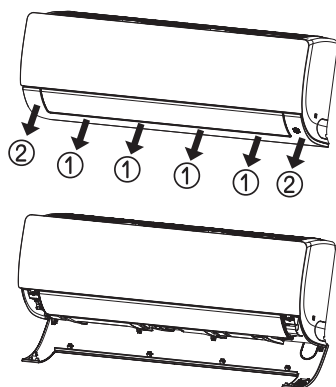
In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

8.2 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.

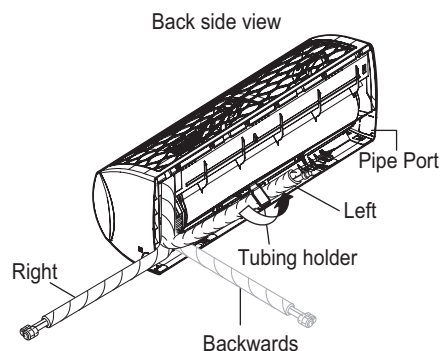
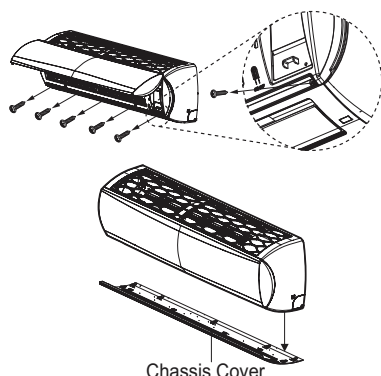
* The feature can be changed according to type of model.

* 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.

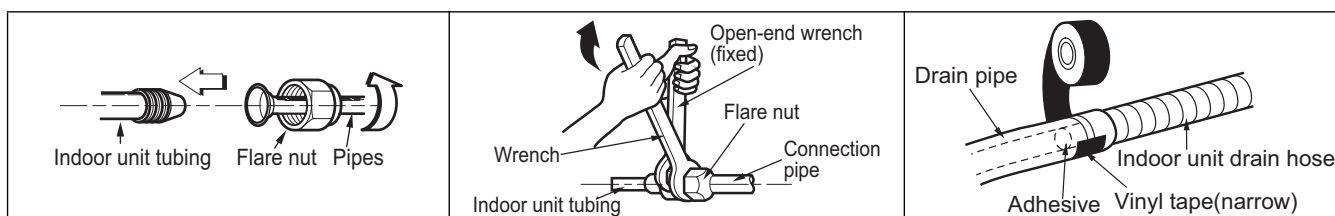
8. Installation



* 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.

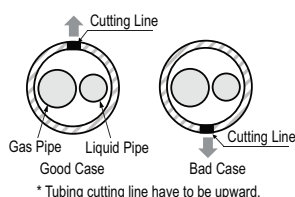
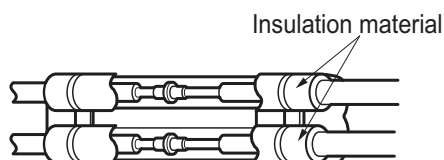
■ Connecting the installation pipe and drain hose



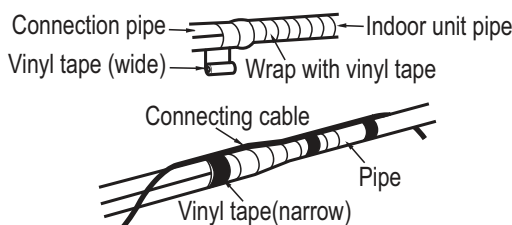
1. Align the center of the pipes and sufficiently tighten the flare nut by hand.
2. Tighten the flare nut with a wrench.
3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

■ 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.



* Tubing cutting line have to be upward.



⚠ CAUTION

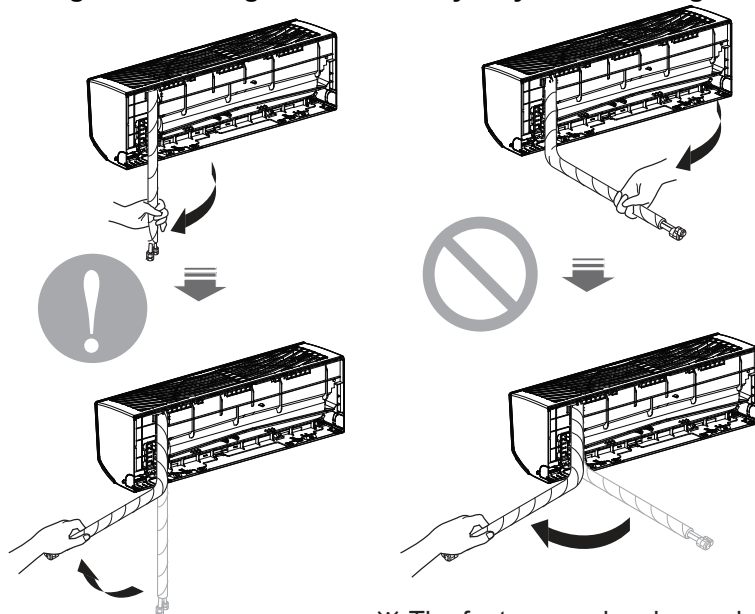
If the drain hose is routed inside the room insulate the hose with an insulation material* so that dripping from sweating condensation) will not damage furniture or floors.

8. Installation

* 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.



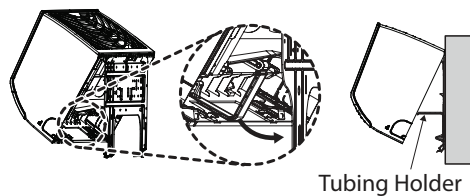
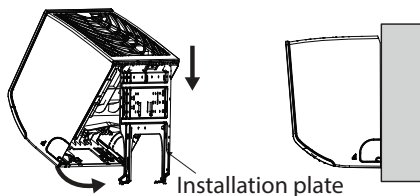
※ The feature can be changed according to type

- 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.

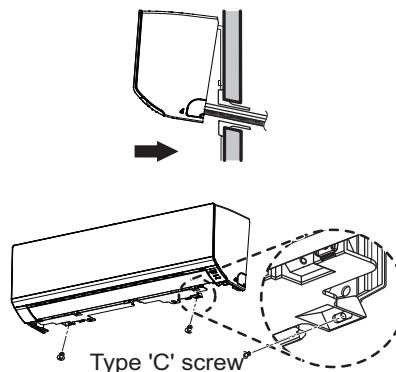


* The feature can be changed according to type of model.

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.

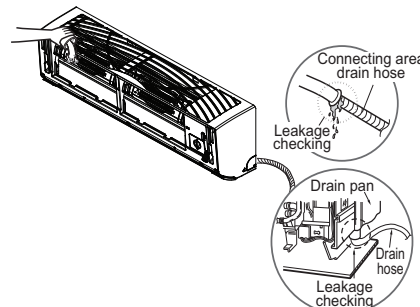
CAUTION

- 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.

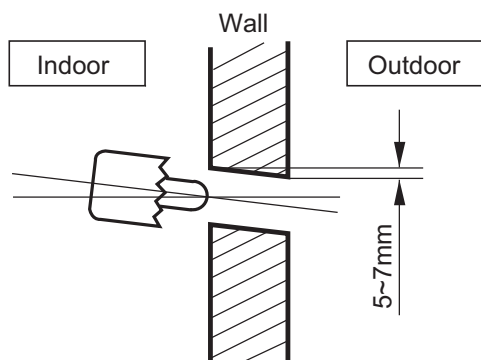


* The feature can be changed according to type of model.

8. Installation

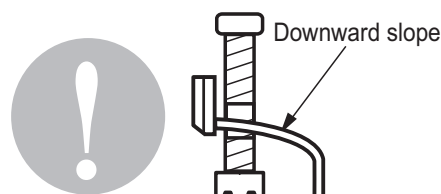
◆ Drill a Hole in the wall

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.

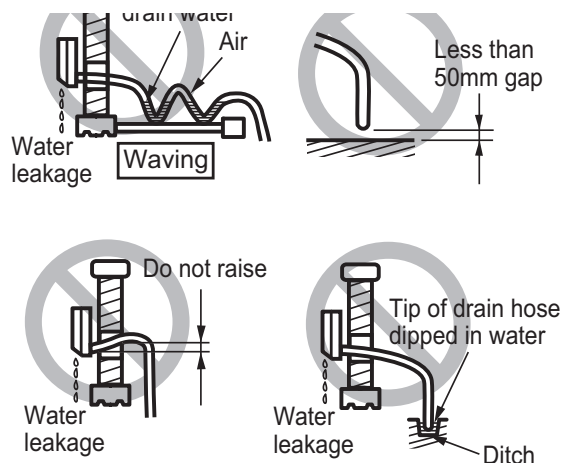


◆ Drain Piping

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.

8.3 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:

8. Installation

- 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 and visually 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 0.75mm² 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

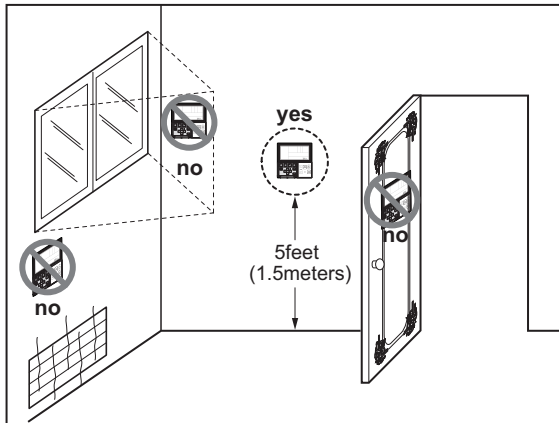
- Make sure that the screws of the terminal are fixed tightly.
 - The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (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.
-

8.3.4 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.

8. Installation

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	AMNH09GTUC0 [MT09AH NU1] AMNH12GTUC0 [MT11AH 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	X
	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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AMNH09GTUC0 [MT09AH NU1] AMNH12GTUC0 [MT11AH NU1]
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	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 ₂ 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	-	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. 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

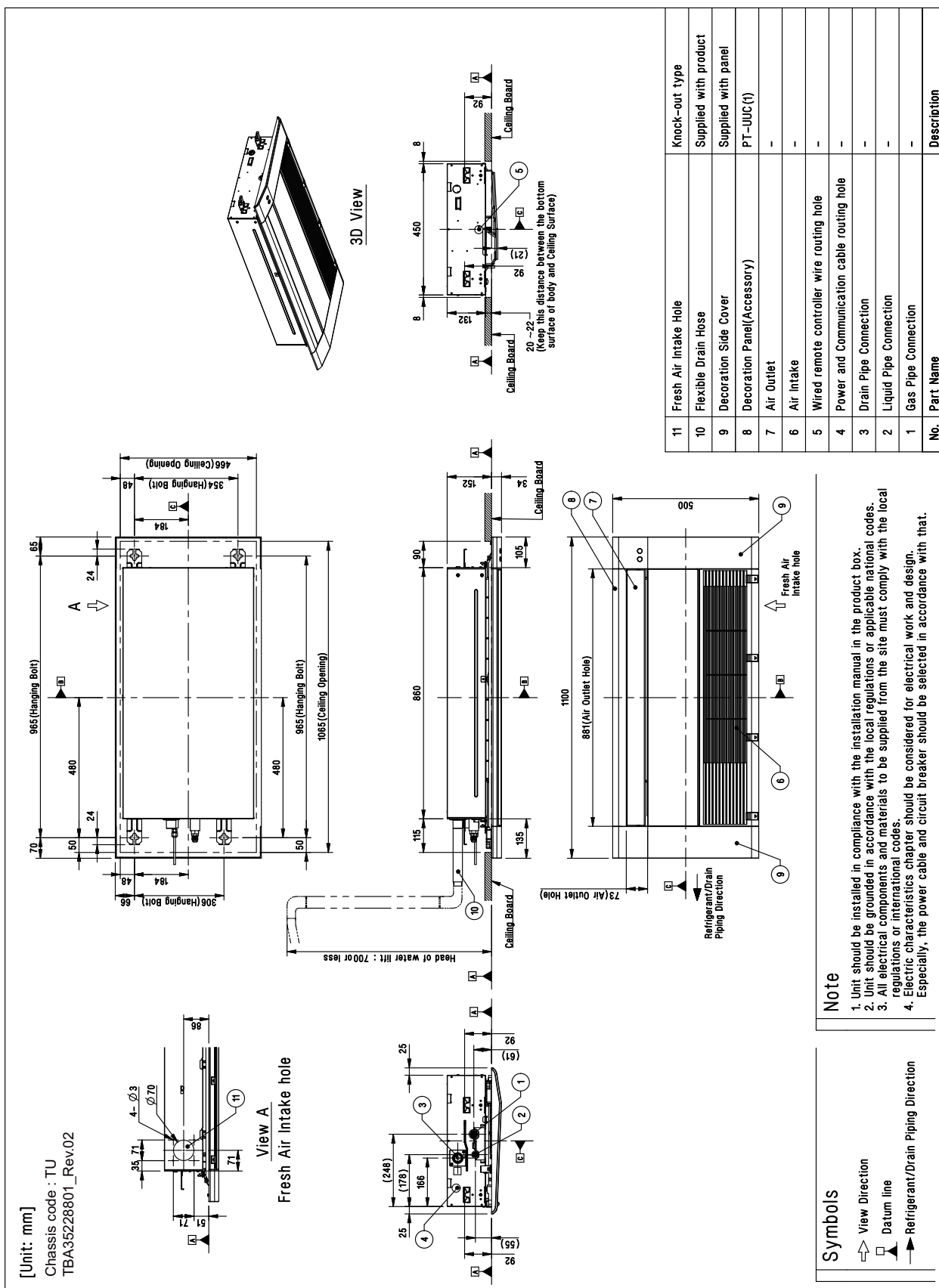
Model Name				AMNH09GTUC0 [MT09AH NU1]	AMNH12GTUC0 [MT11AH NU1]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input			W x No.	20 × 1	20 × 1
Running Current			A	0.2	0.2
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	860 × 132 × 450	860 × 132 × 450
		W x H x D	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)	13.5 (29.8)	13.5 (29.8)
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 ² (ft ²)	0.18 (1.90)	0.18 (1.90)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	7.5 / 7.3 / 6.8	8.1 / 7.4 / 7.0
		H / M / L	ft ³ /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		Max.	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 ² (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

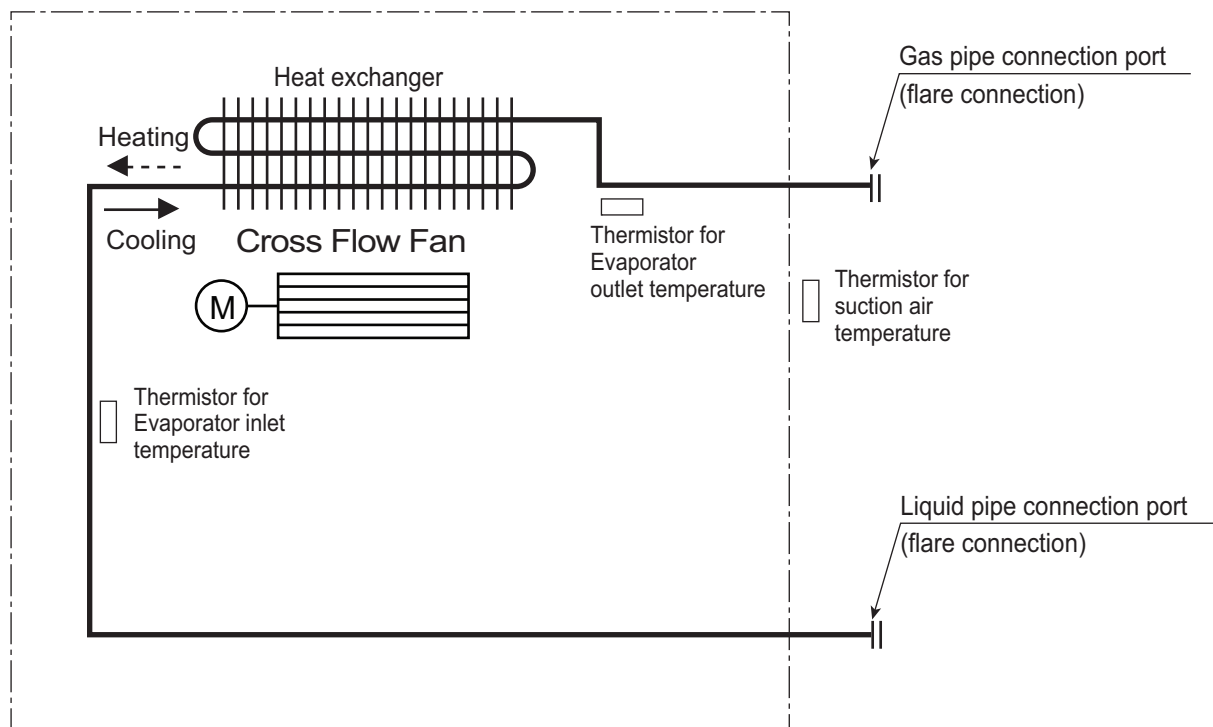
- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

3. Dimensions

AMNH09GTUC0 [MT09AH NU1] / AMNH12GTUC0 [MT11AH NU1]



4. Piping diagrams



Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE1
Thermistor for evaporator outlet temperature	CN-PIPE2

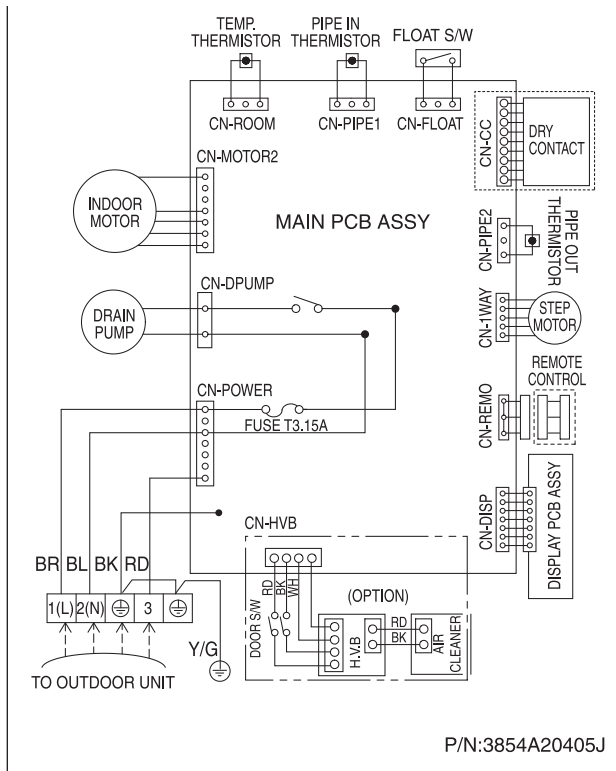
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
AMNH09GTUC0 [MT09AH NU1] AMNH12GTUC0 [MT11AH NU1]	Ø9.52	Ø6.35

5. Wiring Diagrams

■ Models: AMNH-TU [MT-AH NU1]

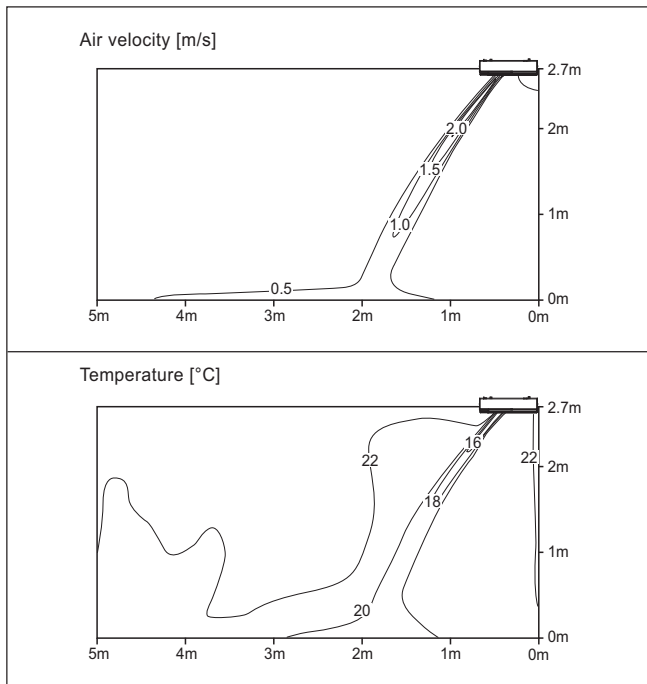


6. Air flow and temperature distributions (reference data)

■ Model : AMNH09GTUC0 [MT09AH NU1]

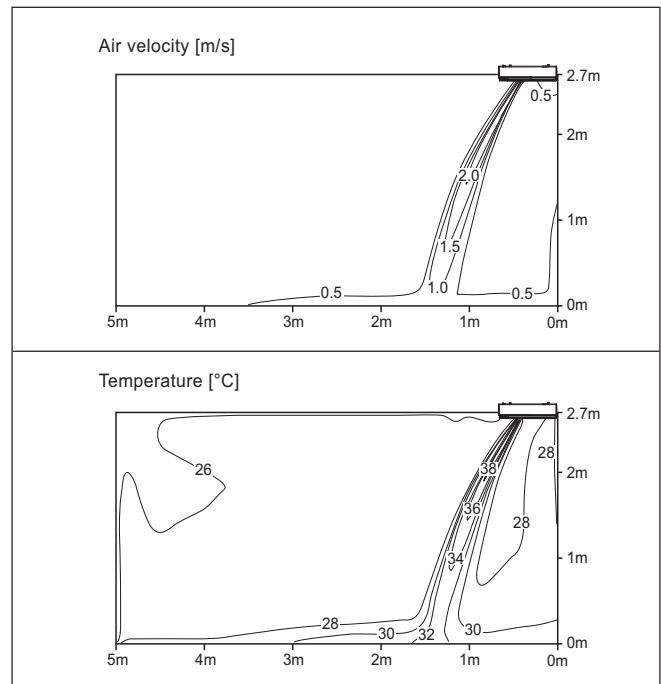
Cooling

Discharge angle: 50°



Heating

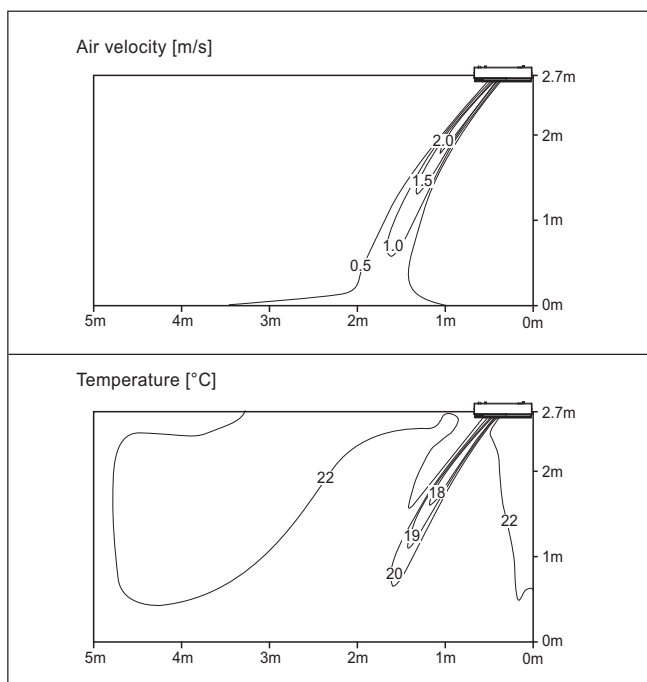
Discharge angle: 60°



■ Model : AMNH12GTUC0 [MT11AH NU1]

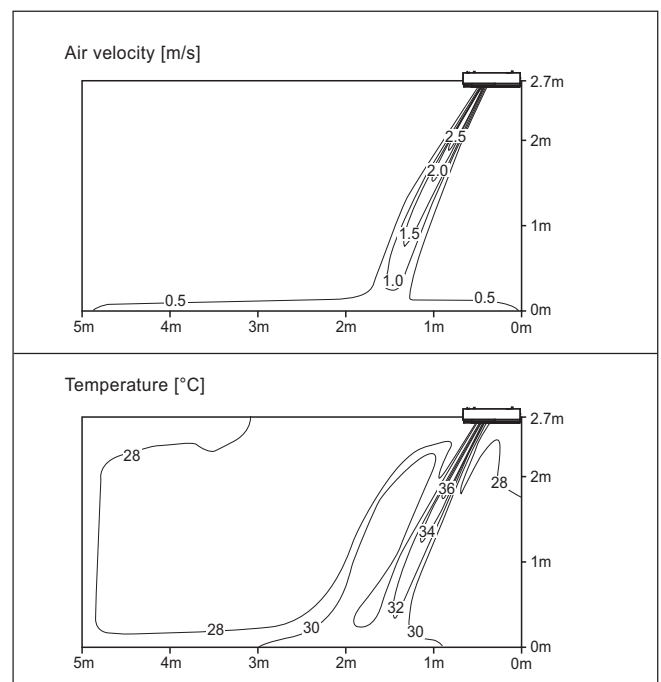
Cooling

Discharge angle: 50°



Heating

Discharge angle: 60°



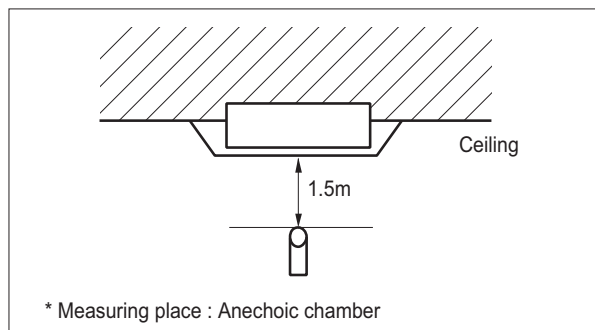
Note

- 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

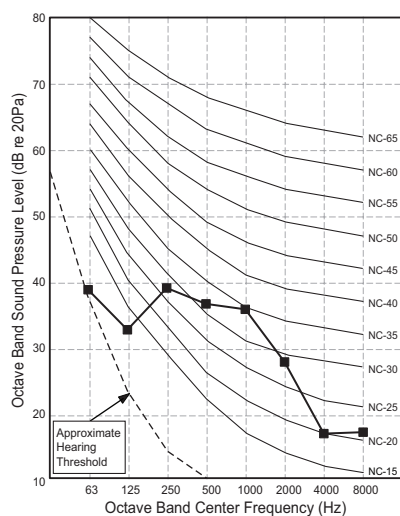


Note

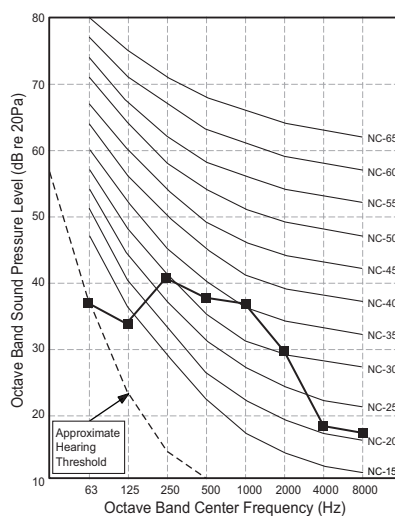
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNH09GTUC0 [MT09AH NU1]	36	34	32
AMNH12GTUC0 [MT11AH NU1]	37	36	33

AMNH09GTUC0 [MT09AH NU1]



AMNH12GTUC0 [MT11AH NU1]



7. Sound levels

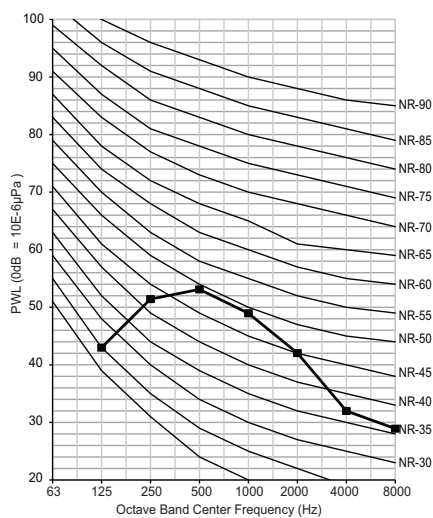
7.2 Sound power level

Note

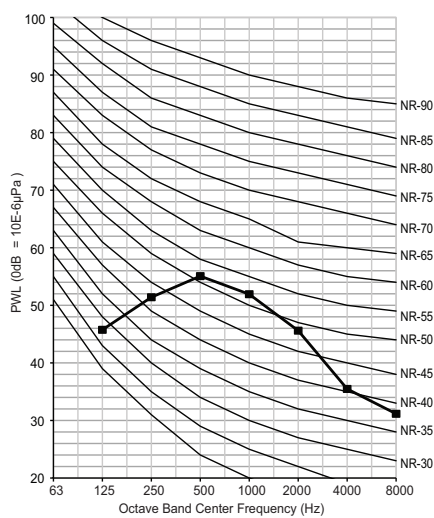
1. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
2. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound power level [dB(A)]
	H
AMNH09GTUC0 [MT09AH NU1]	54
AMNH12GTUC0 [MT11AH NU1]	57

AMNH09GTUC0 [MT09AH NU1]

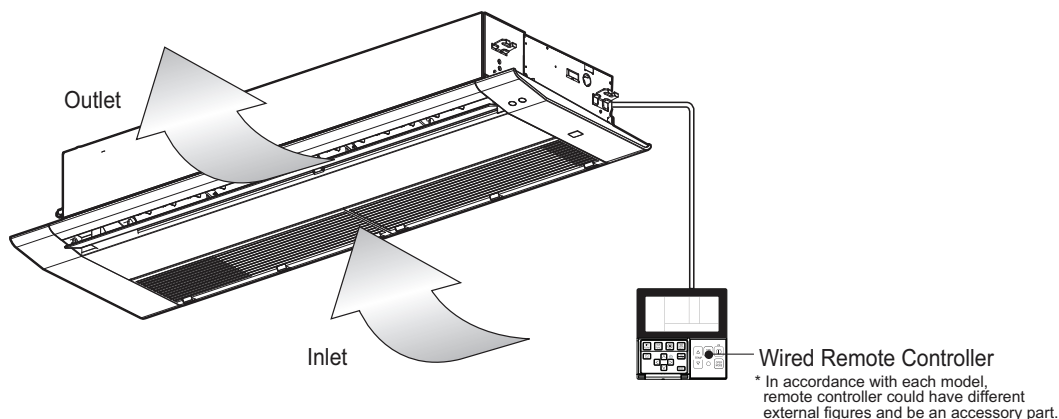


AMNH12GTUC0 [MT11AH NU1]



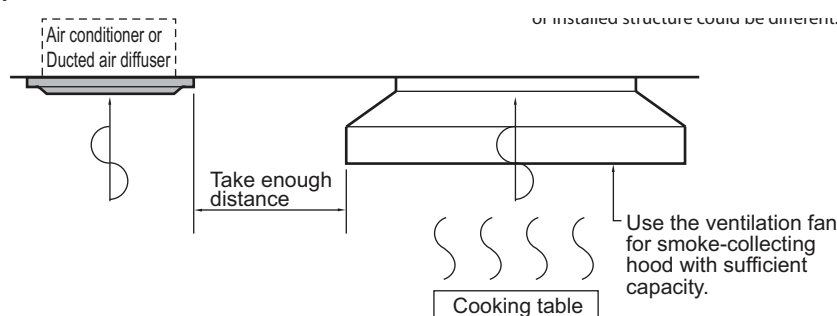
8. Installation

- 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.

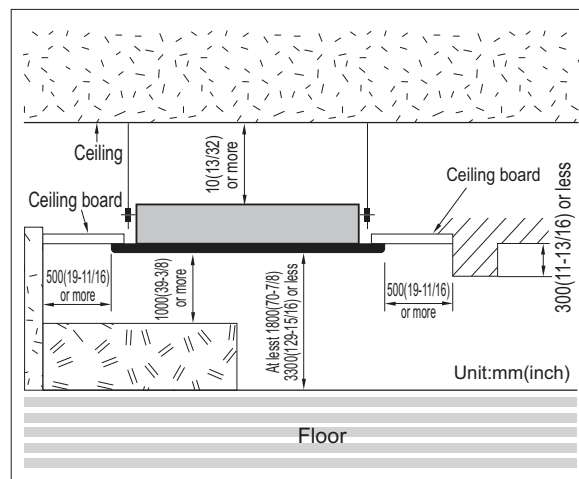


8. Installation

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

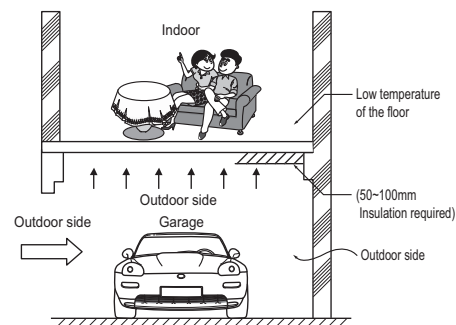
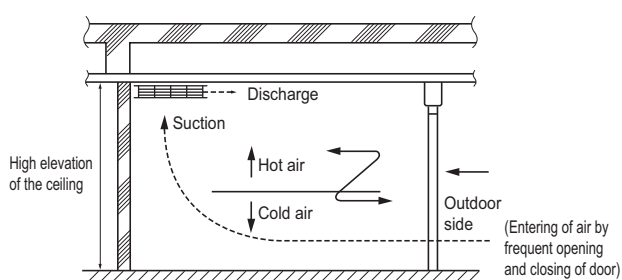
- If the temperature rise above 30 °C or the humidity rise above RH 80%, the dew-protective kit should be equipped or use additional insulation to the indoor unit body.
 - "Dew Protective kit" is sold separately.
 - Use the glass wool material or polyethylene foam and it make sure to be thick of 10mm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



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.



8. Installation

◆ 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

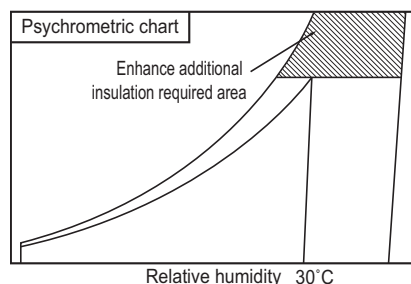
- In case there is a cold air intake,
 - » The duct surface may have some dew drops. So a insulation on the duct is a must. (Insulation material: a glass wool of thickness 25 mm will be appropriate.)

• 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.

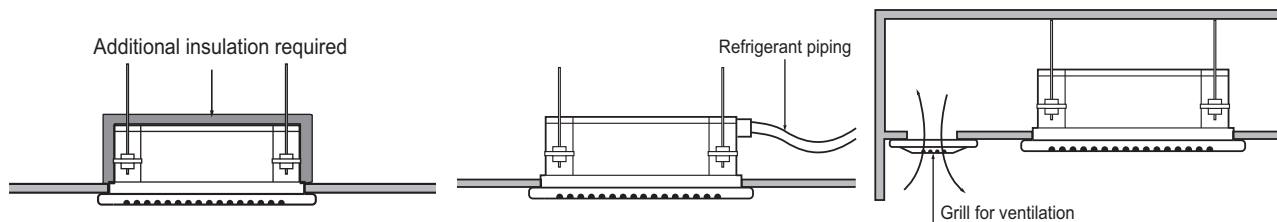
◆ In case of high temperature or humidity between the false ceiling and ceiling slab

- 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.



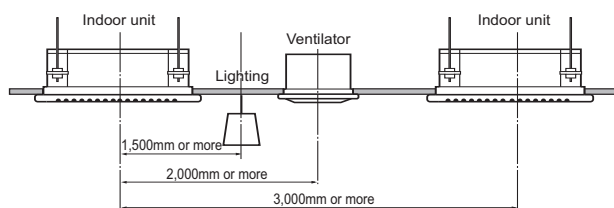
• Countermeasure method

- 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 th air tight seal places. (To escape of the humidity inside false ceiling)



8. Installation

◆ In case of multiple indoor cassette units (recommended)

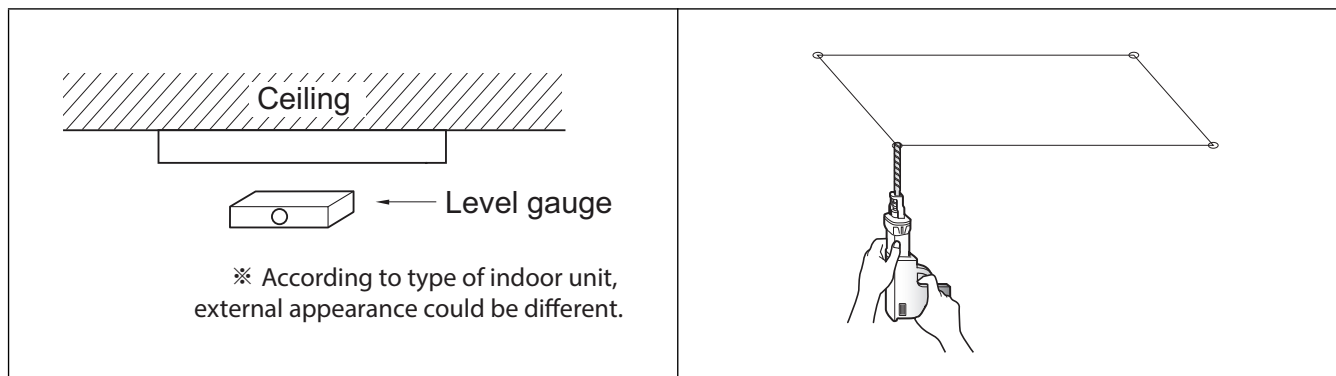


※ According to type of indoor unit, external appearance could be different.

8.3 Ceiling opening dimensions and hanging bolt location

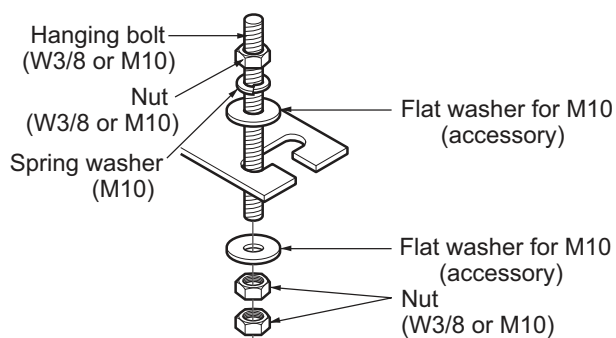
⚠ CAUTION

- 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

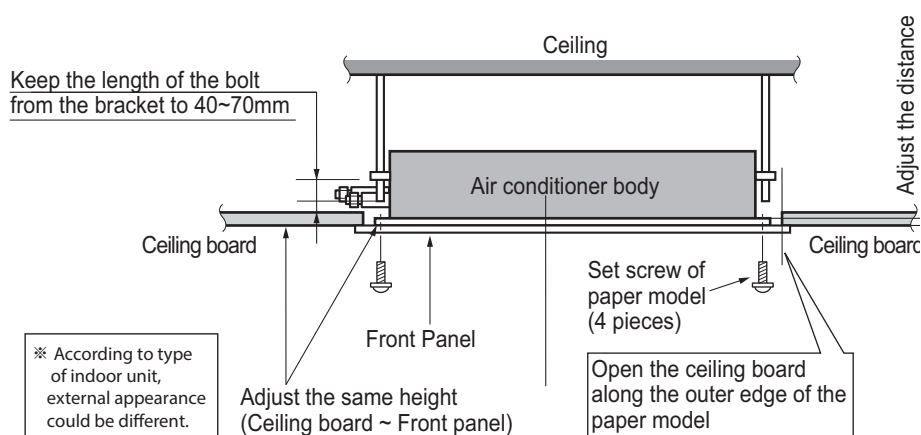
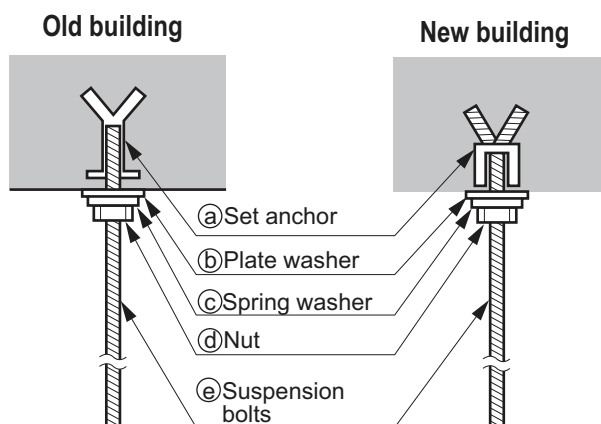


- The following parts are local purchasing.

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.



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

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 and visually 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 0.75mm² 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.

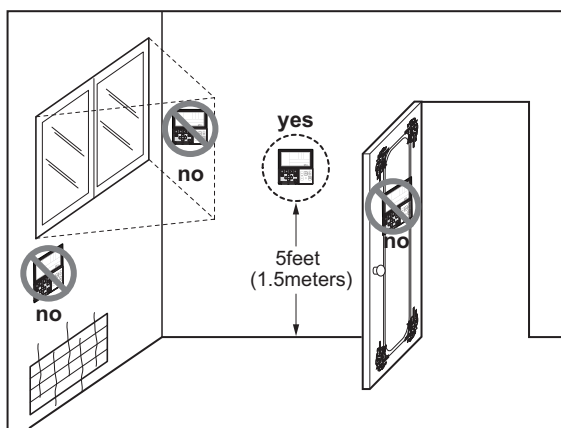
8. Installation

- 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

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.)

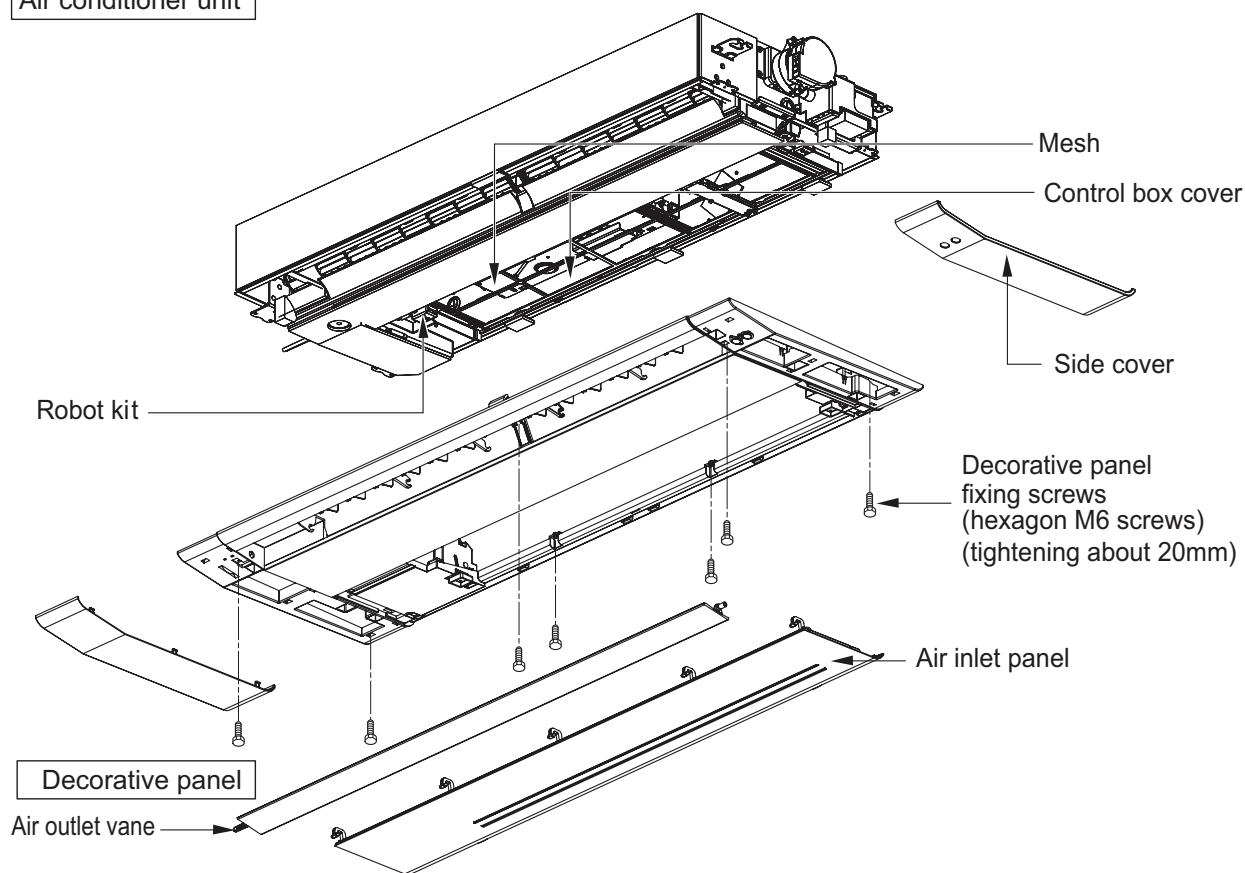
8. Installation

8.5 Installation of Decoration Panel (Panel Type)

- 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 and air inlet panel connector.
7. Install the air inlet panel (including the air filter) and side covers.

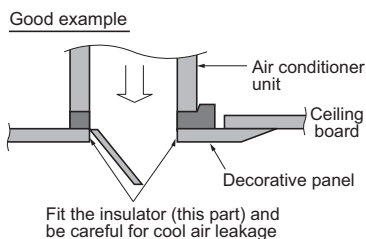
Air conditioner unit



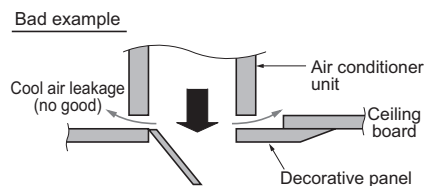
⚠ CAUTION

- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.

Good case



Bad case

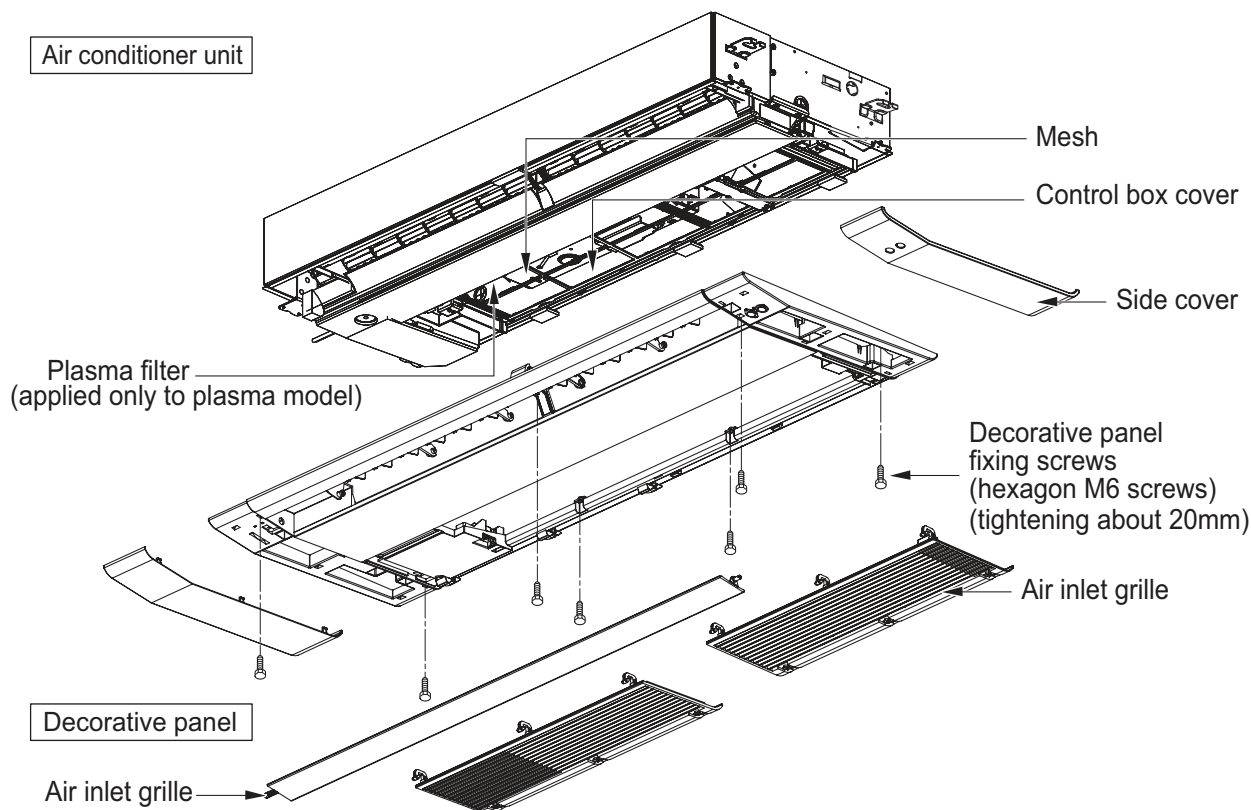


8. Installation

8.6 Installation of Decoration Panel(Grille Type)

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

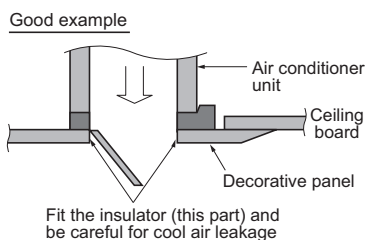
1. Open the air outlet vane, and extract side covers.
2. Remove the air inlet panel from the decoration panel.
3. Hook decoration panel to indoor unit, using hooks attached at the backside of both side of decoration panel.
4. Arrange wires not to get caught between decoration panel and indoor unit.
5. Screw the fixing screws. (TU Chassis : 6 screws / TT Chassis : 7 screws)
6. Connect the vane motor connector and display connector. (Plasma connector for plasma model)
7. Install the air inlet panel (including the air filter) and side covers.



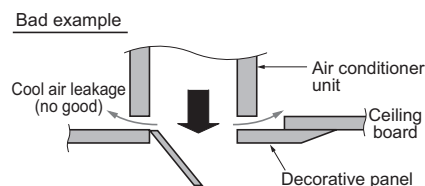
⚠ CAUTION

- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.

Good case



Bad case

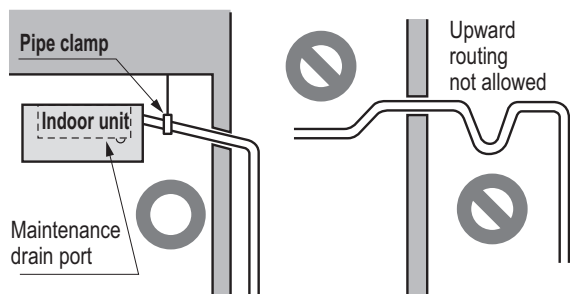


8. Installation

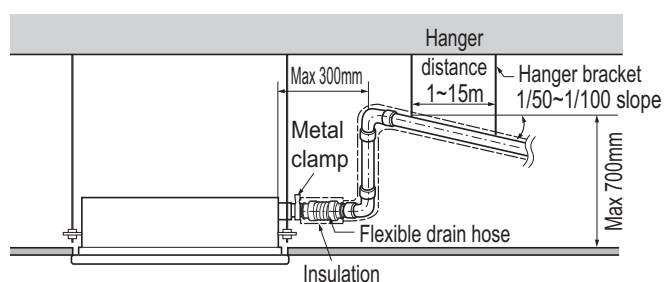
8.7 Indoor Unit Drain Piping

8.7.1 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.

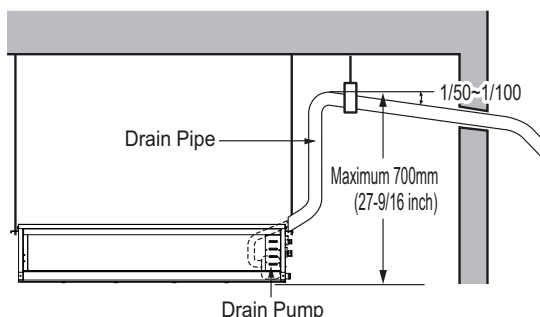


※ According to type of indoor unit, external appearance could be different.

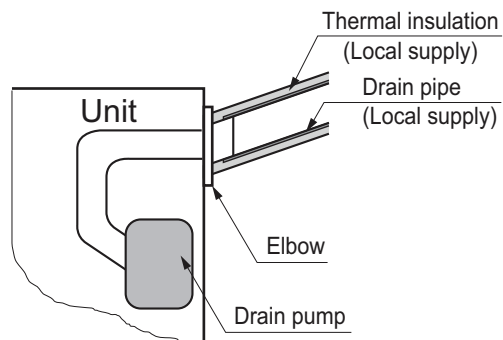


※ According to type of indoor unit, external appearance could be different.

- 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.



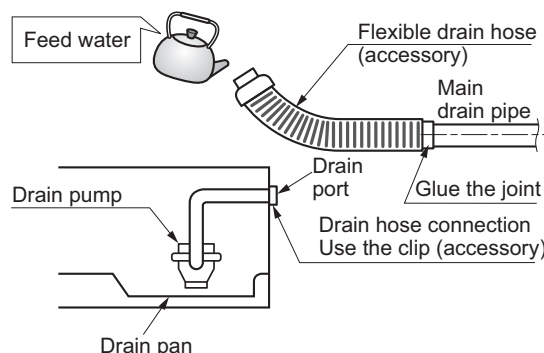
8. Installation

8.7.2 Method of Drainage test

◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

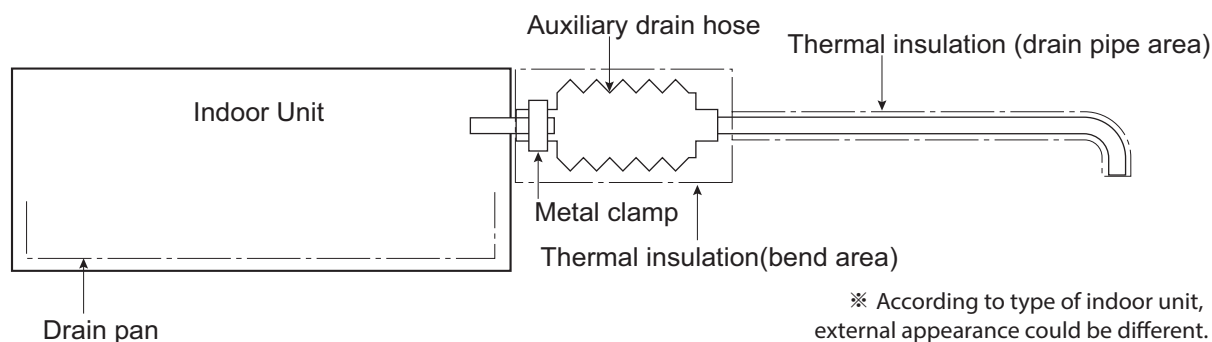
1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is 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.

8.7.3 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.

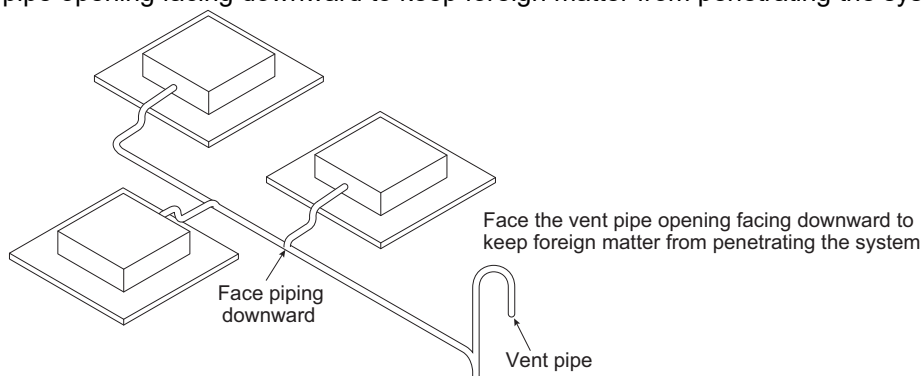


⚠ CAUTION

- 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.

8.7.4 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	AMNH05GTRA0 [MT06AH NR0] AMNH07GTRA0 [MT08AH NR0] ATNH09GRLE2 [CT09 NR2] ATNH12GRLE2 [CT12 NR2] ATNH18GQLE2 [CT18 NQ2]
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
Air purifying	Triple filter (Deodorizing)	X
	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	X
	High ceiling operation*	O
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	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	X
	Auto Elevation Grille	O
Special Functions	Wi-Fi	X
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
Network Solution(LGAP)		O

Note

1. O : Applied, X : Not applied

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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AMNH05GTRA0 [MT06AH NR0] AMNH07GTRA0 [MT08AH NR0] ATNH09GRLE2 [CT09 NR2] ATNH12GRLE2 [CT12 NR2] ATNH18GQLE2 [CT18 NQ2]
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	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 ₂ 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	-	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. 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	ATNH24GPLE2 [CT24 NP2], ATNH30GPLE2 [UT30 NP2] ATNH36GNLE2 [UT36 NN2], ATNH42GMLE2 [UT42 NM2] ATNH48GMLE2 [UT48 NM2], ATNH60GMLE2 [UT60 NM2]
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
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	PTPKM0
	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	X
	High ceiling operation*	O
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	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	X
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
Network Solution(LGAP)		O

Note

1. O : Applied, X : Not applied

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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ATNH24GPLE2 [CT24 NP2] ATNH30GPLE2 [UT30 NP2] ATNH36GNLE2 [UT36 NN2] ATNH42GMLE2 [UT42 NM2] ATNH48GMLE2 [UT48 NM2] ATNH60GMLE2 [UT60 NM2]
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	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	-	X
	CO ₂ 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	-	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. 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				AMNH05GTRA0 [MT06AH NR0]	AMNH07GTRA0 [MT08AH NR0]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Nom / Max		W	10 / 20 / 20	10 / 20 / 20
Running Current			A	0.4	0.4
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	570 × 214 × 570	570 × 214 × 570
		W x H x D	inch	22-7/16 x 8-7/16 x 22-7/16	22-7/16 x 8-7/16 x 22-7/16
Net Weight	Body		kg (lbs)	14.0 (30.9)	14.0 (30.9)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 8 x 18) x 1	(2 x 8 x 18) x 1
	Face Area		m ² (ft ²)	0.22 (2.40)	0.22 (2.40)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	7.5 / 6.0 / 5.0	7.5 / 6.0 / 5.0
		H / M / L	ft ³ /min	265 / 212 / 177	265 / 212 / 177
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43 x 1	43 x 1
Sound Pressure Level		H / M / L	dB(A)	31 / 27 / 24	31 / 27 / 24
Sound Power Level		Max.	dB(A)	48	48
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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UQC	PT-UQC
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	700 × 22 × 700	700 × 22 × 700
		W x H x D	inch	27-9/16 x 7/8 x 27-9/16	27-9/16 x 7/8 x 27-9/16
Net weight			kq (lbs)	3.0 (6.6)	3.0 (6.6)

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

Model Name				ATNH09GRLE2 [CT09 NR2]	ATNH12GRLE2 [CT12 NR2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Nom / Max		W	10 / 20 / 20	10 / 20 / 20
Running Current			A	0.4	0.4
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	570 × 214 × 570	570 × 214 × 570
		W x H x D	inch	22-7/16 x 8-7/16 x 22-7/16	22-7/16 x 8-7/16 x 22-7/16
Net Weight	Body		kg (lbs)	14.0 (30.9)	14.0 (30.9)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 8 x 18) x 1	(2 x 8 x 18) x 1
	Face Area		m ² (ft ²)	0.22 (2.40)	0.22 (2.40)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	8.5 / 7.0 / 6.0	9.5 / 8.0 / 7.0
		H / M / L	ft ³ /min	300 / 265 / 230	336 / 283 / 230
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43 x 1	43 x 1
Sound Pressure Level		H / M / L	dB(A)	36 / 33 / 30	38 / 35 / 32
Sound Power Level		Max.	dB(A)	48	51
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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UQC	PT-UQC
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	700 × 22 × 700	700 × 22 × 700
		W x H x D	inch	27-9/16 x 7/8 x 27-9/16	27-9/16 x 7/8 x 27-9/16
	Net weight		kg (lbs)	3.0 (6.6)	3.0 (6.6)

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

Model Name				ATNH18GQLE2 [CT18 NQ2]	ATNH24GPLE2 [CT24 NP2]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
Power Input			W	10 / 30 / 40	20 / 50 / 60	
Running Current			A	0.4	0.6	
Casing Color			-	-	-	
Dimensions	Body	W x H x D	mm	570 × 256 × 570	840 × 204 × 840	
		W x H x D	inch	22-7/16 x 10-3/32 x 22-7/16	33-1/16 x 8-1/32 x 33-1/16	
Net Weight	Body		kg (lbs)	15.5 (34.2)	20.5 (45.2)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 10 x 18) x 1	(2 x 8 x 19) x 1	
	Face Area		m ² (ft ²)	0.28 (3.00)	0.35 (3.77)	
Fan	Type		-	Turbo Fan	Turbo Fan	
	Air Flow Rate	H / M / L	m ³ /min	13.0 / 12.0 / 11.0	17.0 / 15.0 / 13.0	
		H / M / L	ft ³ /min	459 / 424 / 353	600 / 530 / 459	
Fan Motor	Type	-		BLDC	BLDC	
	Output	W x No.		43 x 1	60 x 1	
Sound Pressure Level		H / M / L	dB(A)	41 / 39 / 36	38 / 36 / 34	
Sound Power Level		Max.	dB(A)	55	57	
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)	Ø 6.35 (1/4)*
	Gas		mm(inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)	Ø 12.7 (1/2)*
	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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)	
Decoration Panel	Model Name		-	PT-UQC	PT-UMC(1)	
	Casing Color		-	Morning Fog	Morning Fog	
	Dimensions	W x H x D	mm	700 × 22 × 700	950 × 25 × 950	
		W x H x D	inch	27-9/16 x 7/8 x 27-9/16	37-13/32 x 31/32 x 37-13/32	
Net weight			kg (lbs)	3.0 (6.6)	5.0 (11.0)	

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

2. Specifications

ModelName				ATNH30GPLE2 [UT30 NP2]	ATNH36GNLE2 [UT36 NN2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Nom / Max		W	30 / 70 / 80	40 / 130 / 140
Running Current			A	0.6	0.6
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	840 × 204 × 840	840 × 246 × 840
		W x H x D	inch	33-1/16 x 8-1/32 x 33-1/16	33-1/16 x 9-11/16 x 33-1/16
Net Weight	Body		kg (lbs)	20.5 (45.2)	22.3 (49.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 8 x 19) x 1	(2 x 10 x 19) x 1
	Face Area		m ² (ft ²)	0.35 (3.77)	0.44 (4.71)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	19.0 / 17.0 / 15.0	24.0 / 22.0 / 19.0
		H / M / L	ft ³ /min	671 / 600 / 530	848 / 777 / 671
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	60 x 1	124 x 1
Sound Pressure Level		H / M / L	dB(A)	40 / 37 / 35	43 / 40 / 37
Sound Power Level		Max.	dB(A)	57	62
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UMC(1)	PT-UMC(1)
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	950 × 25 × 950	950 × 25 × 950
		W x H x D	inch	37-13/32 x 31/32 x 37-13/32	37-13/32 x 31/32 x 37-13/32
	Net weight		kg (lbs)	5.0 (11.0)	5.0 (11.0)

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

ModelName				ATNH42GMLE2 [UT42 NM2]	ATNH48GMLE2 [UT48 NM2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Nom / Max		W	70 / 190 / 210	80 / 190 / 210
Running Current			A	1.0	1.0
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	840 × 288 × 840	840 × 288 × 840
		W x H x D	inch	33-1/16 x 11-11/32 x 33-1/16	33-1/16 x 11-11/32 x 33-1/16
Net Weight	Body		kg (lbs)	24.6 (54.2)	24.6 (54.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 12 x 21) x 1	(2 x 12 x 21) x 1
	Face Area		m ² (ft ²)	0.53 (5.65)	0.53 (5.65)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	30.0 / 28.0 / 26.0	34.0 / 32.0 / 30.0
		H / M / L	ft ³ /min	1,060 / 989 / 918	1,201 / 1,130 / 1,060
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	124 x 1	124 x 1
Sound Pressure Level		H / M / L	dB(A)	46 / 44 / 43	49 / 47 / 45
Sound Power Level		Max.	dB(A)	65	66
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UMC(1)	PT-UMC(1)
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	950 × 25 × 950	950 × 25 × 950
		W x H x D	inch	37-13/32 x 31/32 x 37-13/32	37-13/32 x 31/32 x 37-13/32
	Net weight		kg (lbs)	5.0 (11.0)	5.0 (11.0)

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

ModelName				ATNH60GMLE2 [UT60 NM2]	
Power Supply			V, Ø, Hz	220-240, 1, 50	
				220, 1, 60	
Power Input	Min / Nom / Max		W	80 / 190 / 210	
Running Current			A	1.0	
Casing Color			-	-	
Dimensions	Body	W x H x D	mm	840 × 288 × 840	
		W x H x D	inch	33-1/16 x 11-11/32 x 33-1/16	
Net Weight	Body		kg (lbs)	24.6 (54.2)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 12 x 21) x 1	
	Face Area		m ² (ft ²)	0.53 (5.65)	
Fan	Type		-	Turbo Fan	
	Air Flow Rate	H / M / L	m ³ /min	34.0 / 32.0 / 30.0	
		H / M / L	ft ³ /min	1,201 / 1,130 / 1,060	
Fan Motor	Type		-	BLDC	
	Output		W x No.	124 x 1	
Sound Pressure Level		H / M / L	dB(A)	49 / 47 / 45	
Sound Power Level		Max.	dB(A)	66	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	
	Gas		mm(inch)	Ø 15.88 (5/8)	
	Drain (O.D. / I.D.)		mm	Ø 32.0 / 25.0	
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Power and Communication Cable (included Earth)			No. x mm ² (AWG)	4C x 0.75 (18)	
Decoration Panel	Model Name		-	PT-UMC(1)	
	Casing Color		-	Morning Fog	
	Dimensions	W x H x D	mm	950 × 25 × 950	
		W x H x D	inch	37-13/32 x 31/32 x 37-13/32	
	Net weight		kg (lbs)	5.0 (11.0)	

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

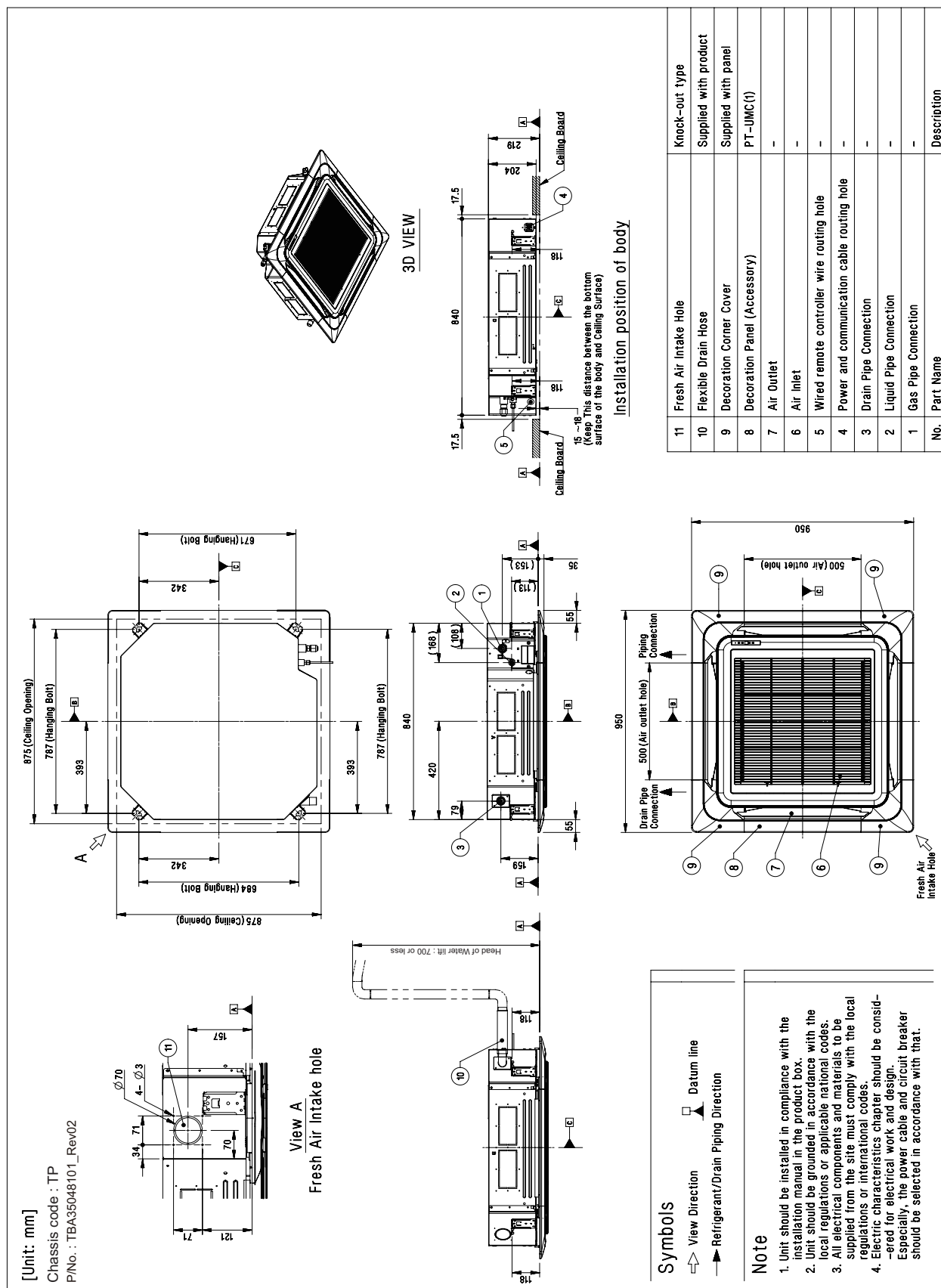
AMNH05GTRA0 [MT06AH NR0] / AMNH07GTRA0 [MT08AH NR0]
ATNH09GRLE2 [CT09 NR2] / ATNH12GRLE2 [CT12 NR2]



11	Fresh Air Intake Hole	Knock-out type
10	Flexible Drain Hose	Supplied with product
9	Decoration Corner Cover	Supplied with panel
8	Decoration Panel(Accessory)	PT-UOC
7	Air Outlet	-
6	Air Intake	-
5	Wired remote controller wire routing hole	-
4	Power and Communication cable routing hole	-
3	Drain Pipe Connection	-
2	Liquid Pipe Connection	-
1	Gas Pipe Connection	-
No.	Part Name	Description

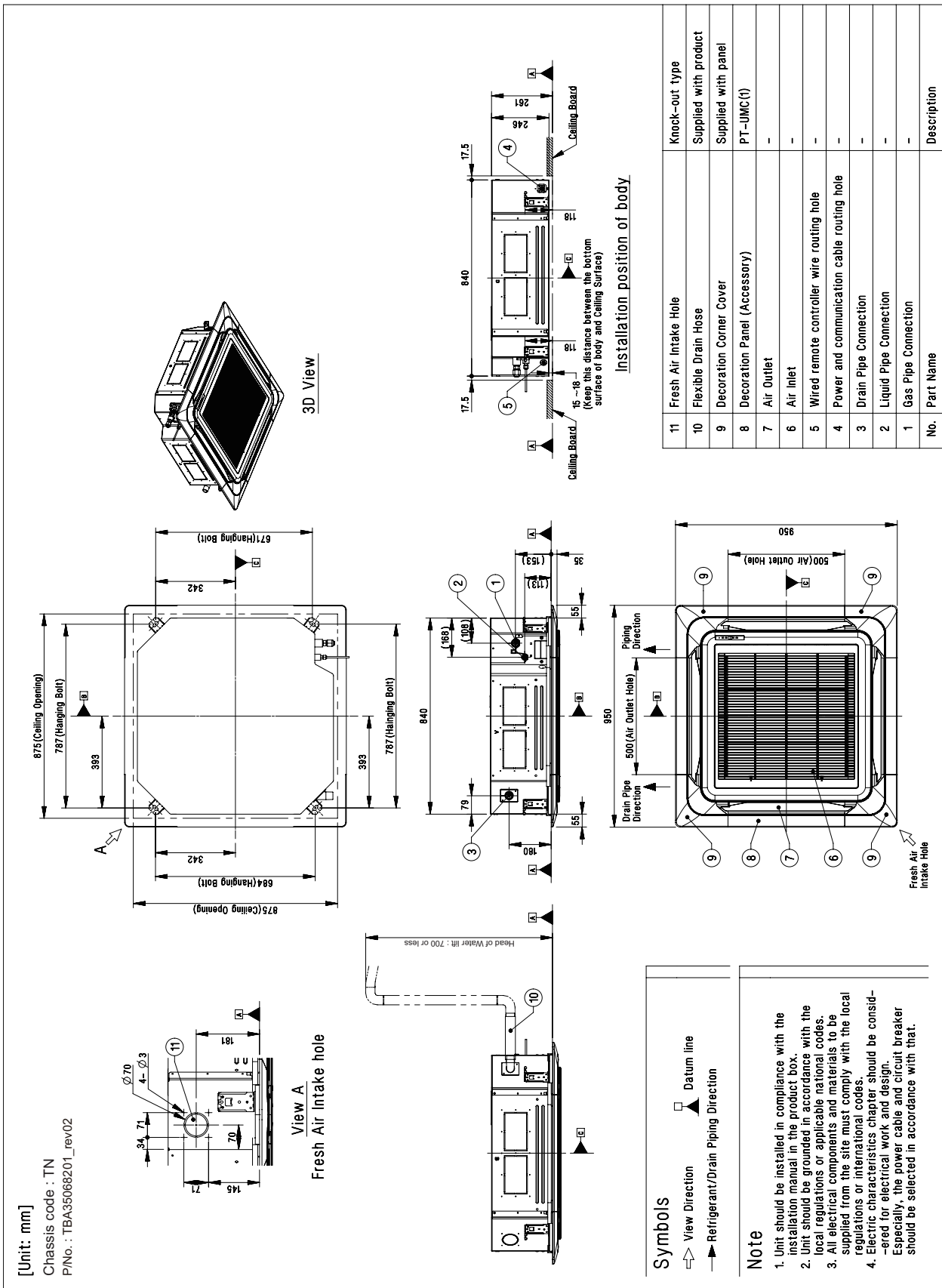
3. Dimensions

ATNH24GPLE2 [CT24 NP2] / ATNH30GPLE2 [UT30 NP2]



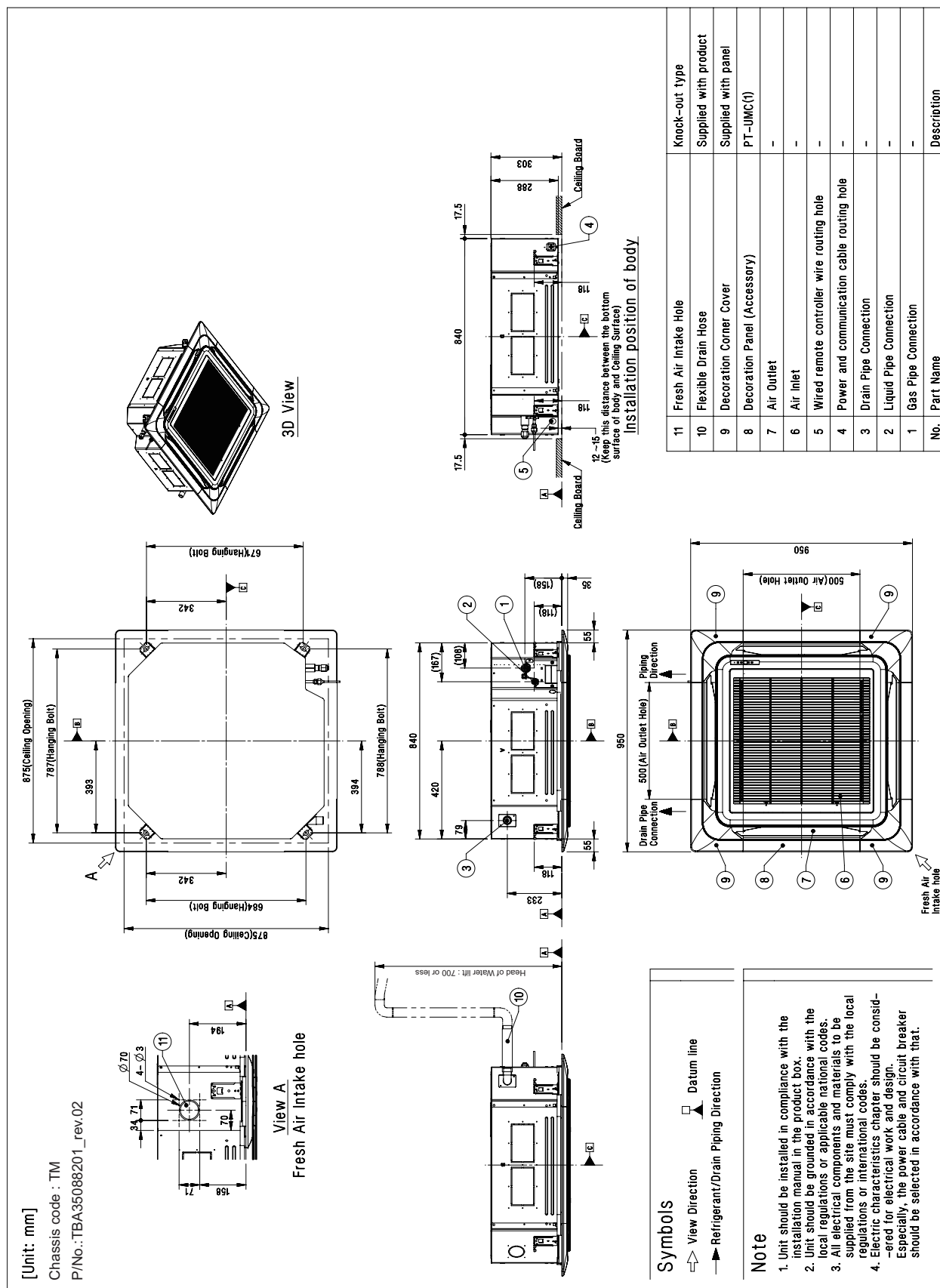
3. Dimensions

ATNH36GNLE2 [UT36 NN2]

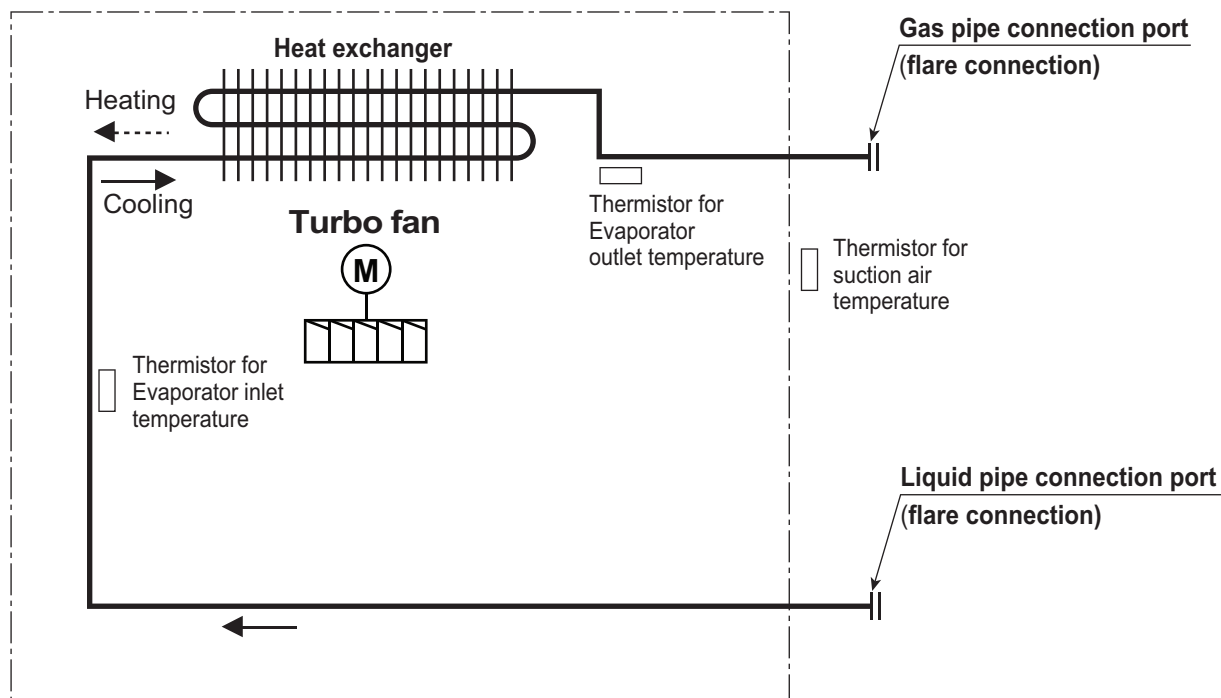


3. Dimensions

ATNH42GMLE2 [UT42 NM2] / ATNH48GMLE2 [UT48 NM2] / ATNH60GMLE2 [UT60 NM2]



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

◆ Refrigerant pipe connection port diameters

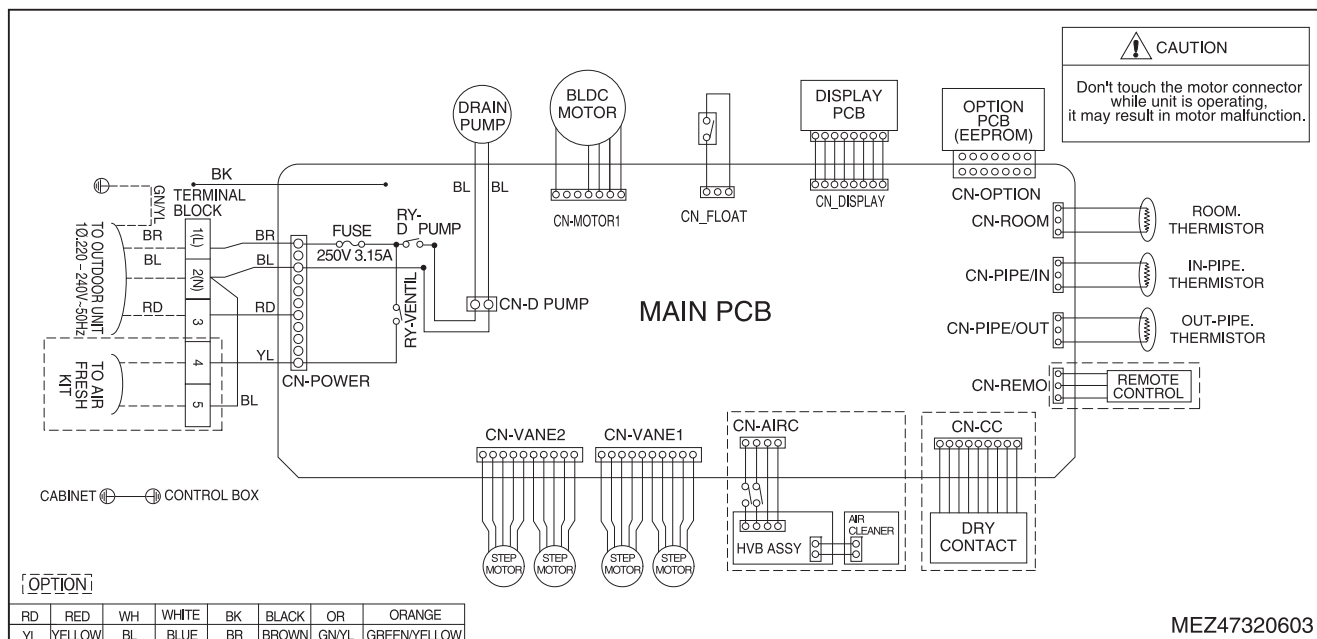
[Unit : mm]

Model	Gas	Liquid
AMNH05GTRA0 [MT06AH NR0] AMNH07GTRA0 [MT08AH NR0] ATNH09GRLE2 [CT09 NR2] ATNH12GRLE2 [CT12 NR2]	Ø9.52	Ø6.35
ATNH18GQLE2 [CT18 NQ2]	Ø12.7	
ATNH24GPLE2 [CT24 NP2]	Ø15.88	Ø9.52
	*Ø12.7	*Ø6.35
ATNH30GPLE2 [UT30 NP2] ATNH36GNLE2 [UT36 NN2] ATNH42GMLE2 [UT42 NM2] ATNH48GMLE2 [UT48 NM2] ATNH60GMLE2 [UT60 NM2]	Ø15.88	Ø9.52

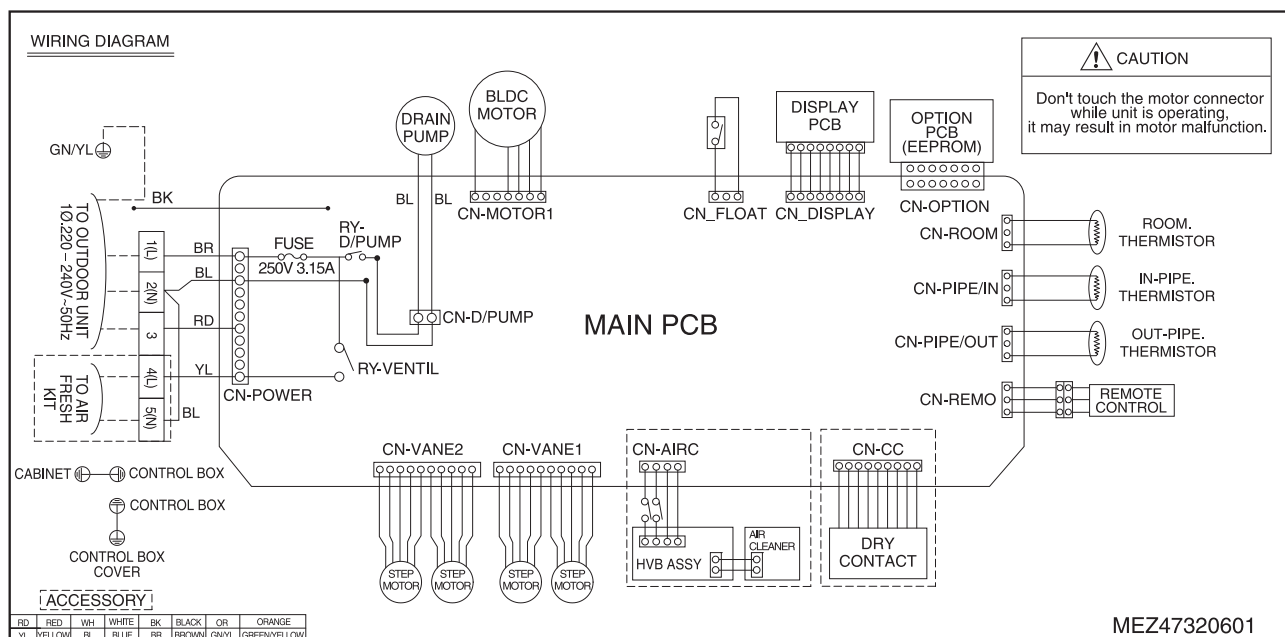
* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

5. Wiring Diagrams

■ Models: AMNH-TR [MT-AH NR0] / ATNH-RL [CT- NR2] / ATNH-QL [CT- NQ2]



■ Models : ATNH-PL [CT- NP2] / ATNH-NL [CT- NN2] / ATNH-ML [CT- NM2]

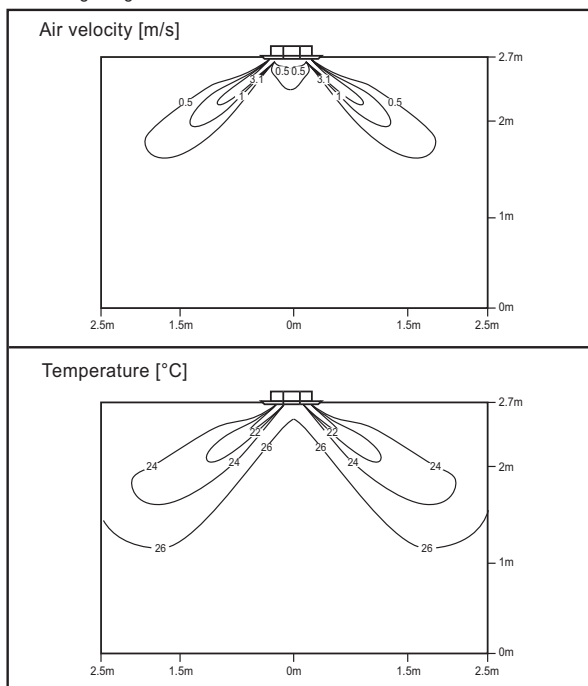


6. Air flow and temperature distributions (reference data)

■ Model : AMNH05GTRA0 [MT06AH NR0], AMNH07GTRA0 [MT08AH NR0]

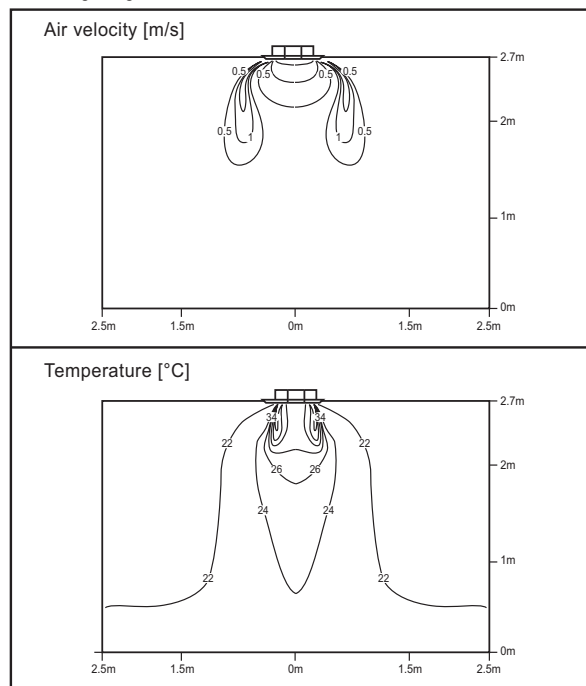
Cooling

Discharge angle: 40°



Heating

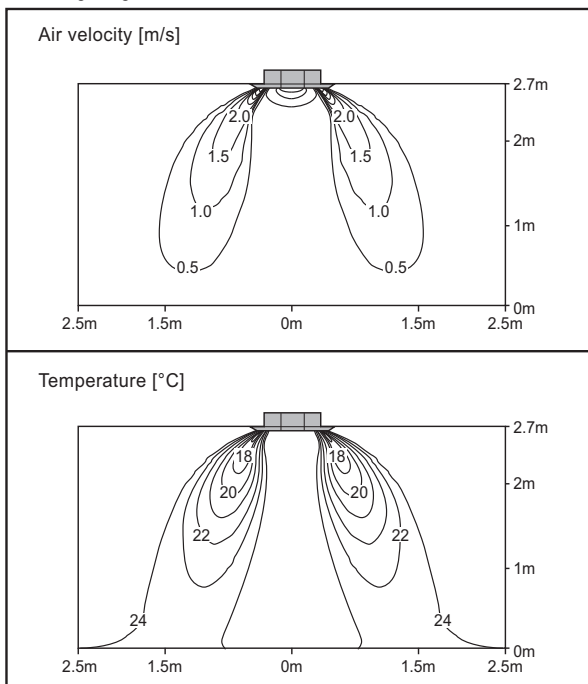
Discharge angle: 50°



■ Model : ATNH09GRLE2 [CT09 NR2], ATNH12GRLE2 [CT12 NR2]

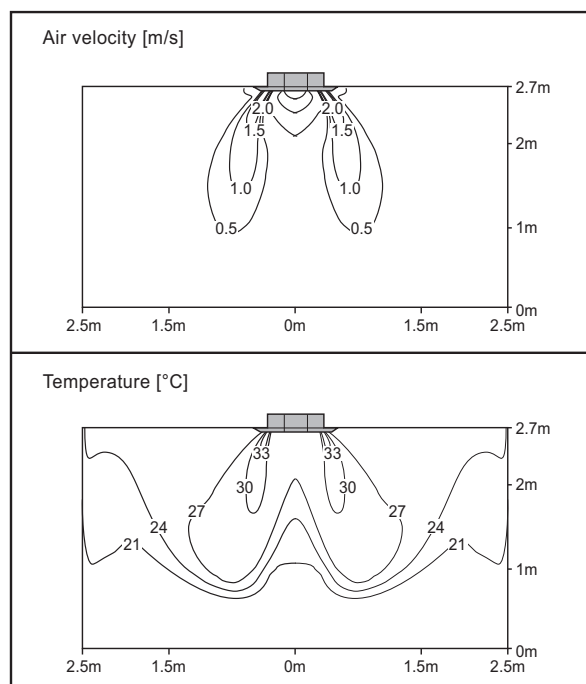
Cooling

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.

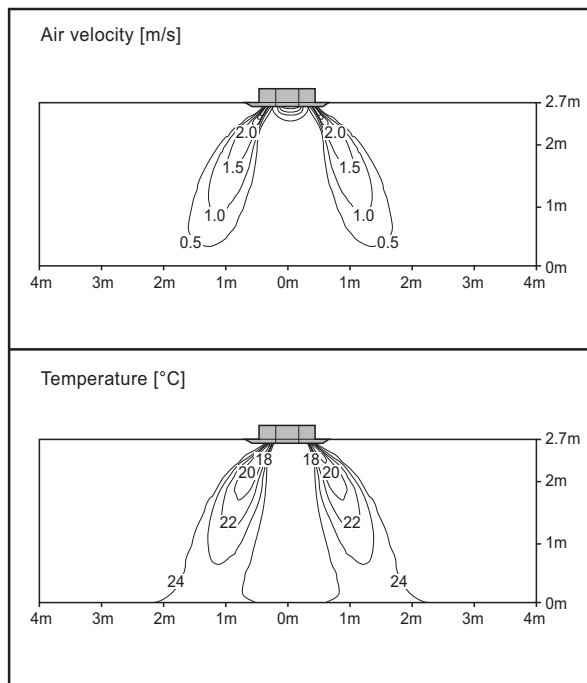
6. Air flow and temperature distributions (reference data)

[Unit : mm]

■ Model : ATNH18GQLE2 [CT18 NQ2]

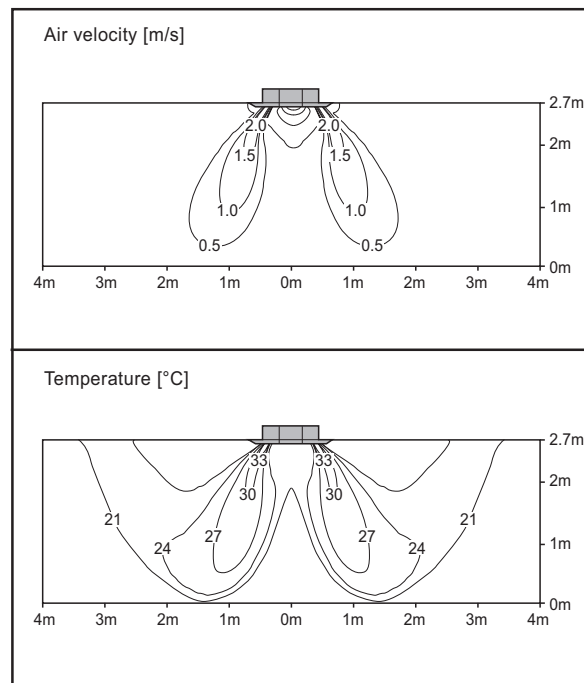
Cooling

Discharge angle: 40°



Heating

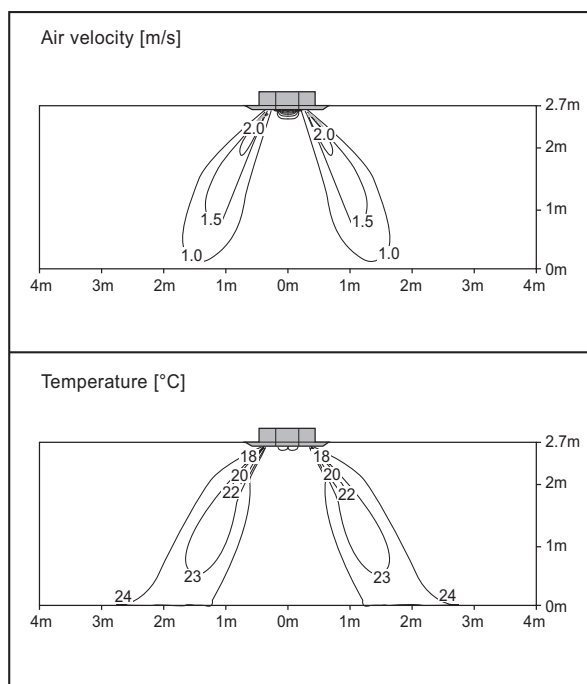
Discharge angle: 50°



■ Model : ATNH24GPLE2 [CT24 NP2]

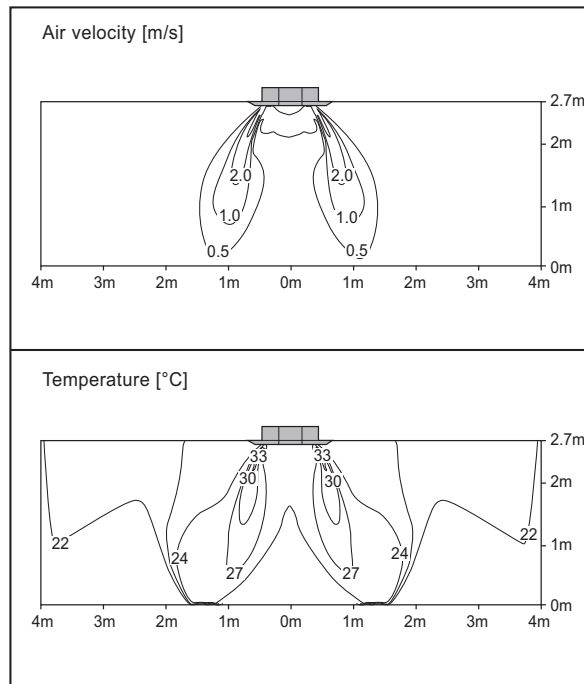
Cooling

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.

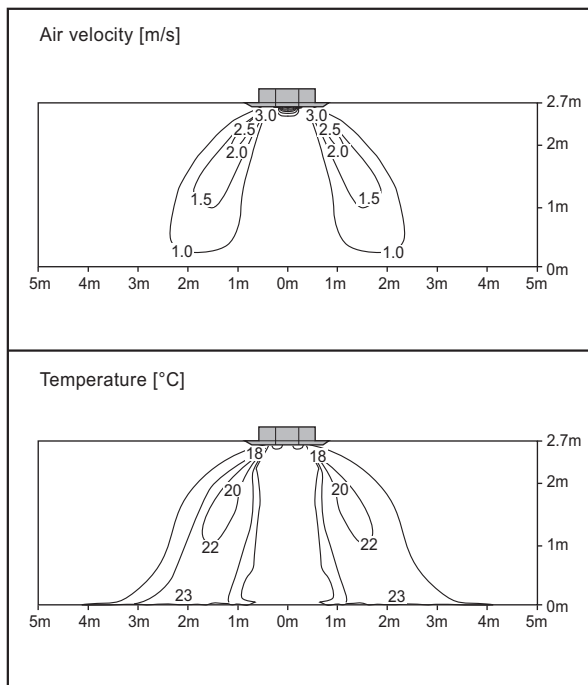
6. Air flow and temperature distributions (reference data)

[Unit : mm]

■ Model : ATNH30GPLE2 [UT30 NP2]

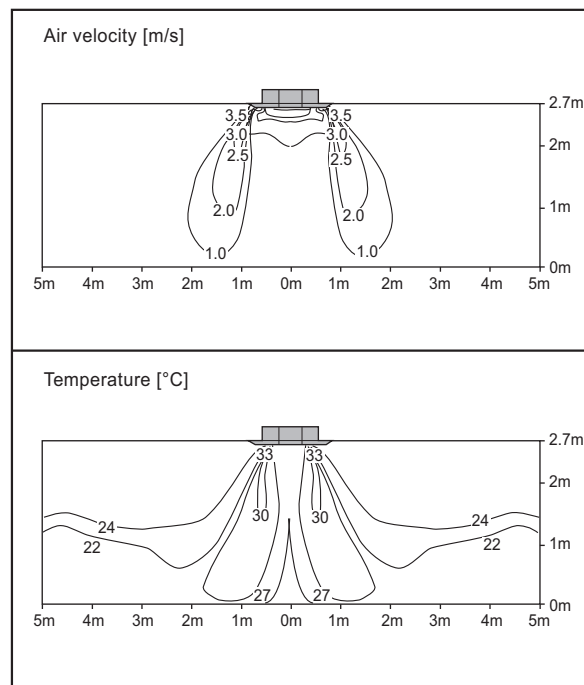
Cooling

Discharge angle: 40°



Heating

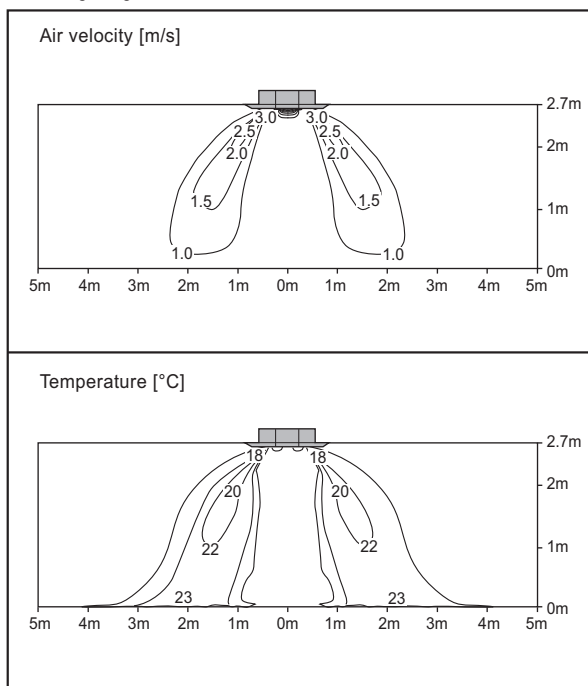
Discharge angle: 50°



■ Model : ATNH36GNLE2 [UT36 NN2]

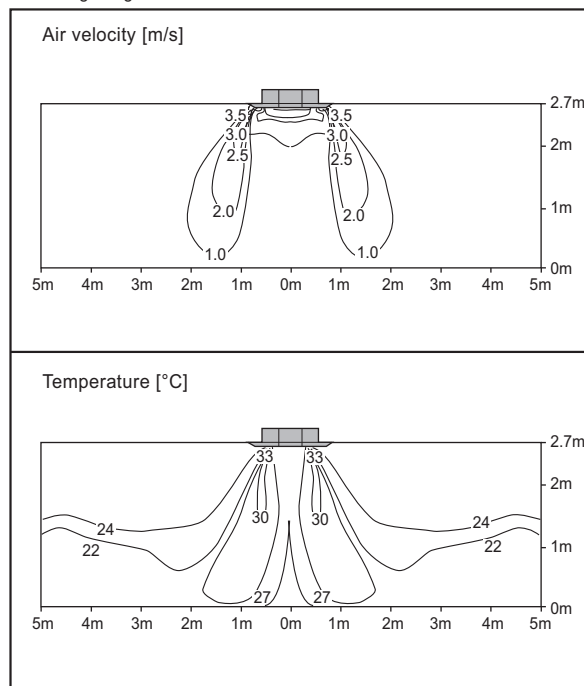
Cooling

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.

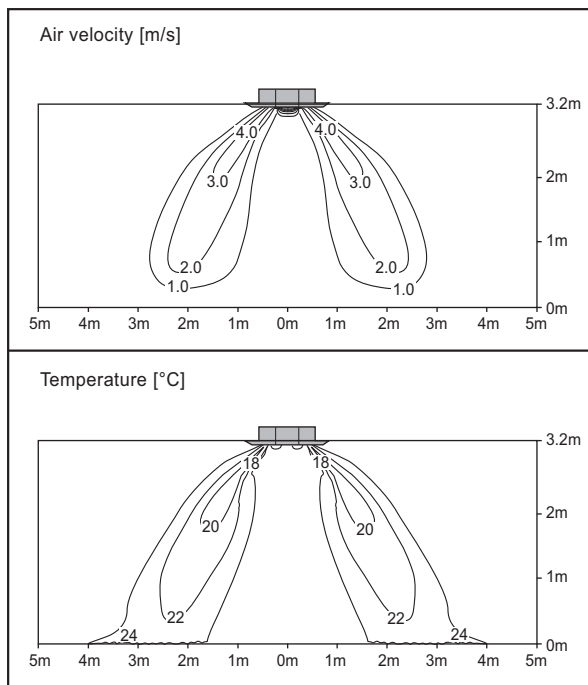
6. Air flow and temperature distributions (reference data)

[Unit : mm]

■ Model : ATNH42GMLE2 [UT42 NM2]

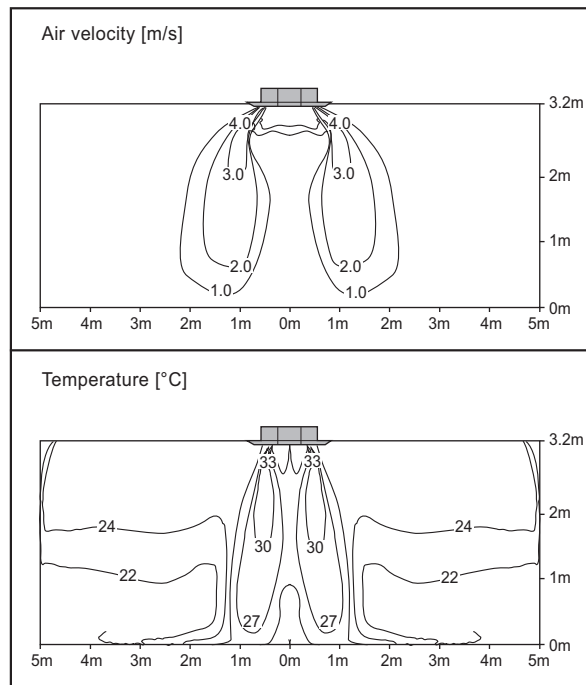
Cooling

Discharge angle: 40°



Heating

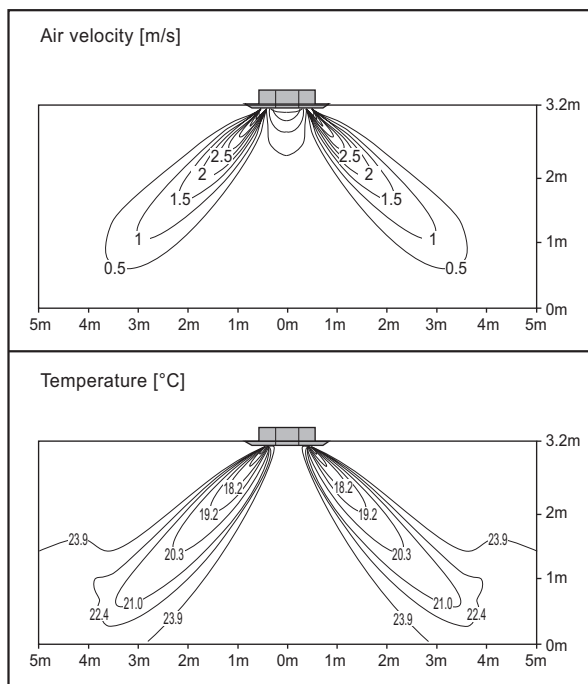
Discharge angle: 50°



■ Model : ATNH48GMLE2 [UT48 NM2], ATNH60GMLE2 [UT60 NM2]

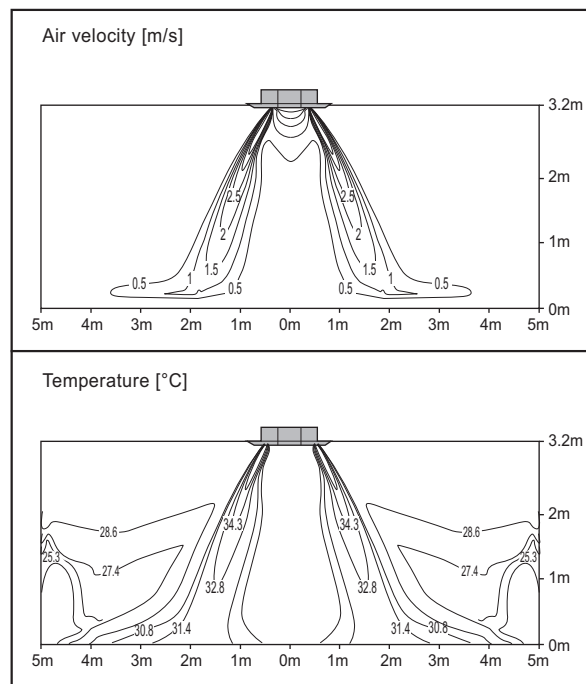
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



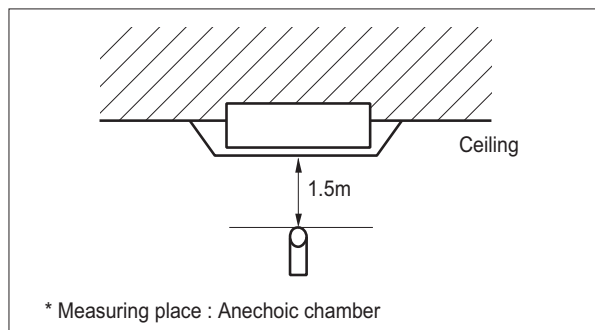
Note

- 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



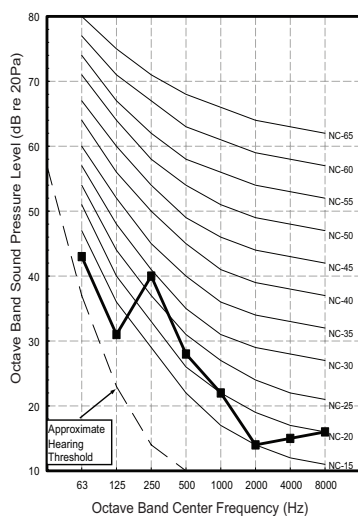
Note

- Sound measured at 1.5m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- 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.
- The operating conditions are assumed to be standard.

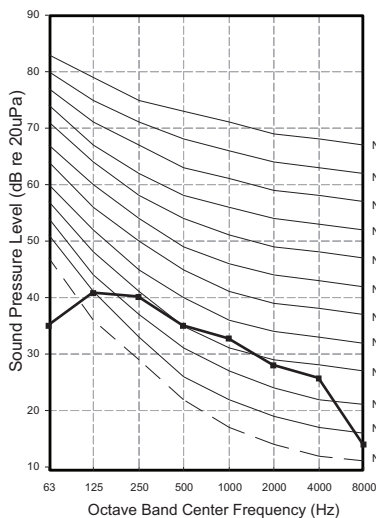
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AMNH05GTRA0 [MT06AH NR0]	31	27	24
AMNH07GTRA0 [MT08AH NR0]	31	27	24
ATNH09GRLE2 [CT09 NR2]	36	33	30
ATNH12GRLE2 [CT12 NR2]	38	35	32
ATNH18GQLE2 [CT18 NQ2]	41	39	36

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ATNH24GPLE2 [CT24 NP2]	38	36	34
ATNH30GPLE2 [UT30 NP2]	40	37	35
ATNH36GNLE2 [UT36 NN2]	43	40	37
ATNH42GMLE2 [UT42 NM2]	46	44	43
ATNH48GMLE2 [UT48 NM2]	49	47	45
ATNH60GMLE2 [UT60 NM2]	49	47	45

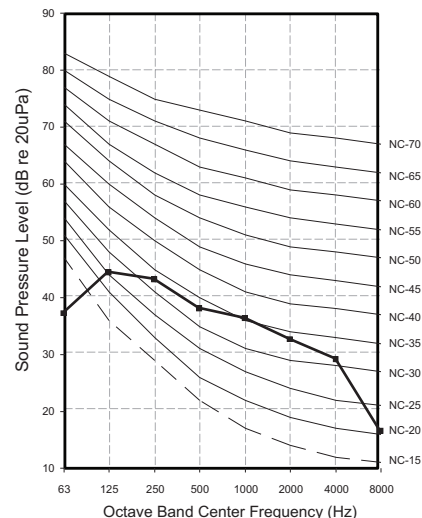
**AMNH05GTRA0 [MT06AH NR0]
AMNH07GTRA0 [MT08AH NR0]**



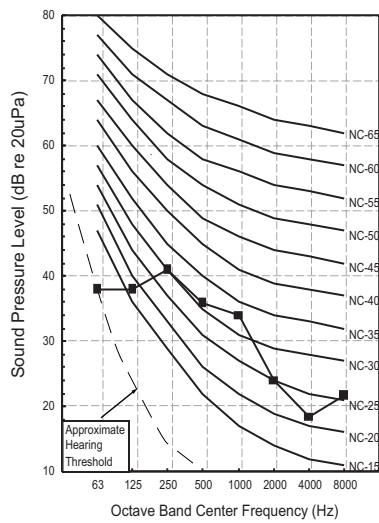
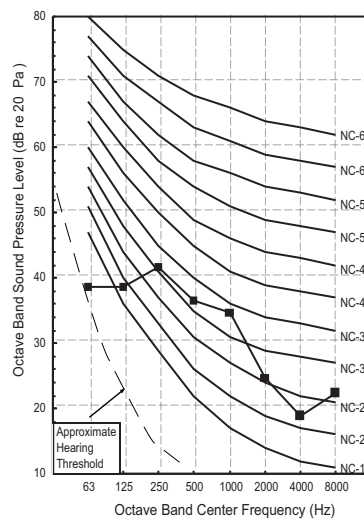
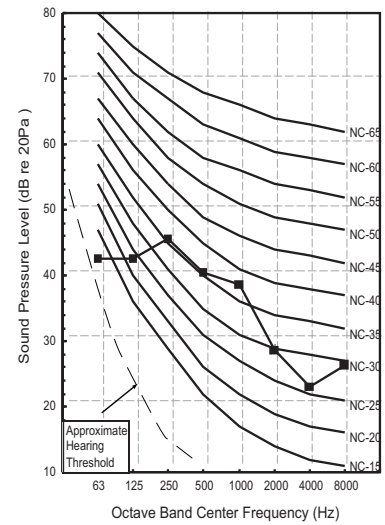
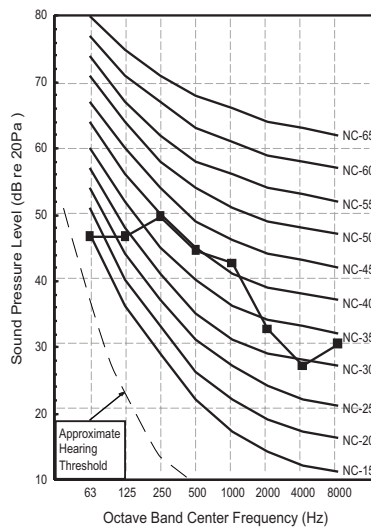
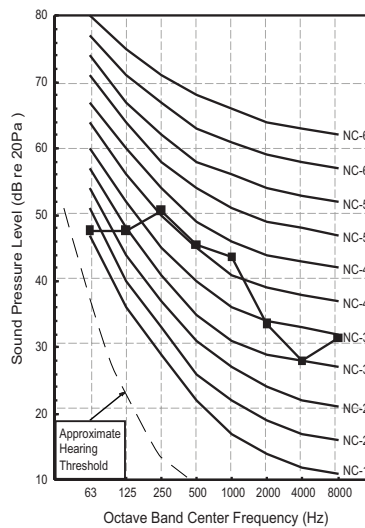
**ATNH09GRLE2 [CT09 NR2]
ATNH12GRLE2 [CT12 NR2]**



ATNH18GQLE2 [CT18 NQ2]



7. Sound levels

ATNH24GPLE2 [CT24 NP2]

ATNH30GPLE2 [UT30 NP2]

ATNH36GNLE2 [UT36 NN2]

ATNH42GMLE2 [UT42 NM2]

**ATNH48GMLE2 [UT48 NM2]
ATNH60GMLE2 [UT60 NM2]**


7. Sound levels

7.2 Sound power level

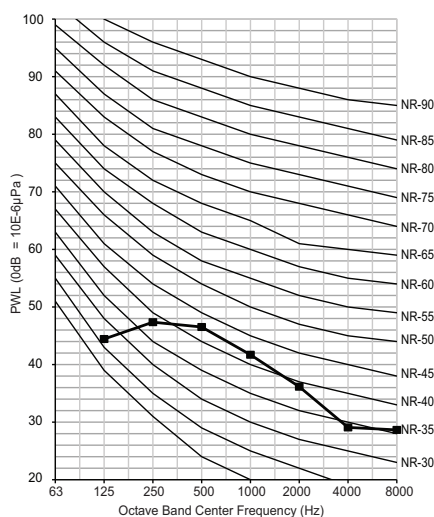
Note

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

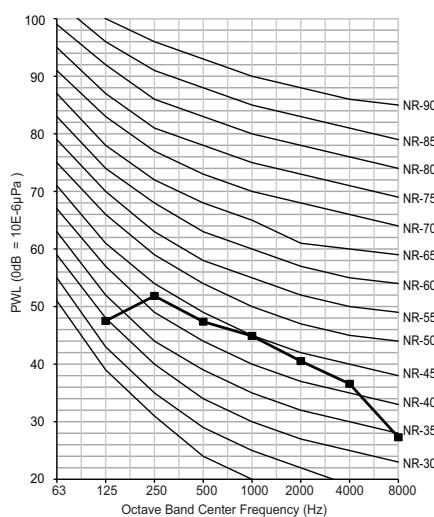
Model	Sound power level [dB(A)]
	H
AMNH05GTRA0 [MT06AH NR0]	48
AMNH07GTRA0 [MT08AH NR0]	48
ATNH09GRLE2 [CT09 NR2]	48
ATNH12GRLE2 [CT12 NR2]	51
ATNH18GQLE2 [CT18 NQ2]	55

Model	Sound power level [dB(A)]
	H
ATNH24GPLE2 [CT24 NP2]	57
ATNH30GPLE2 [UT30 NP2]	57
ATNH36GNLE2 [UT36 NN2]	62
ATNH42GMLE2 [UT42 NM2]	65
ATNH48GMLE2 [UT48 NM2]	66
ATNH60GMLE2 [UT60 NM2]	66

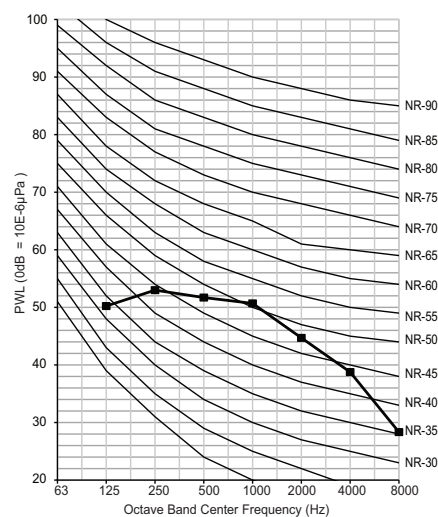
**AMNH05GTRA0 [MT06AH NR0]
AMNH07GTRA0 [MT08AH NR0]
ATNH09GRLE2 [CT09 NR2]**



ATNH12GRLE2 [CT12 NR2]

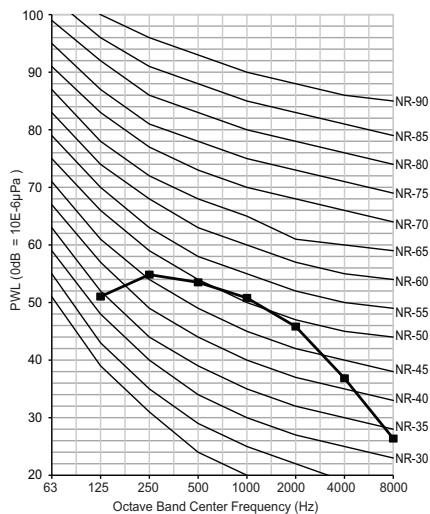


ATNH18GQLE2 [CT18 NQ2]

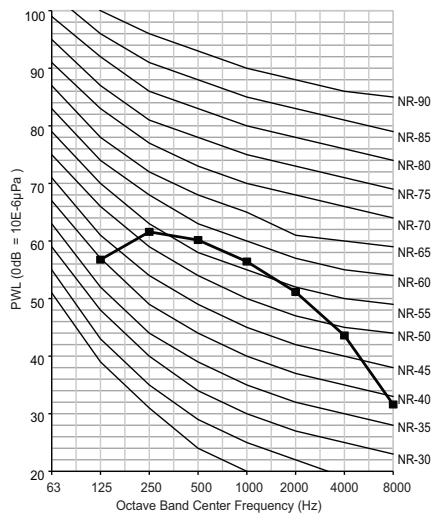


7. Sound levels

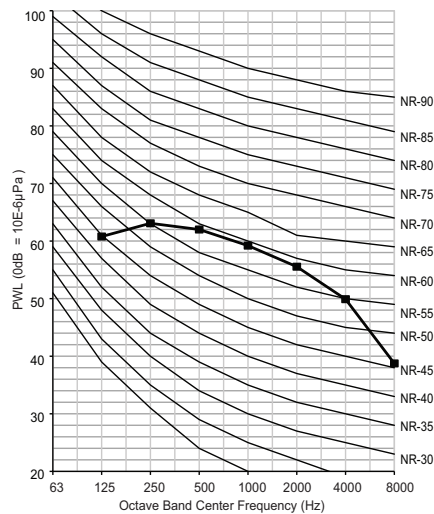
**ATNH24GPLE2 [CT24 NP2]
ATNH30GPLE2 [UT30 NP2]**



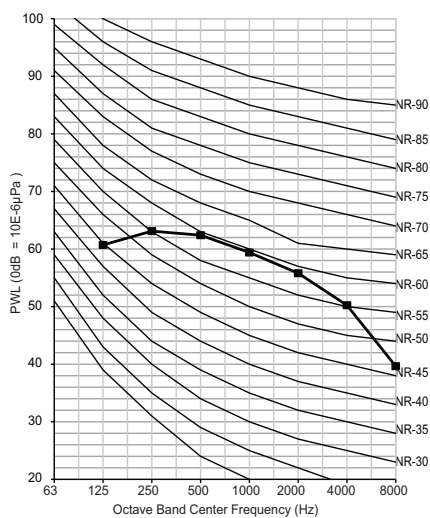
ATNH36GNLE2 [UT36 NN2]



ATNH42GMLE2 [UT42 NM2]

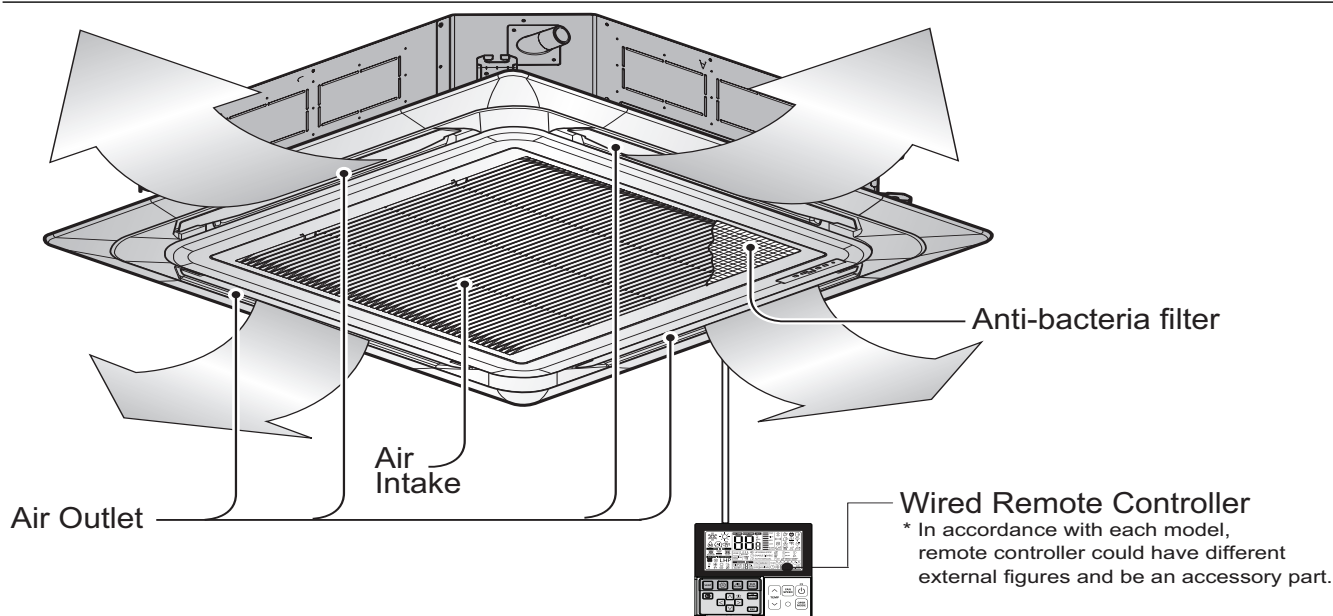


**ATNH48GMLE2 [UT48 NM2]
ATNH60GMLE2 [UT60 NM2]**



8. Installation

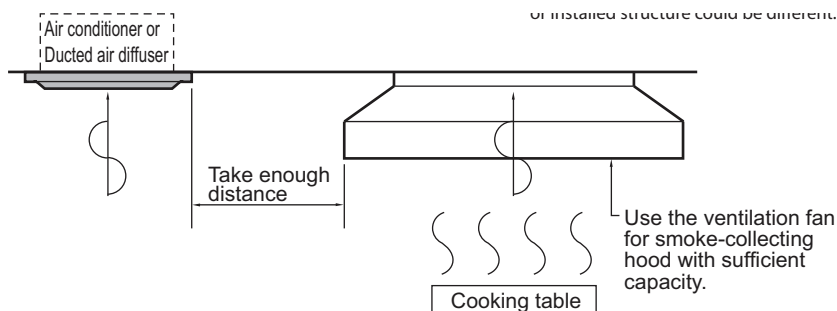
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation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



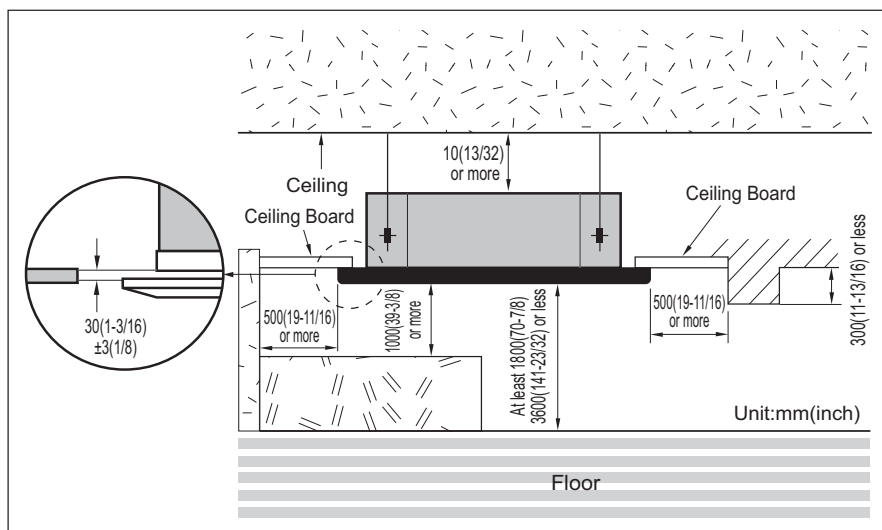
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

CAUTION

- If the temperature rise above 30℃ 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.

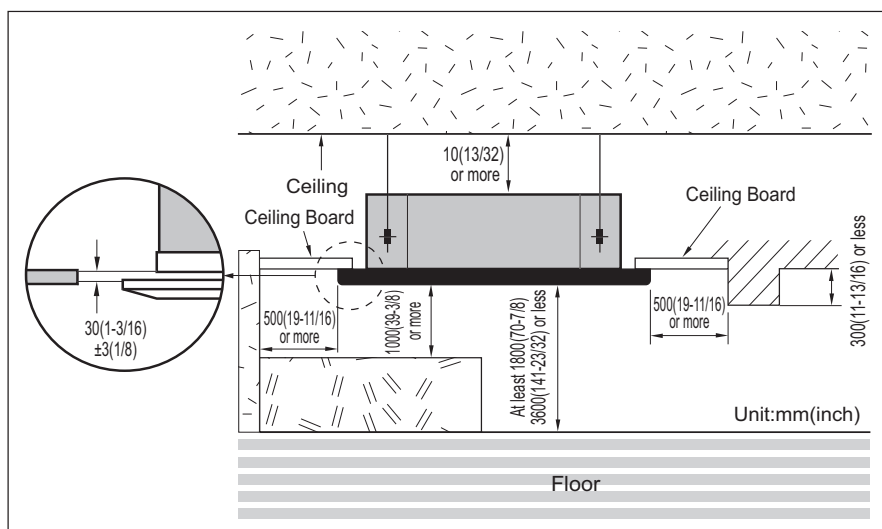
TQ/TR Chassis

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



TP Chassis

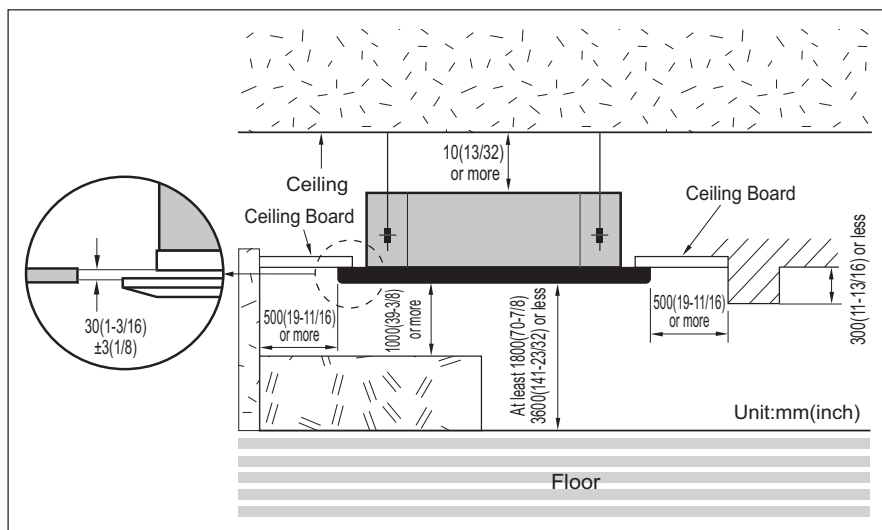
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



8. Installation

TM/TN Chassis

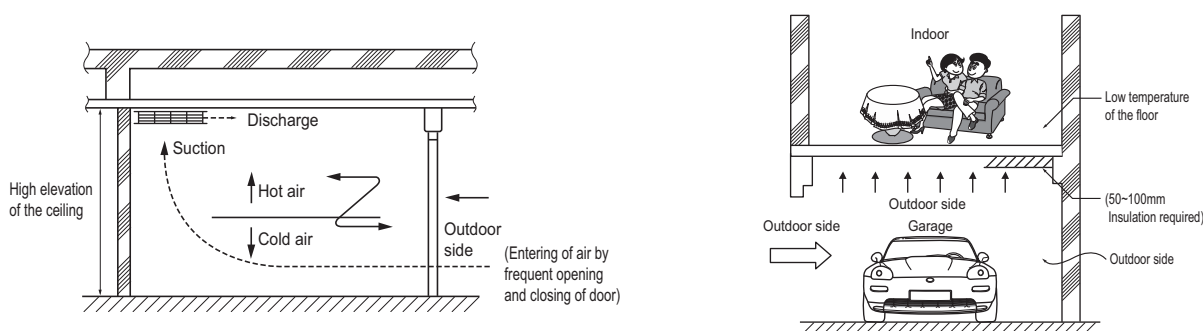
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



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.)

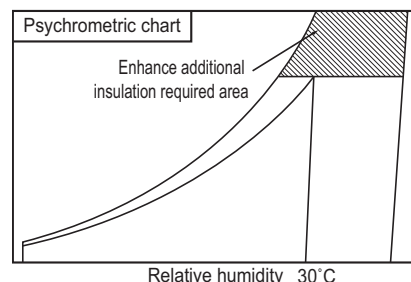
8. Installation

- 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.

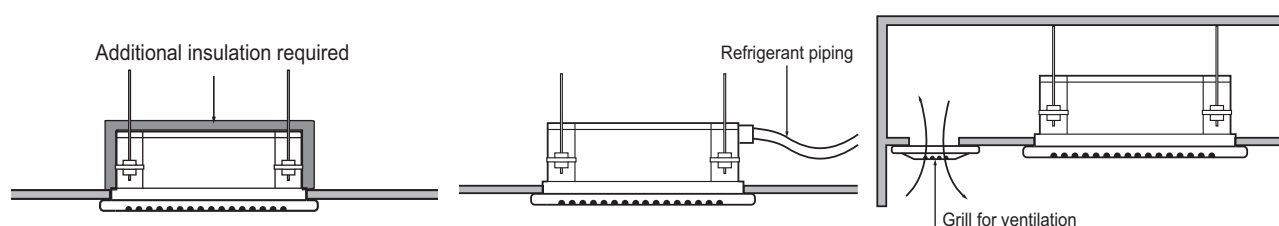
◆ In case of high temperature or humidity between the false ceiling and ceiling slab

- 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.

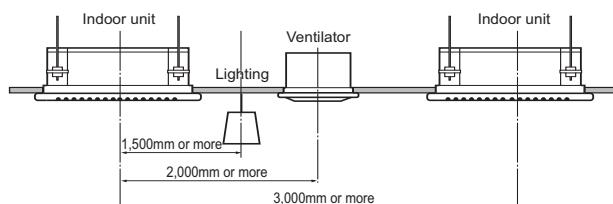


- Countermeasure method

- 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)



◆ In case of multiple indoor cassette units (recommended)



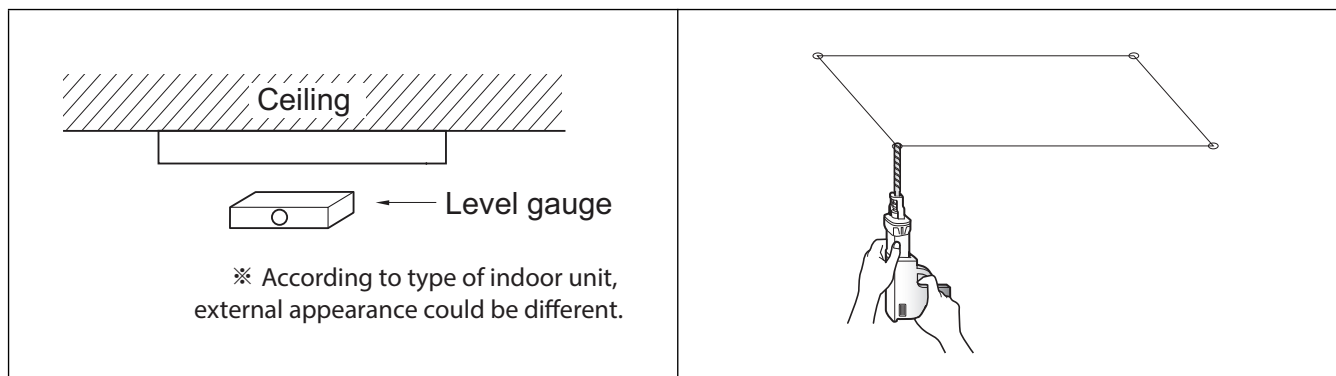
※ According to type of indoor unit, external appearance could be different.

8.3 Ceiling opening dimensions and hanging bolt location

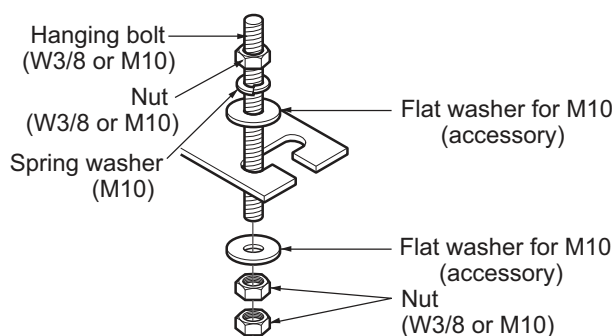
⚠ CAUTION

- 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.

8. Installation



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.

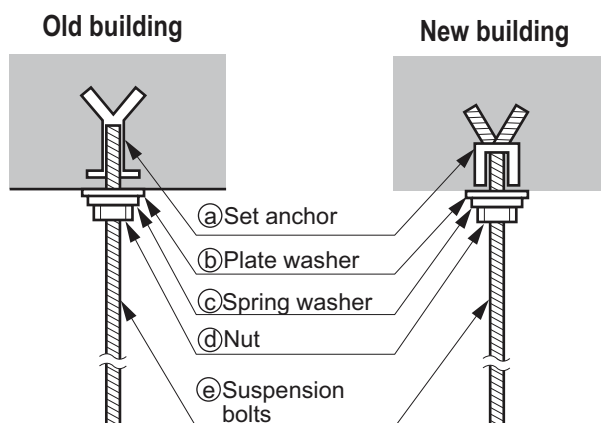


- The following parts are local purchasing.

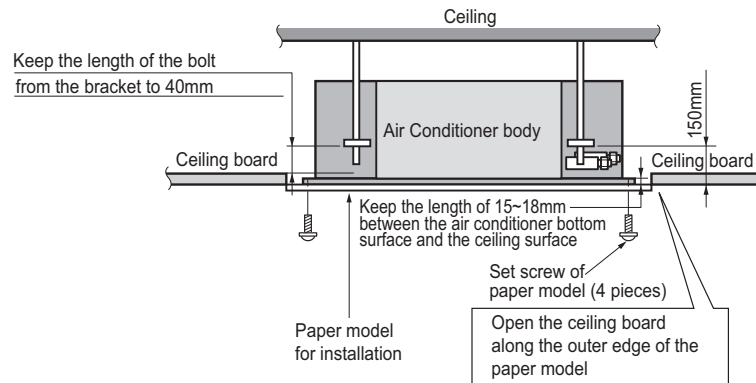
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

⚠ CAUTION

- Tighten the nut and bolt to prevent the unit from falling.

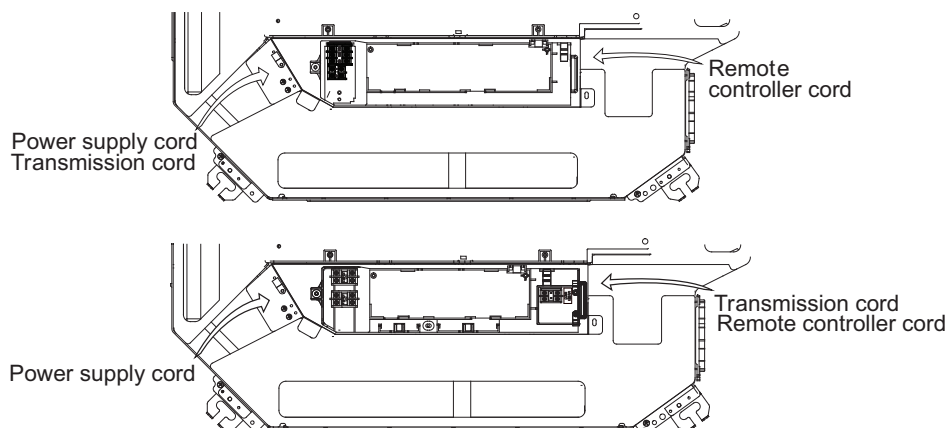


8. Installation



TQ/TR Chassis	TM/TN/TP Chassis

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.

8. Installation

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 and visually 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 0.75mm² 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

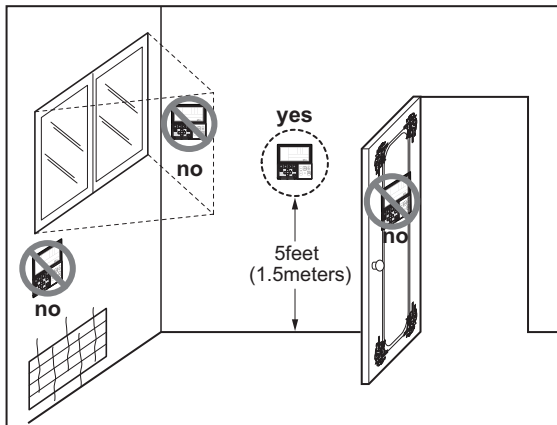
- Make sure that the screws of the terminal are fixed tightly.
 - The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (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

8.4.4 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.)

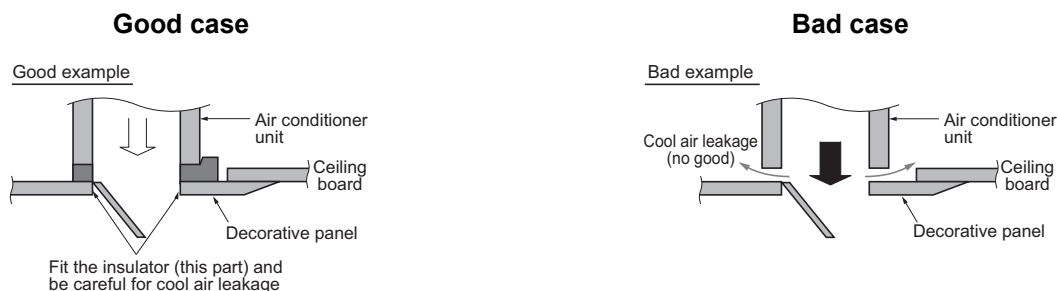
8. Installation

8.5 Installation of Decoration Panel

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

⚠ CAUTION

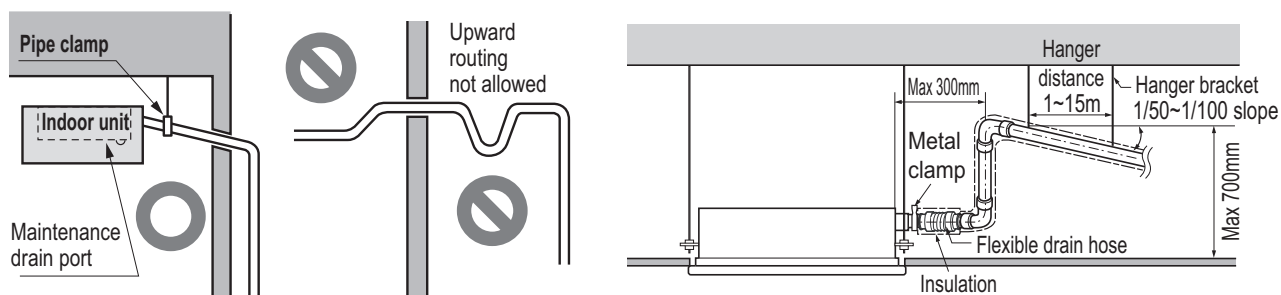
- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



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.



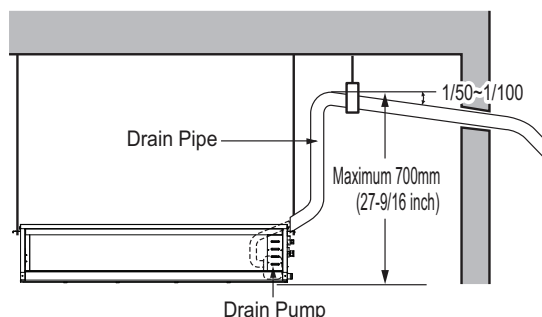
※ According to type of indoor unit, external appearance could be different.

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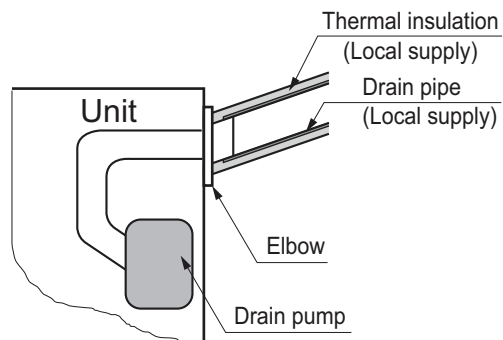
- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.

8. Installation

- Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).

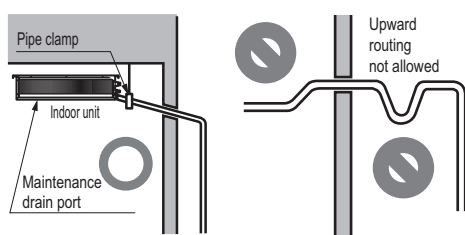


※ According to type of indoor unit, external appearance could be different.

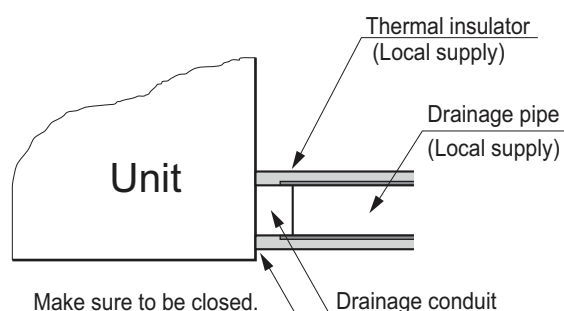


8.6.2 Drain pipe connection without drain pump

- 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 is 32 mm (1-1/4 inch).
 - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.
- 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)



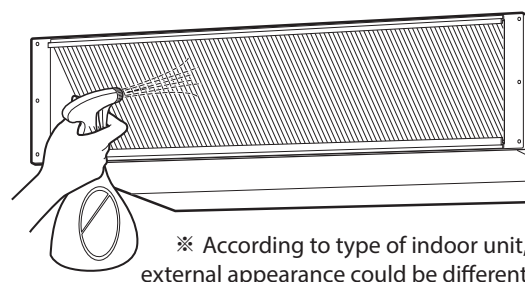
8. Installation

8.6.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

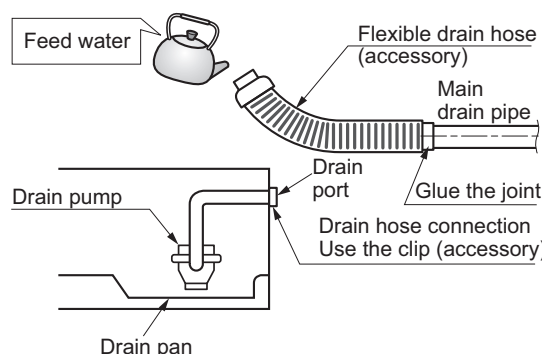
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

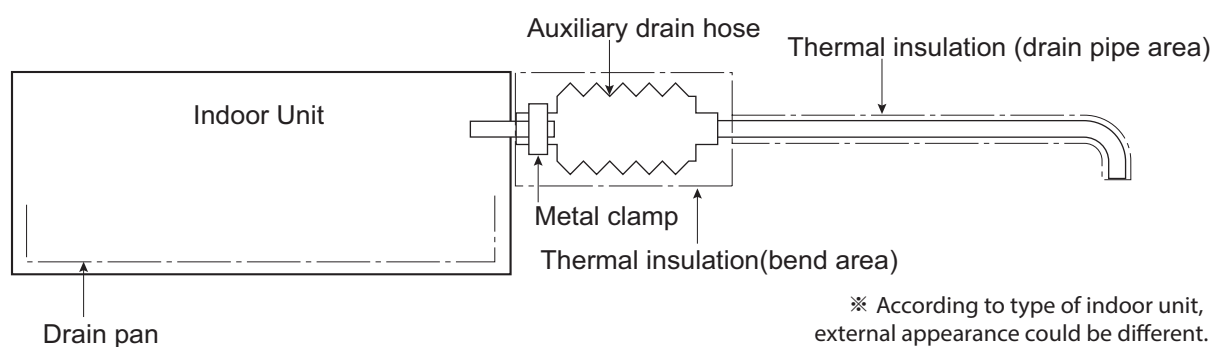
Use the following procedure to test the drain pump operation.

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.



8.6.4 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

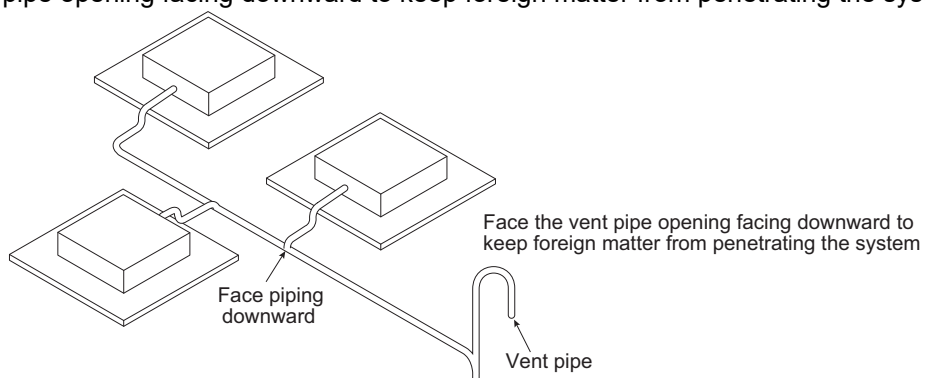
- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

8.6.5 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.

8. Installation

- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



MULTI/SINGLE

Indoor unit

Ceiling Mounted cassette 4-way(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

◆ List of function

Category	Functions	ATNW18GQLA0 [CT18 NQ4]
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
Air purifying	Triple filter (Deodorizing)	X
	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	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	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	X
	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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ATNW18GQLA0 [CT18 NQ4]
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	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 ₂ 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	-	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. 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	ATNW24GPLA0 [CT24 NP4] ATNW30GPLA0 [UT30 NP4]
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
Air purifying	Triple filter (Deodorizing)	X
	Air purifier (Plasma)	PTPKM0
	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	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	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	X
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
Network Solution(LGAP)		O

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1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ATNW24GPLA0 [CT24 NP4] ATNW30GPLA0 [UT30 NP4]
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	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 ₂ 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	-	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. 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				ATNW18GQLA0 [CT18 NQ4]	ATNW24GPLA0 [CT24 NP4]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Power Input			W	10 / 30 / 40	20 / 50 / 60
Running Current			A	0.4	0.6
Casing Color			-	-	-
Dimensions	Body	W x H x D	mm	570 × 256 × 570	840 × 204 × 840
		W x H x D	inch	22-7/16 x 10-3/32 x 22-7/16	33-1/16 x 8-1/32 x 33-1/16
Net Weight	Body		kg (lbs)	15.3(33.7)	20.5 (45.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 10 x 18) x 1	(2 x 8 x 19) x 1
	Face Area		m ² (ft ²)	0.28 (3.00)	0.35 (3.77)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	13.0 / 12.0 / 11.0	17.0 / 15.0 / 13.0
		H / M / L	ft ³ /min	459 / 424 / 353	600 / 530 / 459
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43 x 1	60 x 1
Sound Pressure Level		H / M / L	dB(A)	41 / 39 / 36	38 / 36 / 34
Sound Power Level		Max.	dB(A)	57	57
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
	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 ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)
Decoration Panel	Model Name		-	PT-UQC	PT-UMC(1)
	Casing Color		-	Morning Fog	Morning Fog
	Dimensions	W x H x D	mm	700 × 22 × 700	950 × 25 × 950
		W x H x D	inch	27-9/16 x 7/8 x 27-9/16	37-13/32 x 31/32 x 37-13/32
	Net weight		kg (lbs)	3.0 (6.6)	5.0 (11.0)

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

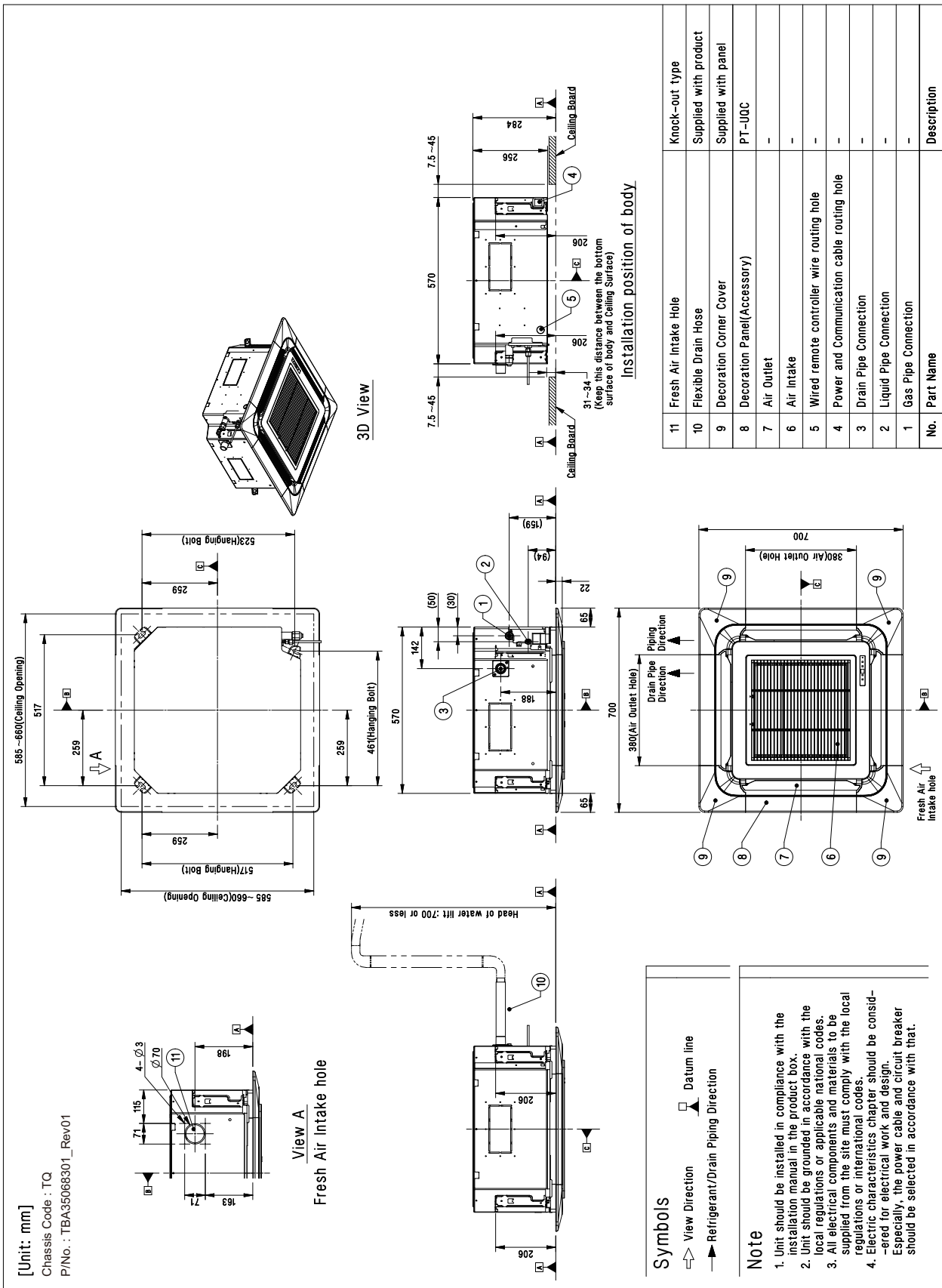
Model Name				ATNW30GPLA0 [UT30 NP4]	
Power Supply			V, Ø, Hz	220-240, 1, 50	
				220, 1, 60	
Power Input	Min / Nom / Max		W	30 / 70 / 80	
Running Current			A	0.6	
Casing Color			-	-	
Dimensions	Body	W x H x D	mm	840 × 204 × 840	
		W x H x D	inch	33-1/16 x 8-1/32 x 33-1/16	
Net Weight	Body		kg (lbs)	20.5 (45.2)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 8 x 19) x 1	
	Face Area		m ² (ft ²)	0.35 (3.77)	
Fan	Type		-	Turbo Fan	
	Air Flow Rate	H / M / L	m ³ /min	19.0 / 17.0 / 15.0	
		H / M / L	ft ³ /min	671 / 600 / 530	
Fan Motor	Type		-	BLDC	
	Output		W x No.	60 x 1	
Sound Pressure Level		H / M / L	dB(A)	40 / 37 / 35	
Sound Power Level		Max.	dB(A)	58	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	
	Gas		mm(inch)	Ø 15.88 (5/8)	
	Drain (O.D. / I.D.)		mm	Ø 32.0 / 25.0	
Safety Devices			-	Fuse	
			-	Thermal Protector for Fan Motor	
Power and Communication Cable (included Earth)			No. x mm ² (AWG)	4C x 0.75 (18)	
Decoration Panel	Model Name		-	PT-UMC(1)	
	Casing Color		-	Morning Fog	
	Dimensions	W x H x D	mm	950 × 25 × 950	
		W x H x D	inch	37-13/32 x 31/32 x 37-13/32	
	Net weight		kg (lbs)	5.0 (11.0)	

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

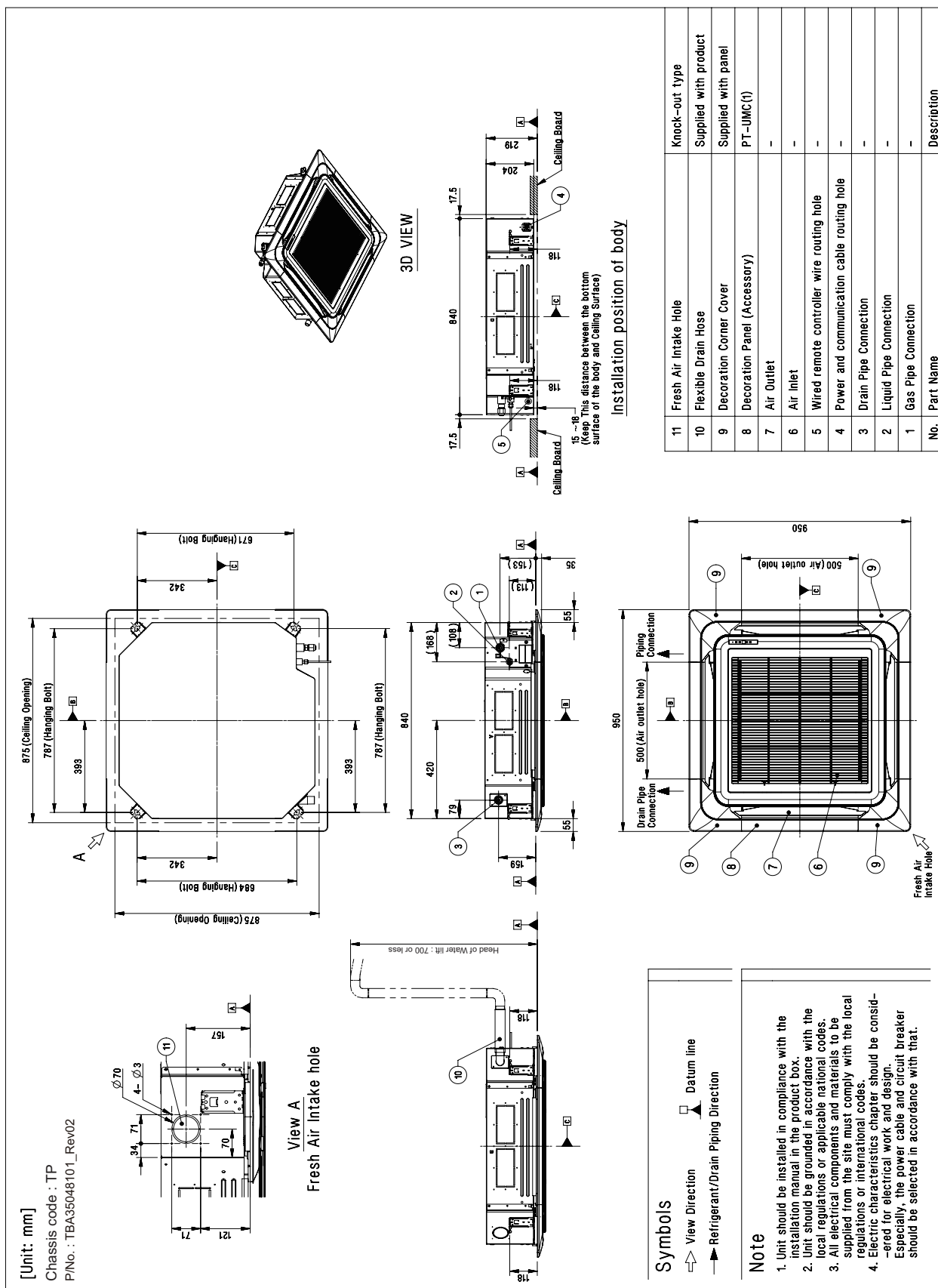
3. Dimensions

ATNW18GQLA0 [CT18 NQ4]

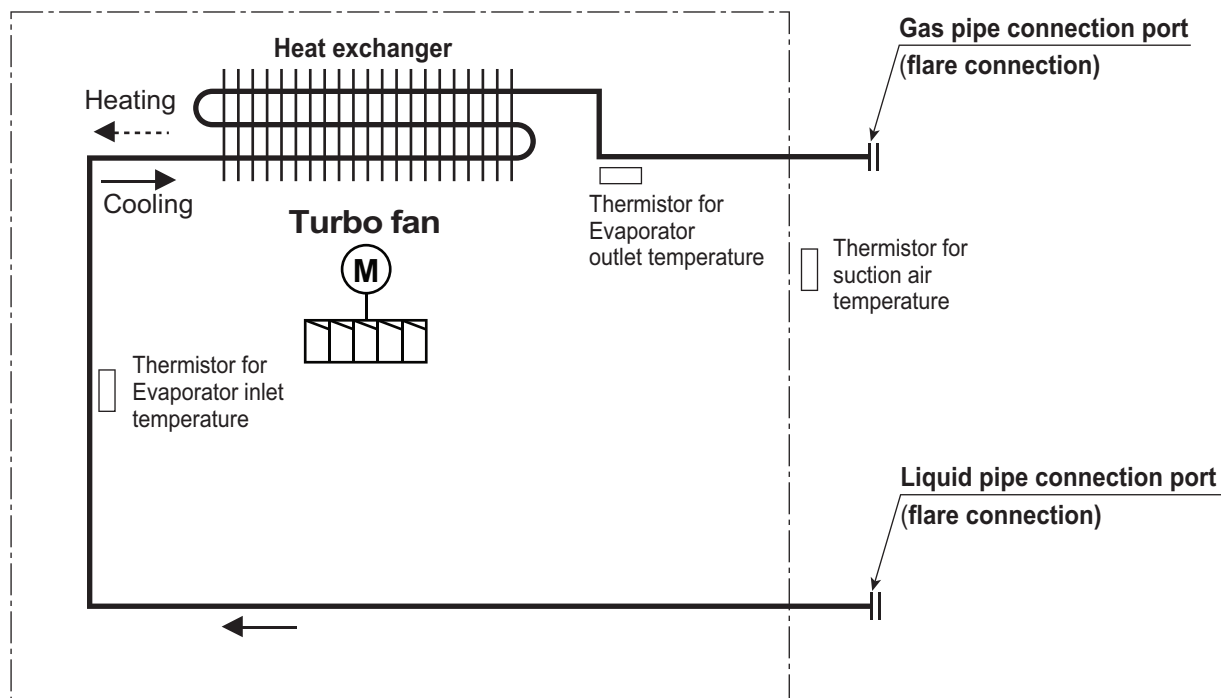


3. Dimensions

ATNW24GPLA0 [CT24 NP4] / ATNW30GPLA0 [UT30 NP4]



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

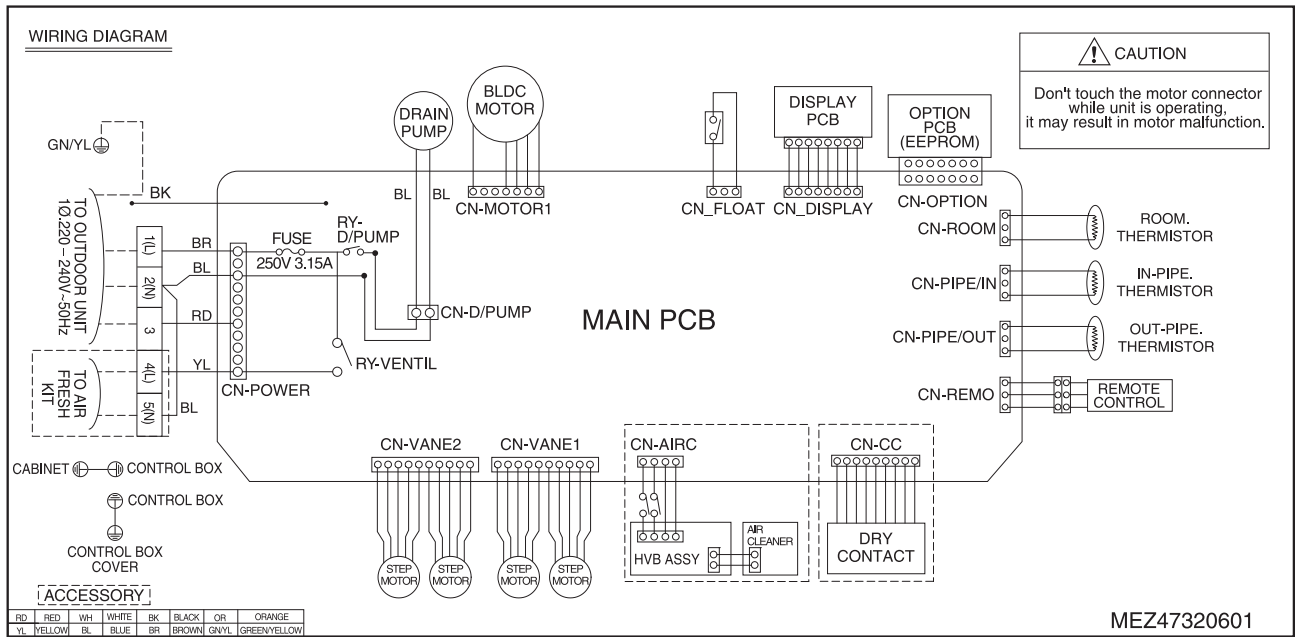
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
ATNW18GQLA0 [CT18 NQ4]	Ø12.7	Ø6.35
ATNW24GPLA0 [CT24 NP4]	Ø15.88	Ø9.52
ATNW30GPLA0 [UT30 NP4]	Ø15.88	Ø9.52

5. Wiring Diagrams

Models: ATNW18GQLA0 [CT18 NQ4] / ATNW24GPLA0 [CT24 NP4] ATNW30GPLA0 [UT30 NP4]

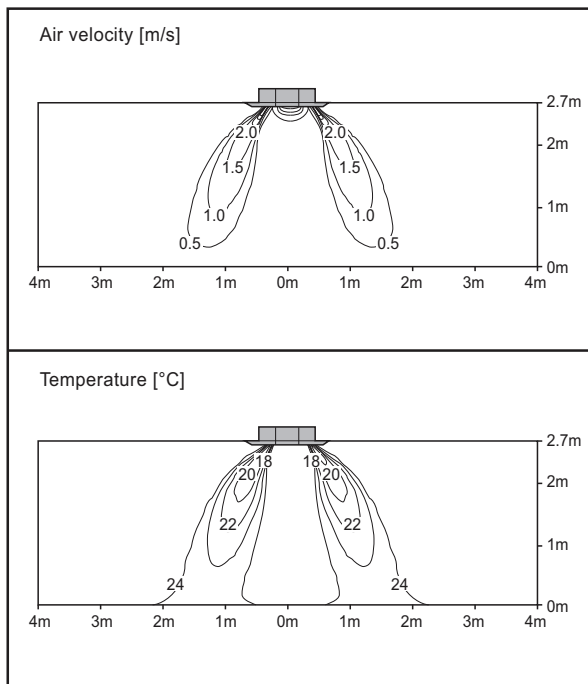


6. Air flow and temperature distributions (reference data)

■ Model : ATNW18GQLA0 [CT18 NQ4]

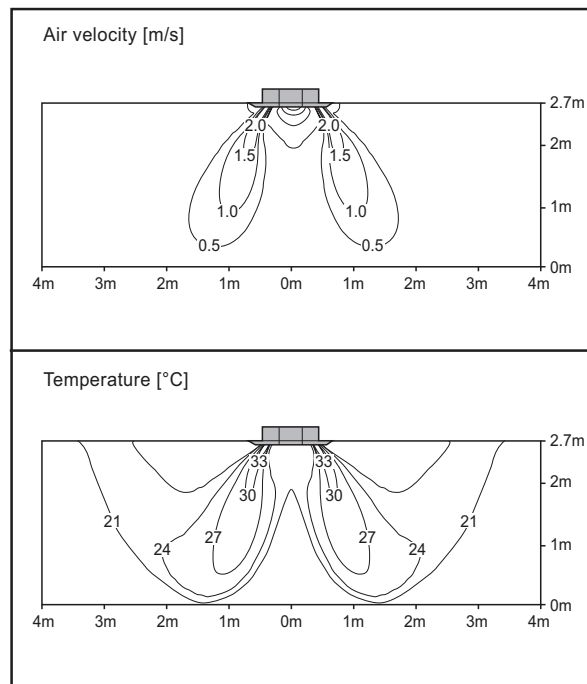
Cooling

Discharge angle: 40°



Heating

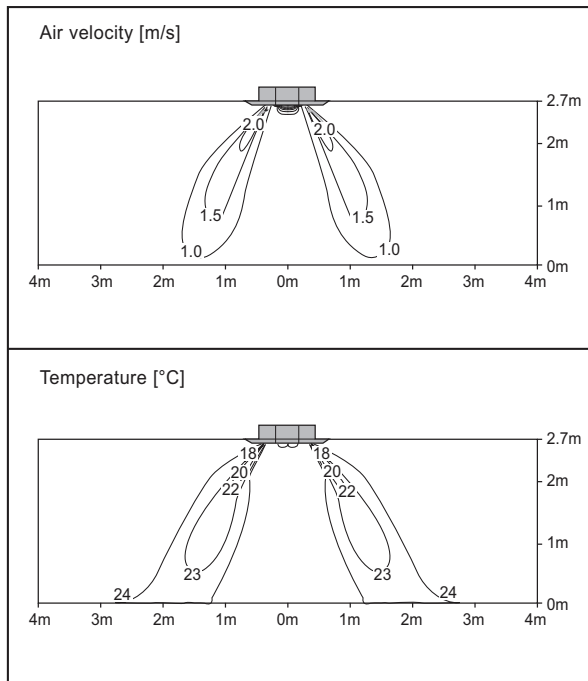
Discharge angle: 50°



■ Model : ATNW24GPLA0 [CT24 NP4]

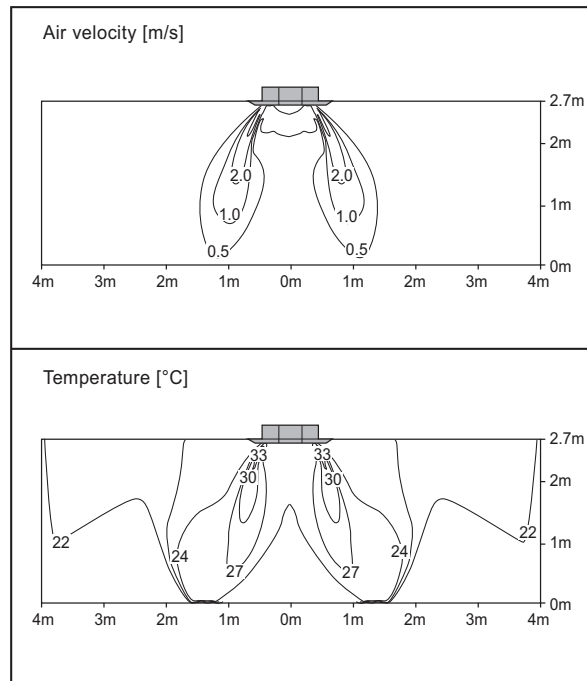
Cooling

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.

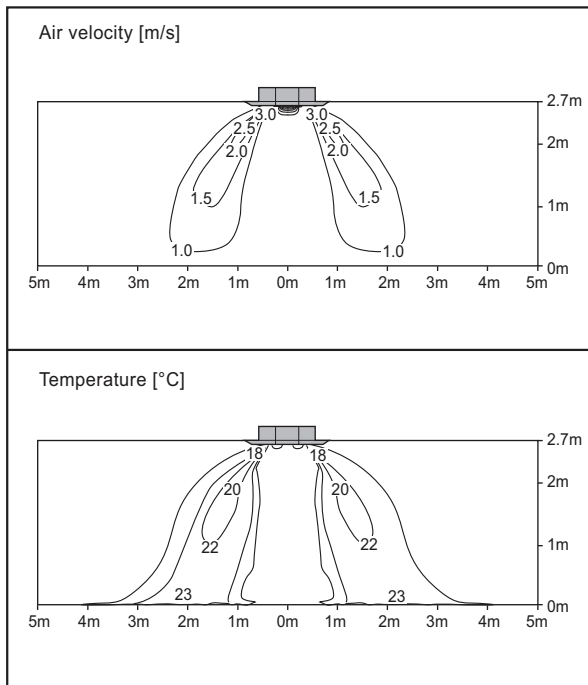
6. Air flow and temperature distributions (reference data)

[Unit : mm]

■ Model : ATNW30GPLA0 [UT30 NP4]

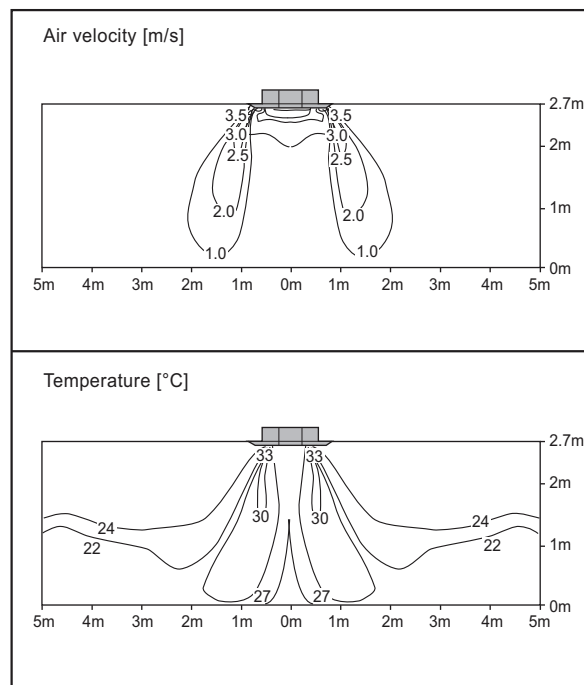
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



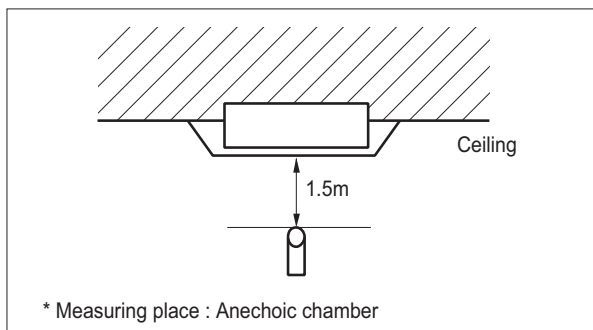
Note

- 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

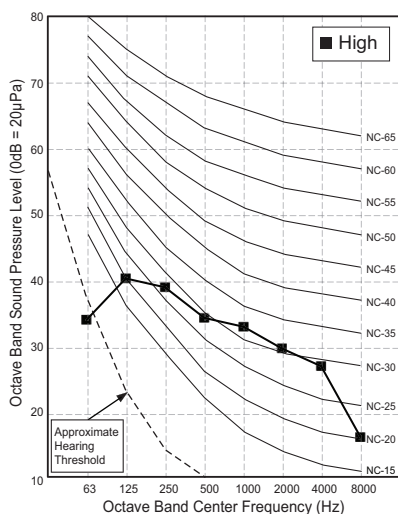


Note

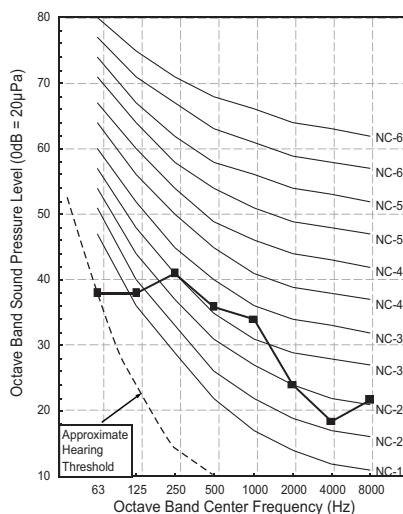
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
ATNW18GQLA0 [CT18 NQ4]	41	39	36
ATNW24GPLA0 [CT24 NP4]	38	36	34
ATNW30GPLA0 [UT30 NP4]	40	37	35

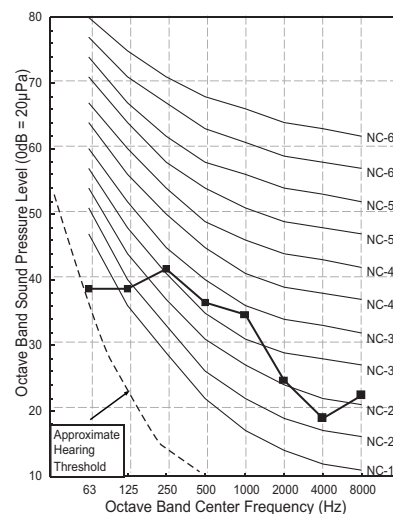
ATNW18GQLA0 [CT18 NQ4]



ATNW24GPLA0 [CT24 NP4]



ATNW30GPLA0 [UT30 NP4]



7. Sound levels

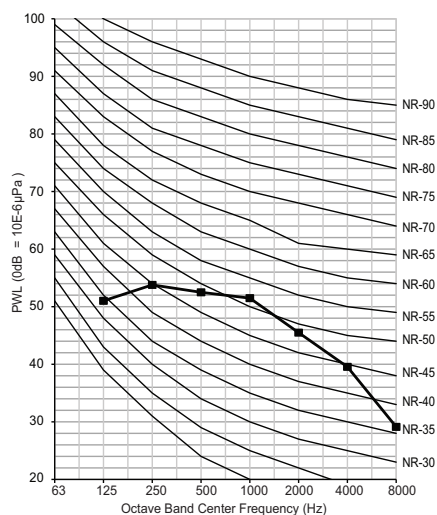
7.2 Sound power level

Note

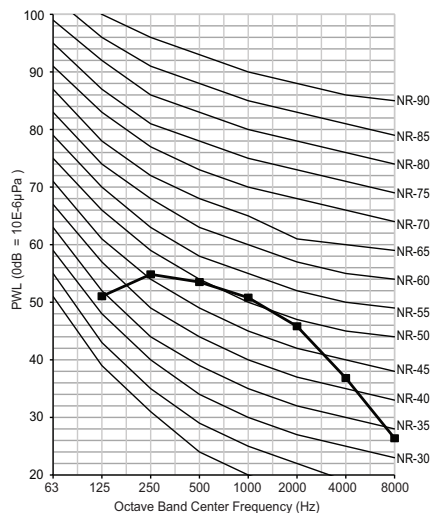
1. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
2. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound power level [dB(A)]
	H
ATNH18GQLE2 [CT18 NQ2]	57
ATNH24GPLE2 [CT24 NP2]	57
ATNH30GPLE2 [UT30 NP2]	58

**ATNW18GQLA0 [CT18 NQ4]
ATNW24GPLA0 [CT24 NP4]**

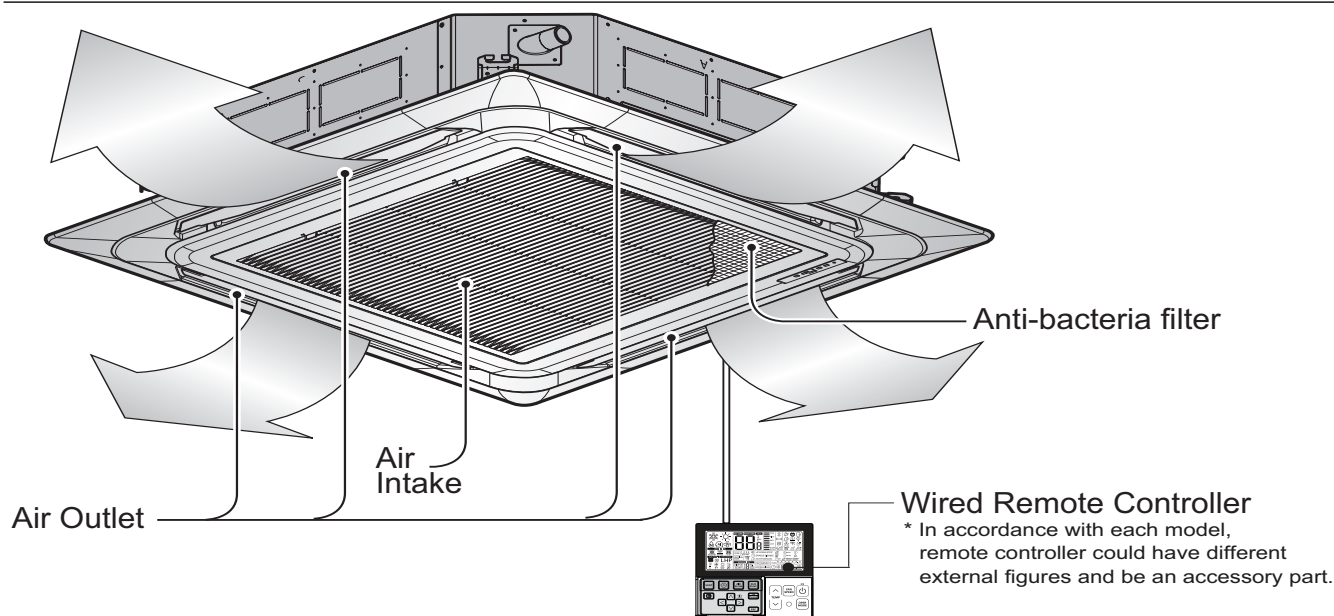


ATNW30GPLA0 [UT30 NP4]



8. Installation

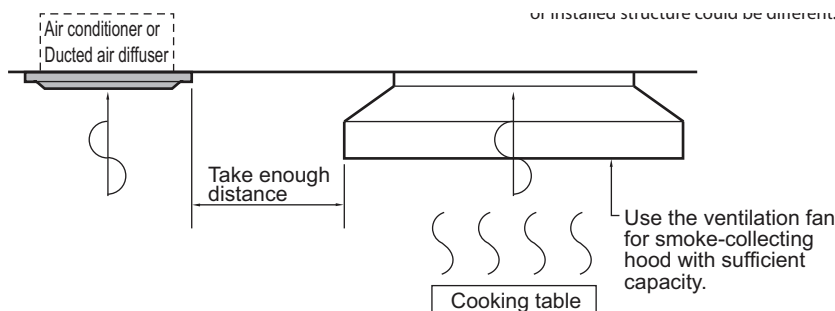
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.
- Teach the customer the operation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



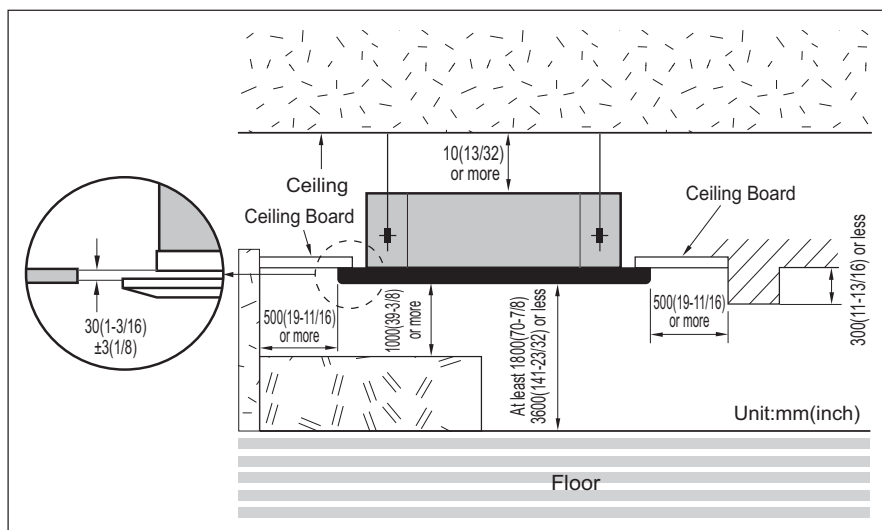
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

CAUTION

- If the temperature rise above 30℃ 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.

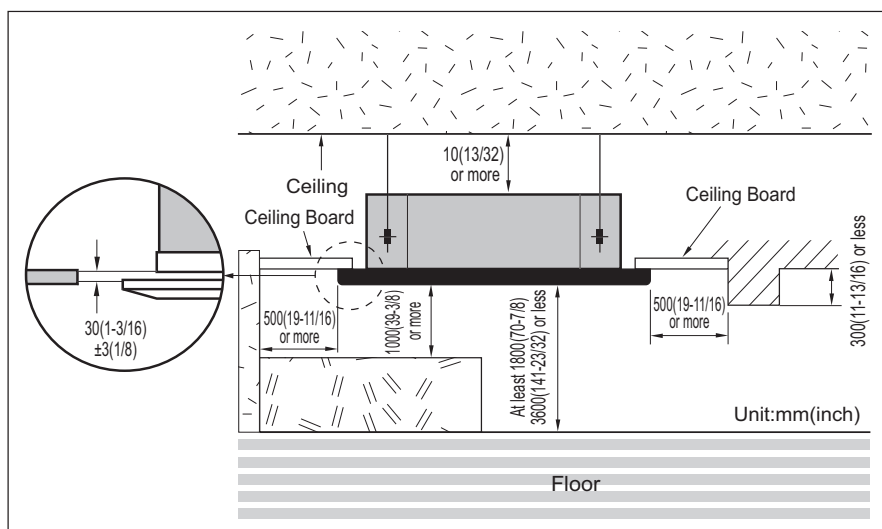
TQ/TR Chassis

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



TP Chassis

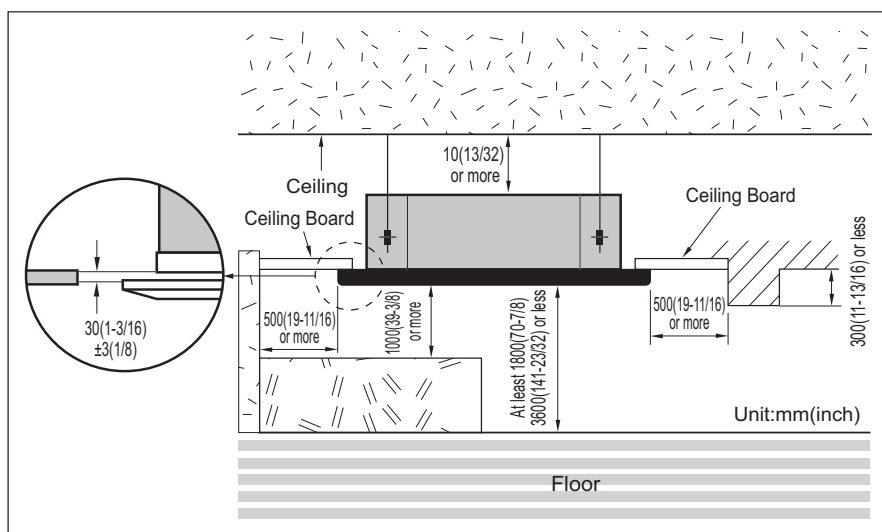
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



8. Installation

TM/TN Chassis

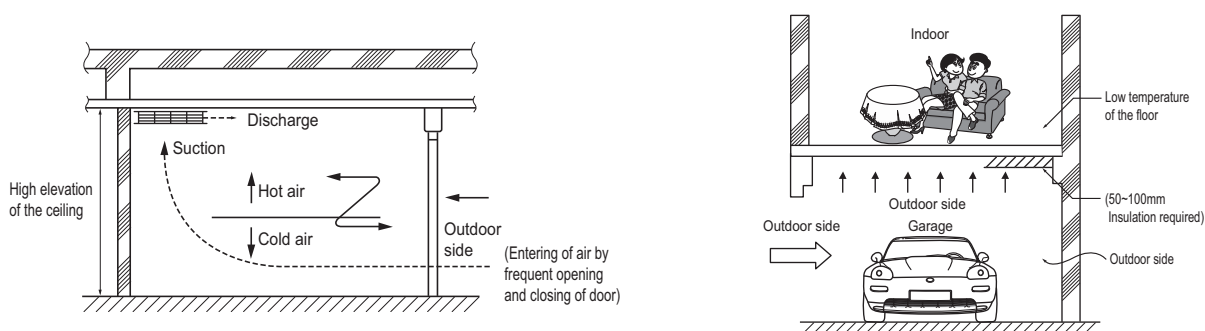
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



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.)

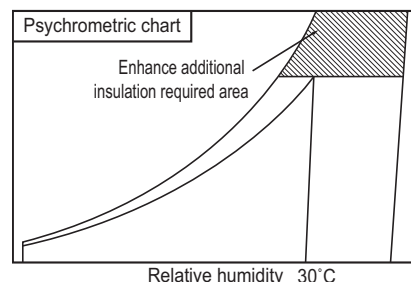
8. Installation

- 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.

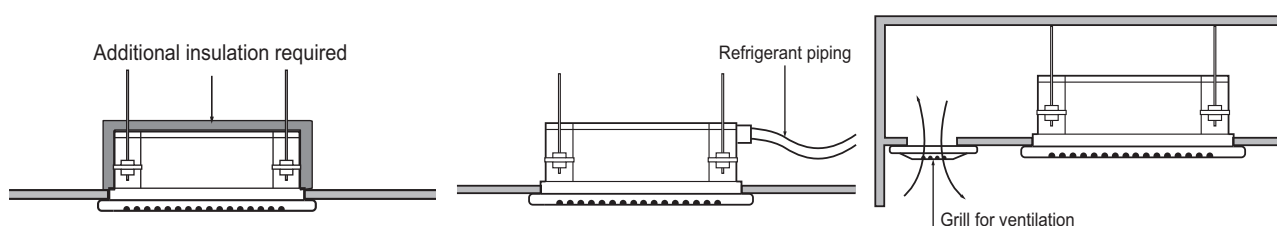
◆ In case of high temperature or humidity between the false ceiling and ceiling slab

- 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.

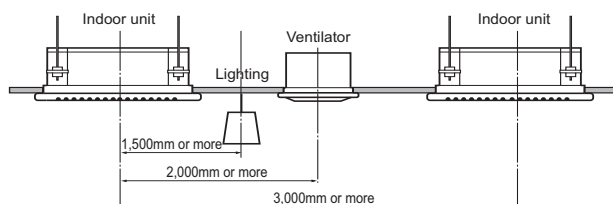


- Countermeasure method

- 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)



◆ In case of multiple indoor cassette units (recommended)



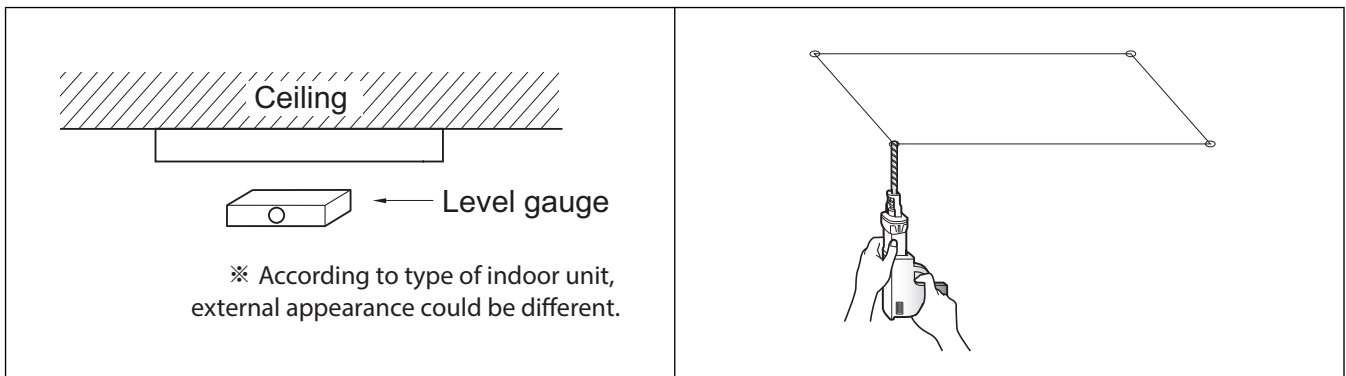
※ According to type of indoor unit, external appearance could be different.

8.3 Ceiling opening dimensions and hanging bolt location

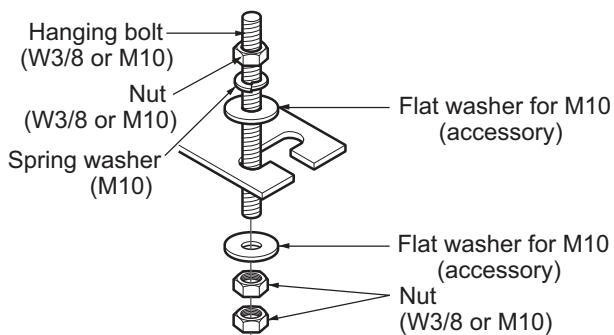
⚠ CAUTION

- 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.

8. Installation



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.

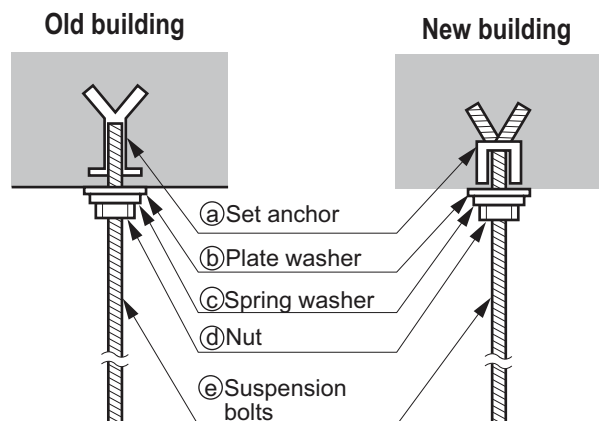


- The following parts are local purchasing.

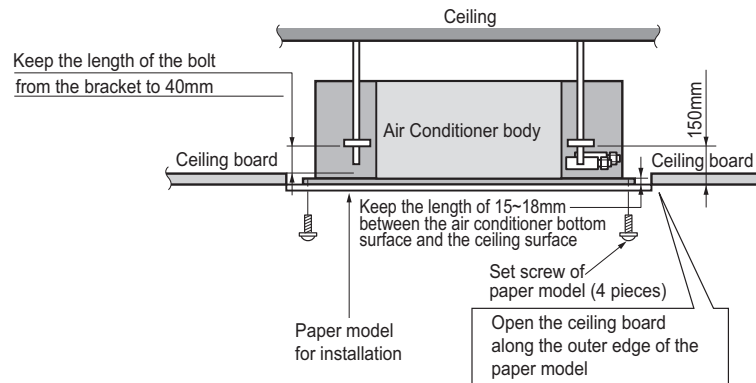
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

⚠ CAUTION

- Tighten the nut and bolt to prevent the unit from falling.

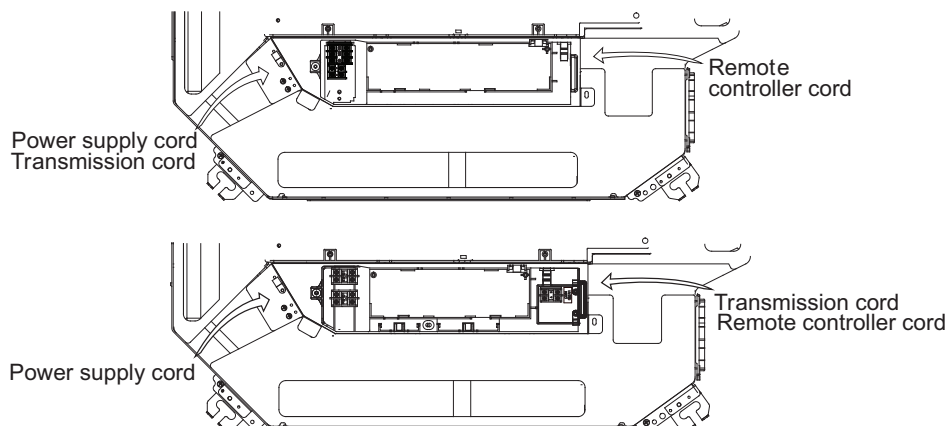


8. Installation



TQ/TR Chassis	TM/TN/TP Chassis

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.

8. Installation

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 and visually 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 0.75mm² 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

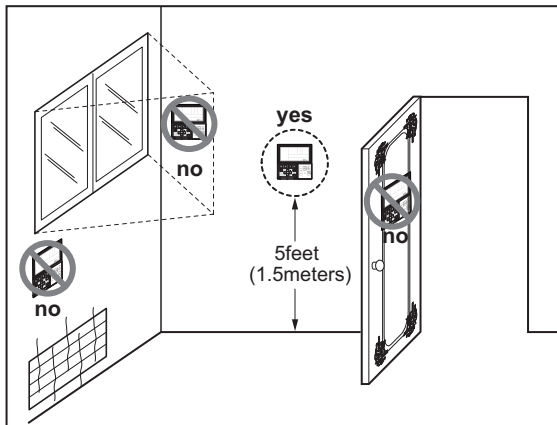
- Make sure that the screws of the terminal are fixed tightly.
- The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (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

8.4.4 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.)

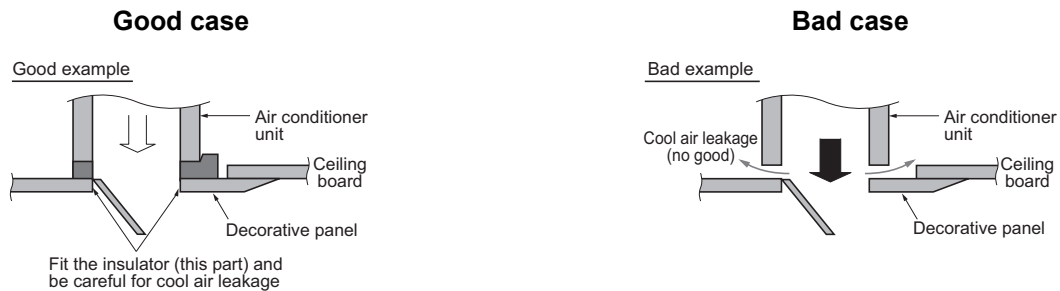
8. Installation

8.5 Installation of Decoration Panel

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

⚠ CAUTION

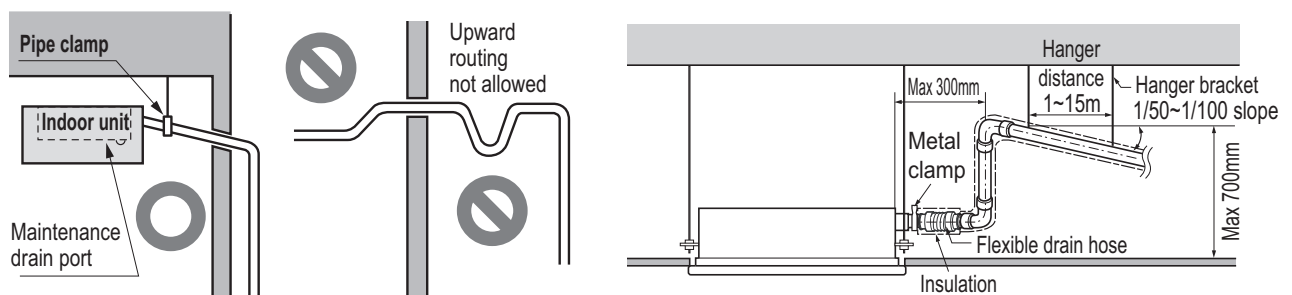
- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



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.



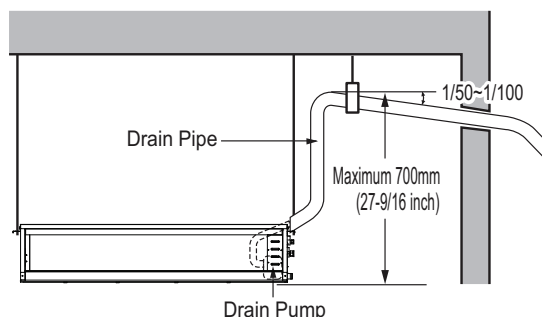
※ According to type of indoor unit, external appearance could be different.

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

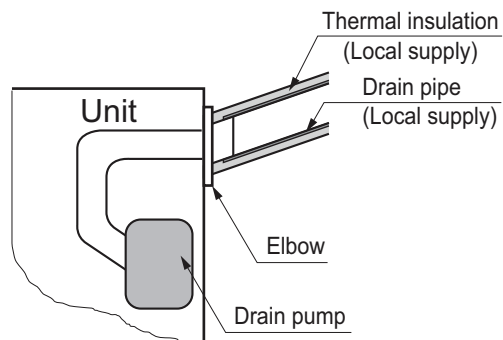
- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.

8. Installation

- Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).

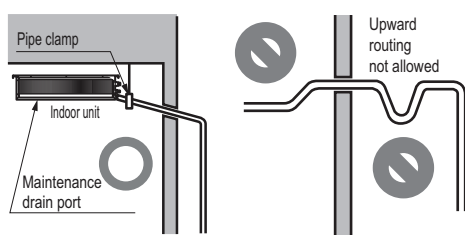


※ According to type of indoor unit, external appearance could be different.

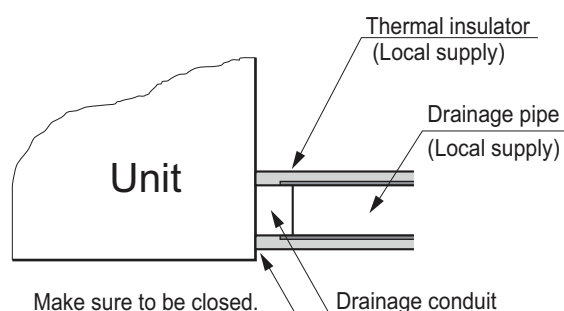


8.6.2 Drain pipe connection without drain pump

- 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 is 32 mm (1-1/4 inch).
 - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.
- 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)



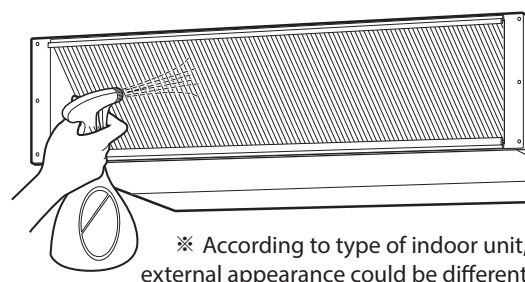
8. Installation

8.6.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

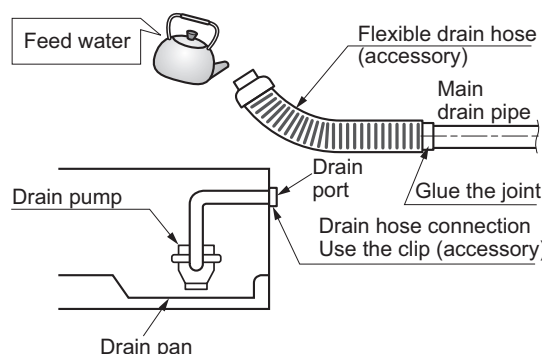
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

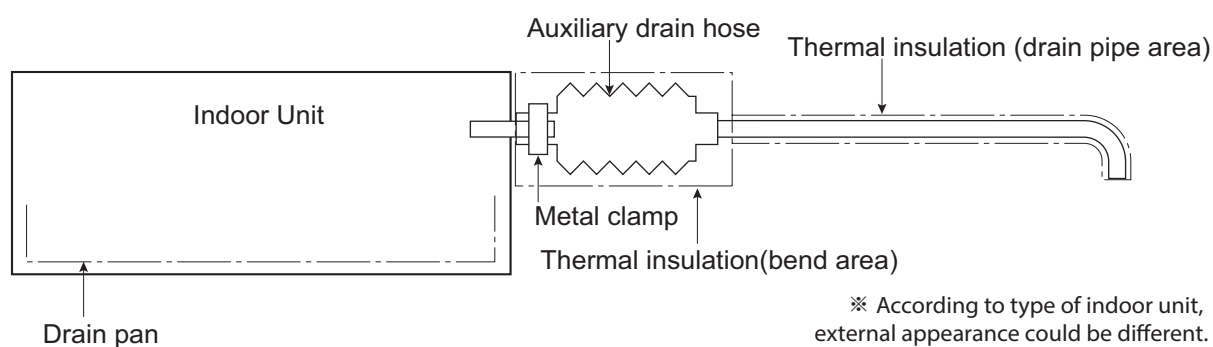
Use the following procedure to test the drain pump operation.

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.



8.6.4 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

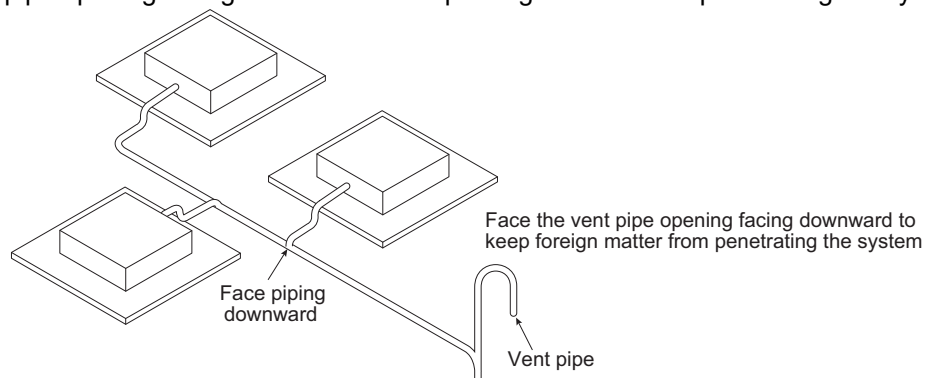
- The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.
- It is need to insulate the auxiliary drain hose with thermal insulation material.

8.6.5 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.

8. Installation

- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



MULTI/SINGLE

Indoor unit

Ceiling concealed duct - High 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	ABNW70GB9A0 [UB70 N94] ABNW85GB9A0 [UB85 N94]
Air flow	Air supply outlet	2
	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	PBDP9
	E.S.P. control*	O
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	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
Special Functions	Auto Elevation Grille	X
	Wi-Fi	X
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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ABNW70GB9A0 [UB70 N94] ABNW85GB9A0 [UB85 N94]
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	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 ₂ 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	-	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. 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))

• *** : In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

2. Specifications

Model Name				ABNW70GB9A0 [UB70 N94]	ABNW85GB9A0 [UB85 N94]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
Power Input			W	-	-	
Running Current			A	3.00	3.00	
Dimensions	Body	W x H x D	mm	1,562 × 460 × 688	1,562 × 460 × 688	
		W x H x D	inch	61-1/2 x 18-1/8 x 27-3/32	61-1/2 x 18-1/8 x 27-3/32	
Net Weight	Body		kg (lbs)	86.0 (189.6)	86.0 (189.6)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 20 x 18) x 1	(3 x 20 x 18) x 1	
	Face Area		m ² (ft ²)	0.58 (6.28)	0.58 (6.28)	
Fan	Type		-	Sirocco Fan	Sirocco Fan	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	70.0 / 65.0 / 60.0	80.0 / 72.0 / 64.0
			H / M / L	ft ³ /min	2,472 / 2,542 / 2,260	2,825 / 2,542 / 2,260
			External Static Pressure	Pa (mmAq)	127(13)	127 (13)
Fan Motor	Type		-	BLDC	BLDC	
	Output		W x No.	375 x 2	375 x 2	
Dehumidification Rate			l / h (pts/h)	1.81 (4.2)	5.14 (11.9)	
Sound Pressure Level		H / M / L	dB(A)	43 / 41 / 40	43 / 41 / 40	
Sound Power Level		Max.	dB(A)	61	61	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (1/4)	Ø 12.7 (1/2)	
	Gas		mm(inch)	Ø 25.4 (1/1)	Ø 22.2 (7/8)	
	Drain (O.D. / I.D.)		mm(inch)	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 ² (AWG)	4C x 1.0 (16)	4C x 1.0 (16)	

1. These models are connectable only with Single CAC outdoor units.

2. Sound pressure, sound power is measured at the 6mmAq.

Note

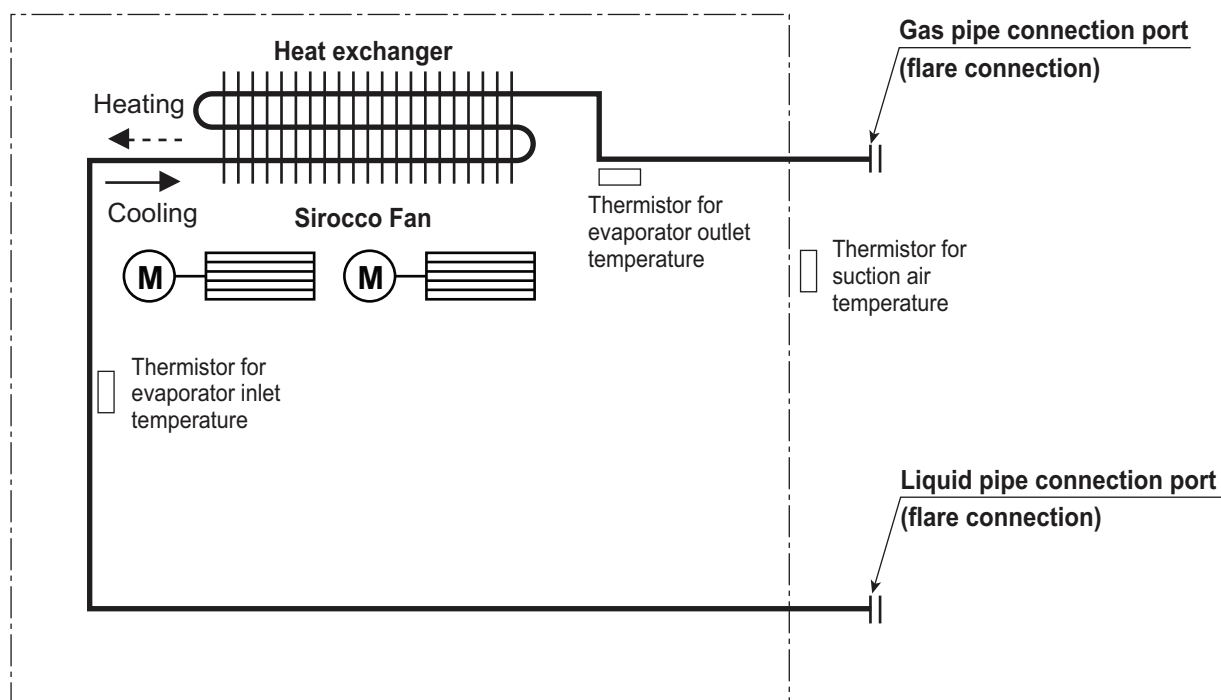
- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound Level Values are measured at Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

ABNW70GB9A0 [UB70 N94] / ABNW85GB9A0 [UB85 N94]



4. Piping diagrams

■ Model : ABNW70GB9A0 [UB70 N94], ABNW85GB9A0 [UB85 N94]



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

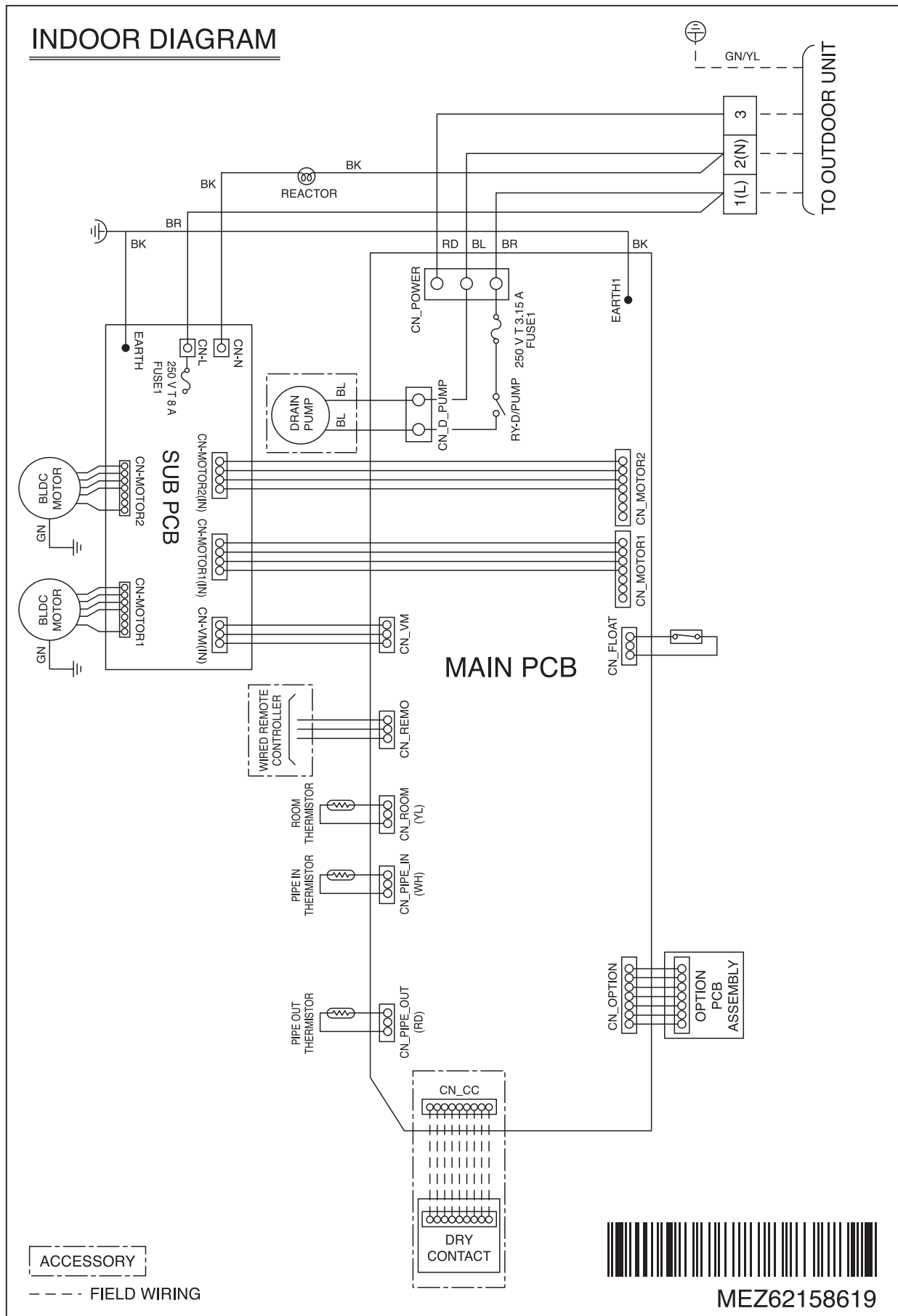
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
ABNW70GB9A0 [UB70 N94]	Ø25.4	Ø9.52
ABNW85GB9A0 [UB85 N94]	Ø22.2	Ø12.7

5. Wiring Diagrams

■ Model : ABNW70GB9A0 [UB70 N94], ABNW85GB9A0 [UB85 N94]

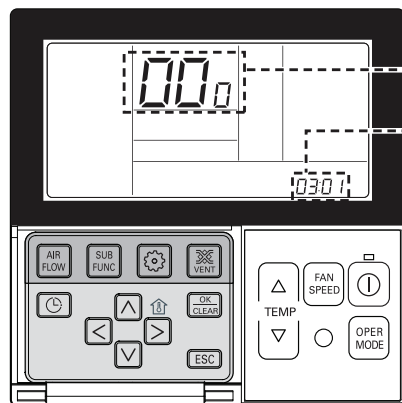


6. External Static Pressure & Air Flow

■ How to Set E.S.P. on the remote controller?

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>1 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>4 Move to ESP value setting by pressing button. (It is 000 when delivering from the warehouse.)</p>
<p>2 If entering into ESP setup mode by using button, it indicates as the picture below.</p>	<p>5 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>3 Select ESP fan step by pressing button. (01: very low, 02: low, 03: medium, 04: high, 05: very high)</p>	<p>6 Select ESP fan step again by using button and setup ESP value, as No. 4 and 5, that corresponds each wind flow</p> <p>7 Press button to save.</p>
	<p>8 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.

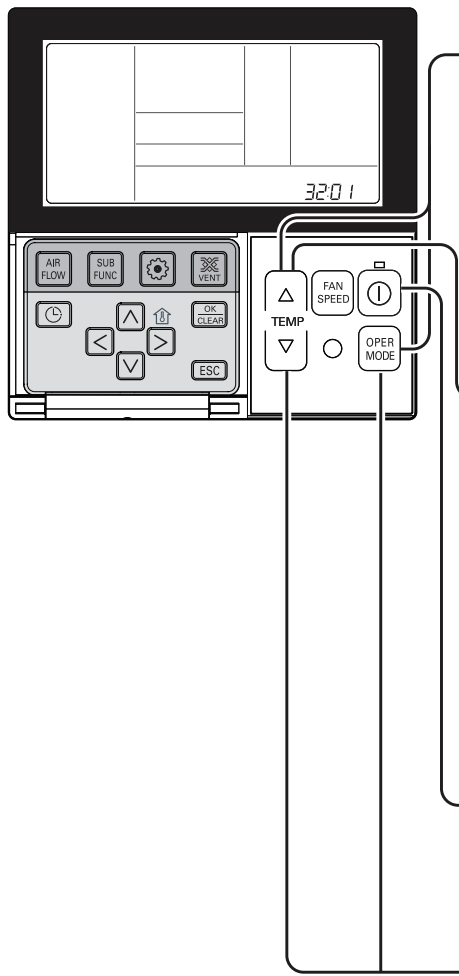
6. External Static Pressure & Air Flow




■ Installer Setting - Static Pressure Step Setting


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(s), down(t) 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

(Unit : CMM)

■ Table 1

◆ ABNW70GB9A0[UB70 N94], ABNW85GB9A0 [UB85 N94]

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))								
	6(59)	8(78)	10(98)	13(127)	15(147)	18(176)	20(196)	22(215)	24(235)
74	64.7	58.6	45.8	-	-	-	-	-	-
78	72.6	67.4	55.3	39.6	-	-	-	-	-
82	79.5	74.1	67.8	55.5	35.2	-	-	-	-
84	81.8	75.4	69.7	63.4	48.5	36.7	-	-	-
89	86	83	79.4	71.6	60.2	44.9	33.1	-	-
94	93.3	91.5	87.5	77.7	68.5	60.3	44.6	30.4	-
95	95.2	92.5	89.1	79.6	72.9	64.8	50.2	36.4	-
100	97.3	94.1	92.8	87.5	82.5	73	60.8	48.2	35.5
105	98.6	94.5	93.2	91.2	87.6	79.8	70.7	62.5	50.5

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.

■ Table 2

◆ ABNW70GB9A0[UB70 N94], ABNW85GB9A0 [UB85 N94]

(Unit : CMM)

Model	Mode		Set value	Standard	CMM	Lower Limit of External Static Pressure [mmAq(Pa)]	Upper Limit of External Static Pressure [mmAq(Pa)]
				E.S.P. [mmAq(Pa)]			
ABNW70GB9A0 [UB70 N94]	High (factory set)	Hi	91	13(127)	70	6(59)	25(245)
		Mid	86		65		
		Low	82		60		
ABNW85GB9A0 [UB85 N94]	High (factory set)	Hi	95	13(127)	80	6(59)	25(245)
		Mid	89		72		
		Low	84		64		

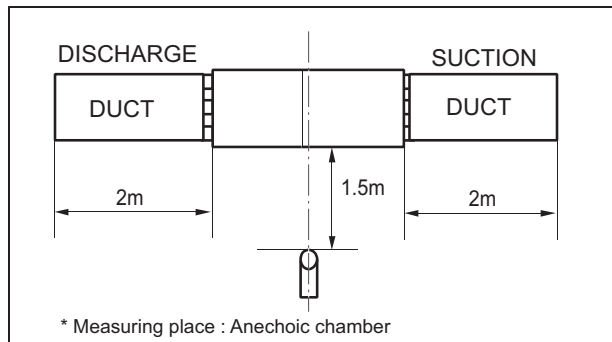
Note

The above table shows the correlation between the air rates and E.S.P.

7. Sound levels

7.1 Sound pressure level

Overall



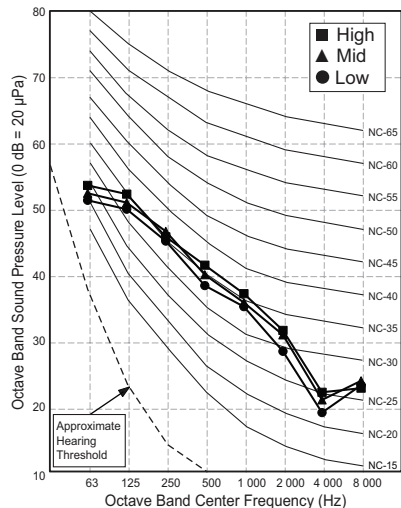
Note

1. Sound measured at 1.5m away from the center of the unit.
2. 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)
3. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
4. 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.

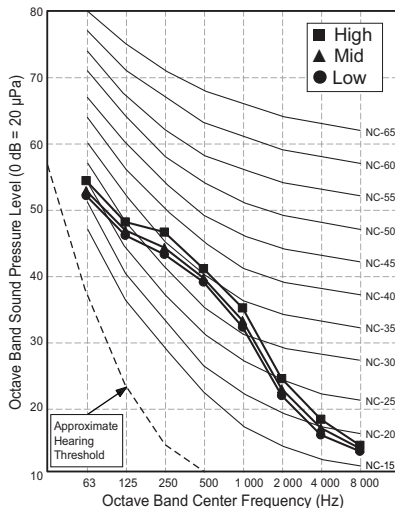
Model	Sound Pressure Levels (dB(A),H-M-L)					
	External Static Pressure [mmAq(Pa)]					
	6(59)	8(78)	10(98)	13(127)	15(147)	18(176)
ABNW70GB9A0 [UB70 N94]	43-41-40	44-42-41	45-43-42	47-45-44	48-46-45	49-48-47
ABNW85GB9A0 [UB85 N94]	43-41-40	44-42-41	44-42-41	47-45-44	48-46-45	49-48-47

◆ External Static Pressure 6(59) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]



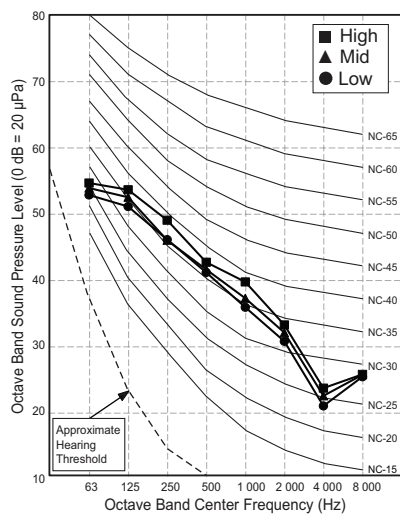
ABNW85GB9A0 [UB85 N94]



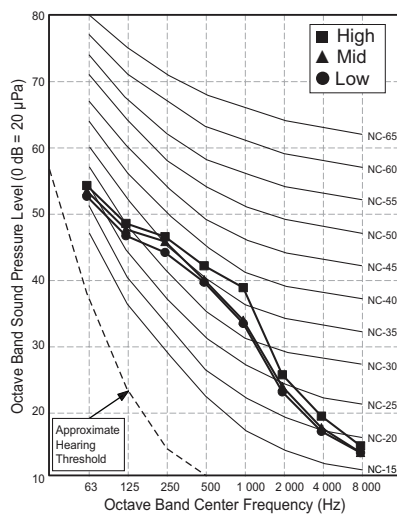
7. Sound levels

◆ External Static Pressure 8(78) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]

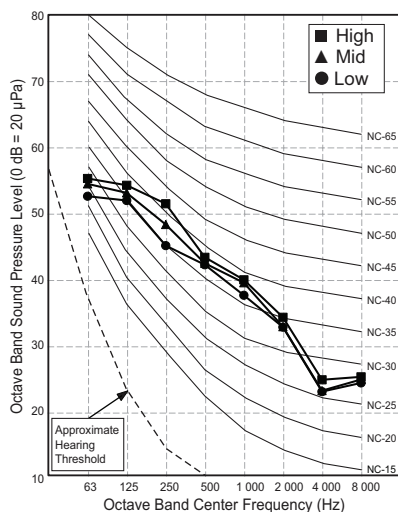


ABNW85GB9A0 [UB85 N94]

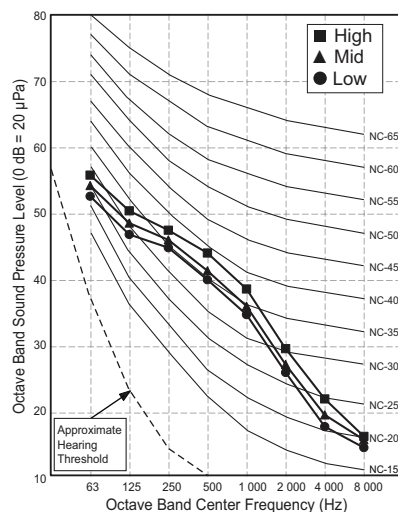


◆ External Static Pressure 10(98) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]



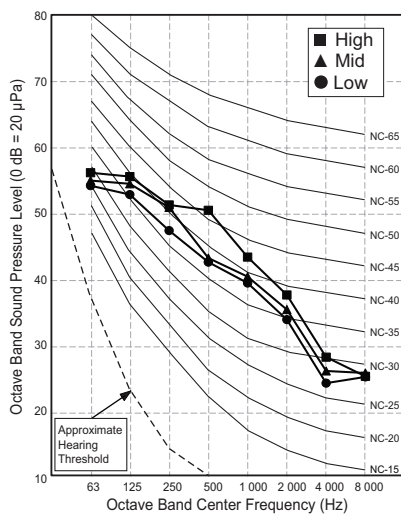
ABNW85GB9A0 [UB85 N94]



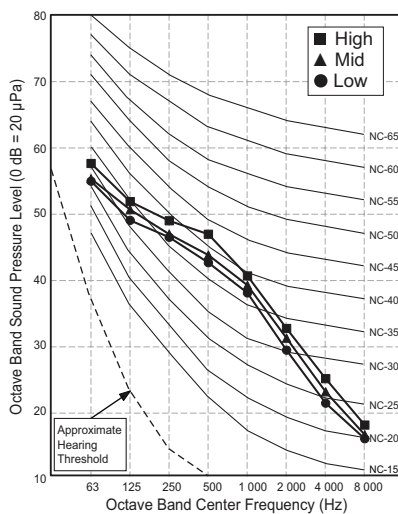
7. Sound levels

◆ External Static Pressure 13(127) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]

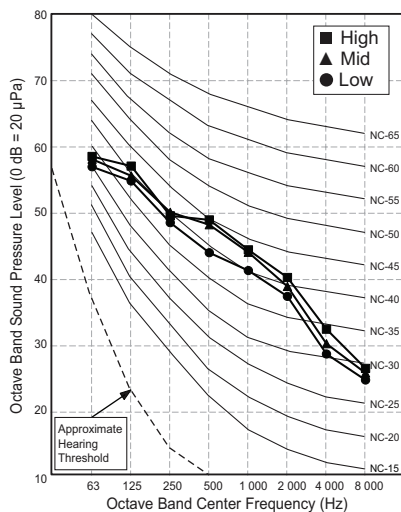


ABNW85GB9A0 [UB85 N94]

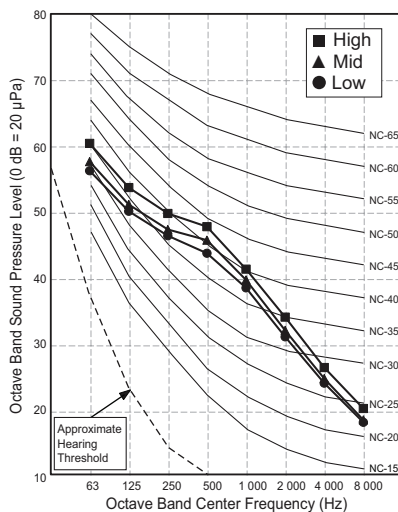


◆ External Static Pressure 15(147) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]



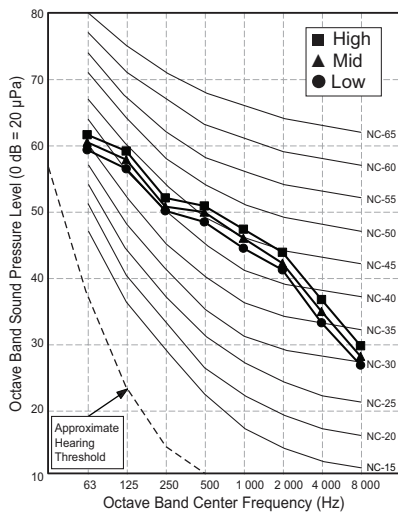
ABNW85GB9A0 [UB85 N94]



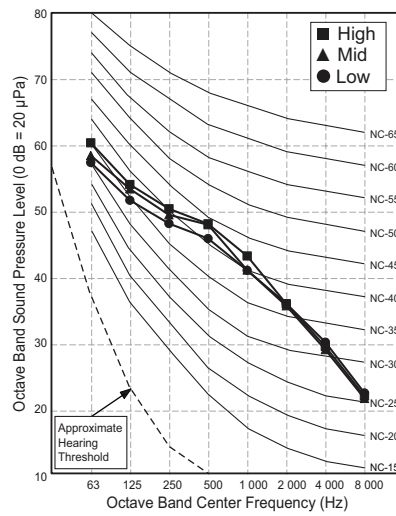
7. Sound levels

◆ External Static Pressure 18(176) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]



ABNW85GB9A0 [UB85 N94]



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 the specifications.

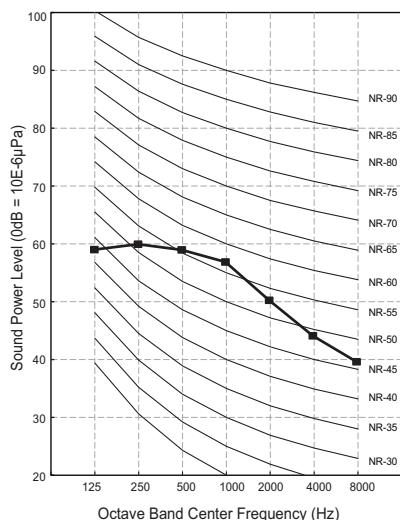
2. Reference acoustic intensity 0dB = 10E-6μW/m²

3. 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.

Model	ABNW85GB9A0 [UB85 N94]		
	External Static Pressure [mmAq(Pa)]		
	6(59)	10(98)	13(127)
ABNW70GB9A0 [UB70 N94]	61-60-59	64-62-61	65-64-63
ABNW85GB9A0 [UB85 N94]	61-60-59	64-62-61	65-64-63

◆ External Static Pressure 6(59) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]
ABNW85GB9A0 [UB85 N94]

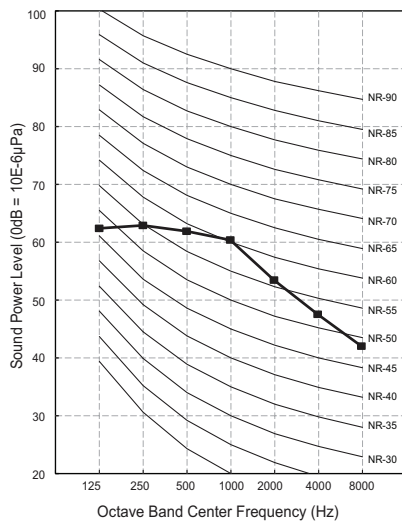


7. Sound levels

◆ External Static Pressure 10(98) [mmAq(Pa)]

ABNW70GB9A0 [UB70 N94]

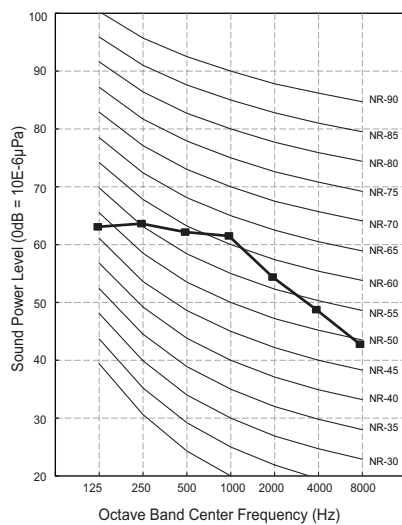
ABNW85GB9A0 [UB85 N94]



◆ External Static Pressure 13(127) [mmAq(Pa)]

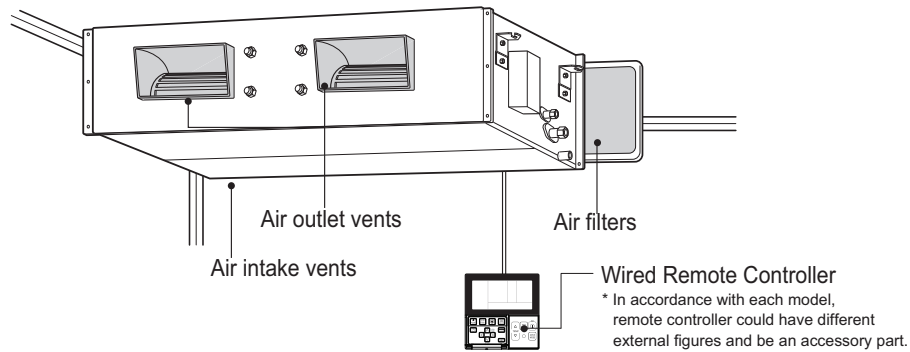
ABNW70GB9A0 [UB70 N94]

ABNW85GB9A0 [UB85 N94]



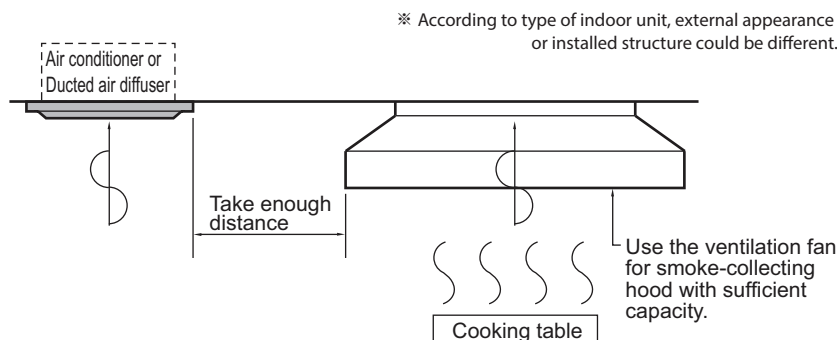
8. Installation

- 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.



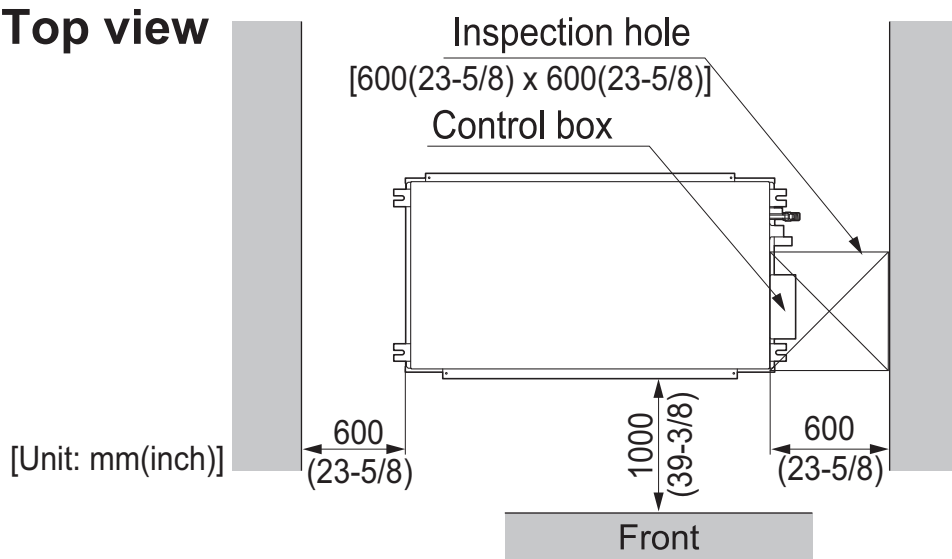
8. Installation

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.

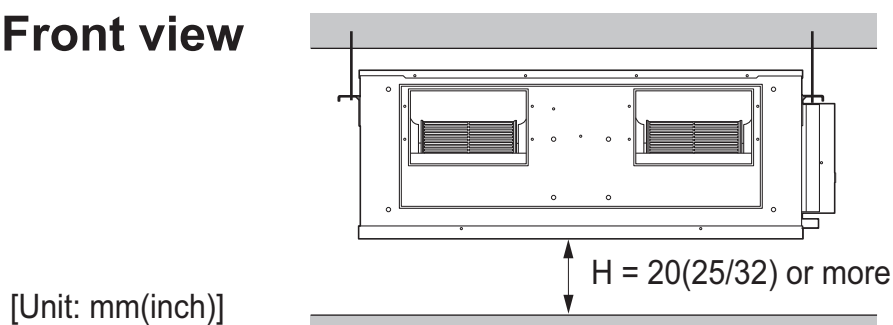
⚠ CAUTION

- 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



Front view

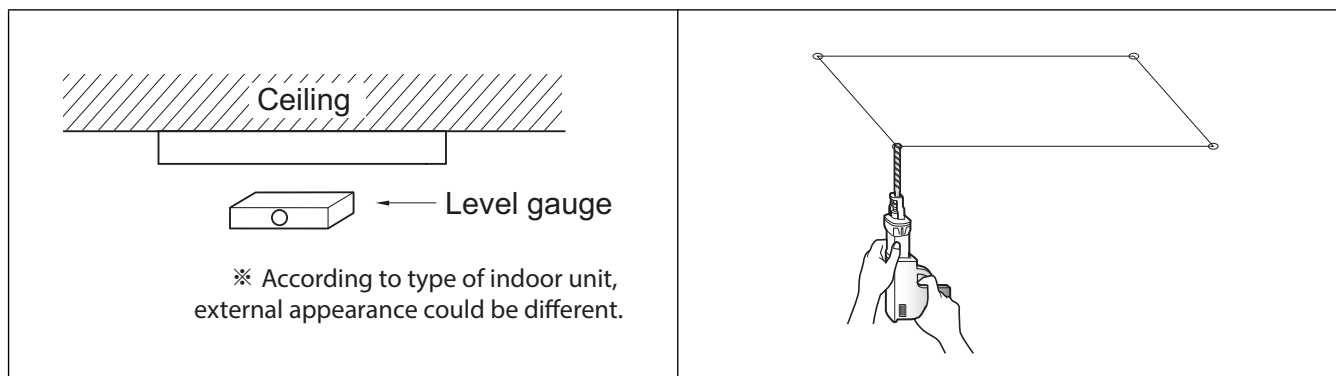


8. Installation

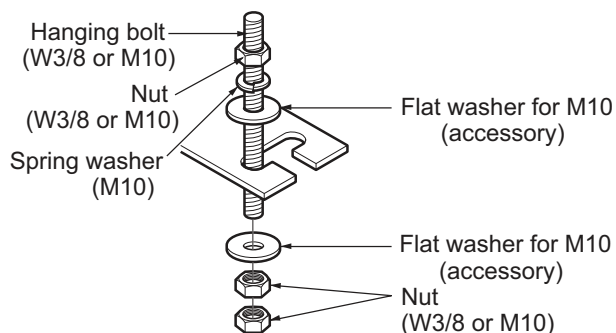
8.2 Ceiling dimension and hanging bolt location

⚠ 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.

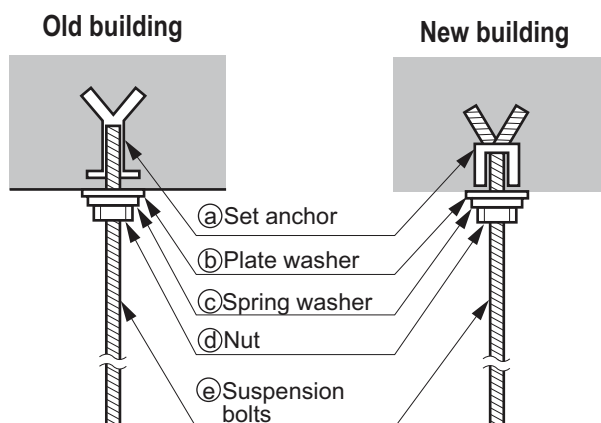


- The following parts are local purchasing.

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.

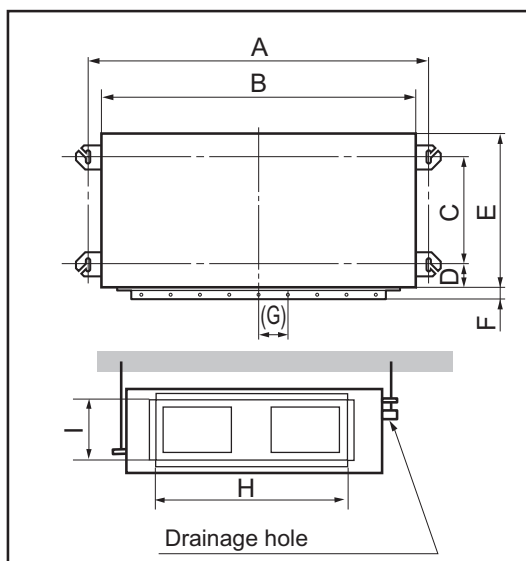


8. Installation

■ Installation dimension of Indoor unit

BH/BG/BR Chassis

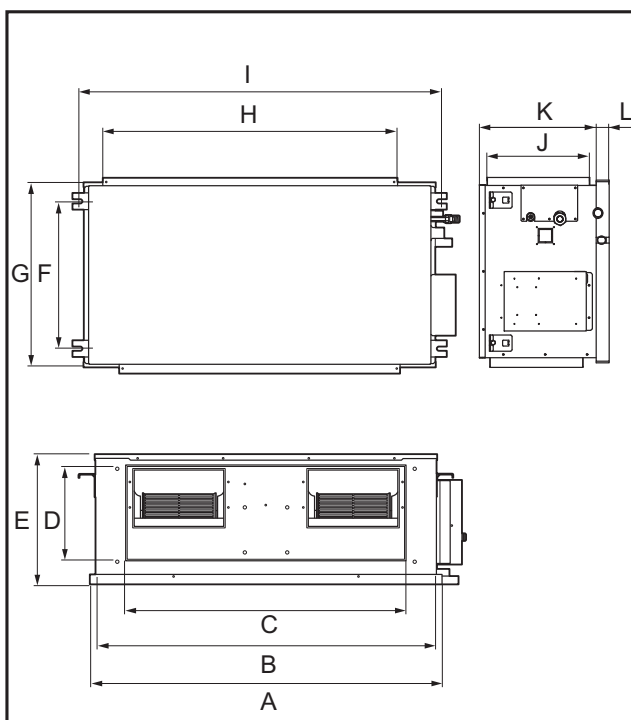
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



Chassis	Dimension (mm)								
	A	B	C	D	E	F	G	H	I
BH	932	882	355	47	450	30	(87)	750	158
BG	1232	1182	355	47	450	30	(87)	830	186
BR	1282	1230	477	56	590	30	(120)	1006	294

B7/B9 Chassis

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

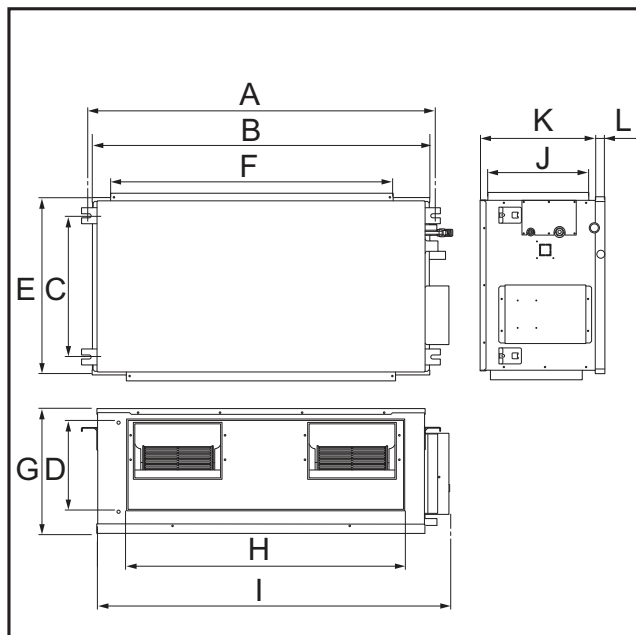


Chassis	Dimension (mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
B7	1,352	1,320	840	287	400	441	563	1,172	1,365	317	360	40
B9	1,594	1,563	984	275	458	657	821	1,368	1,627	391	-	-

8. Installation

B8 Chassis

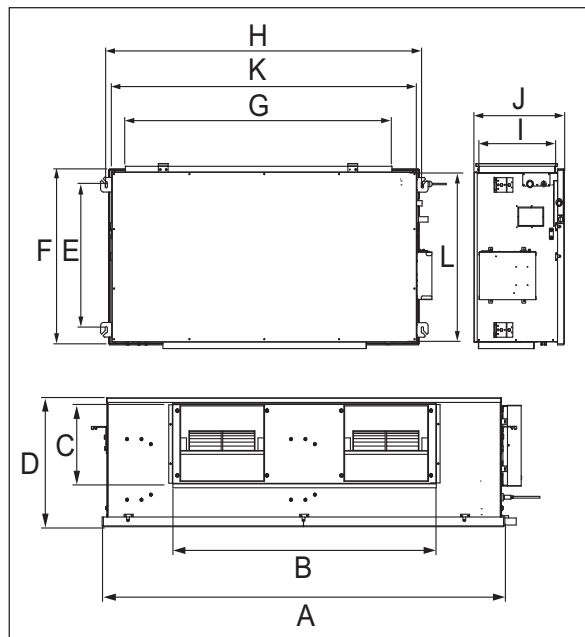
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



Chassis	Dimension (mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
B8	1622	1565	580	292	695	1400	460	1122	1680	390	445	15

B8+ Chassis

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



Chassis	Dimension (mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
B8+	1594	1044	286	460	580	713	1368	1622	392	458	1563	791

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 and visually 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 0.75mm² 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.

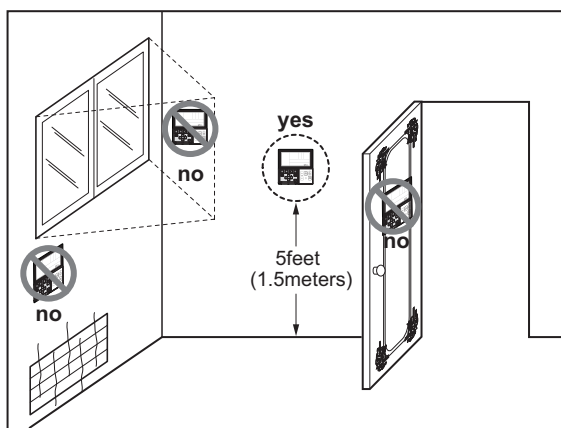
8. Installation

- 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

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 :**

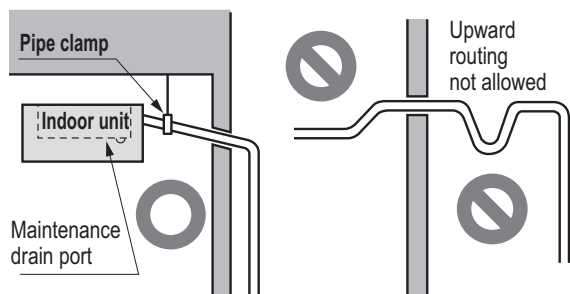
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. 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

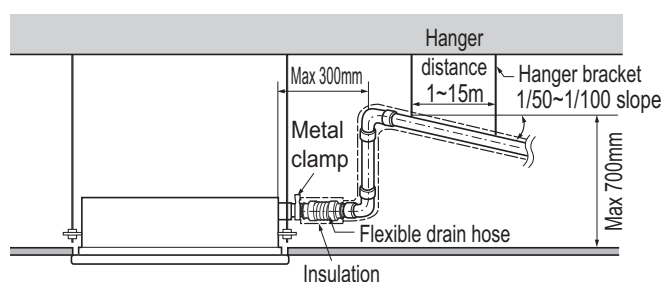
8.4 Indoor Unit Drain Piping

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.

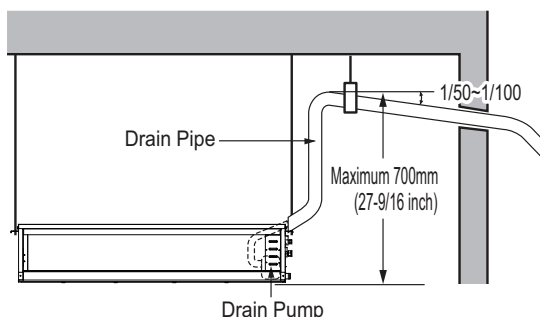


※ According to type of indoor unit, external appearance could be different.

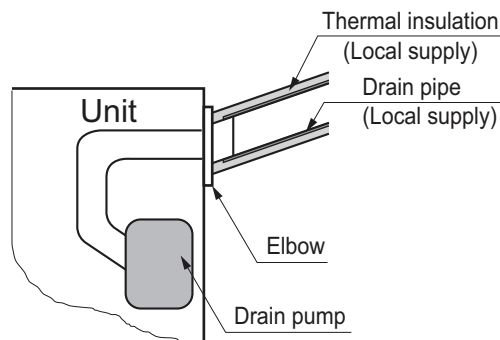


※ According to type of indoor unit, external appearance could be different.

- 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.

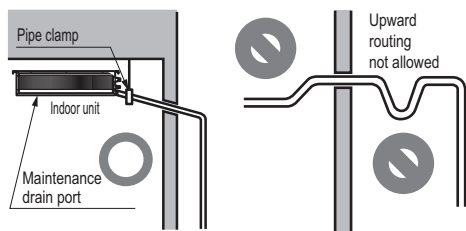


8.4.2 Drain pipe connection without drain pump

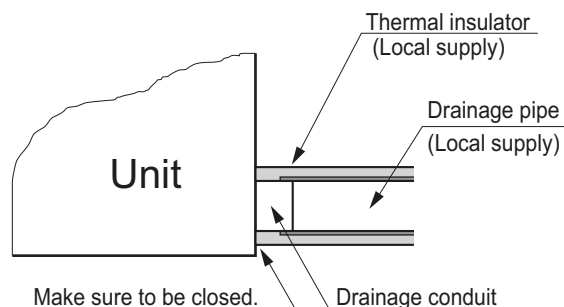
- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4 inch).
 - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.
- Be sure to install heat insulation on the drain piping.

8. Installation

- 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)

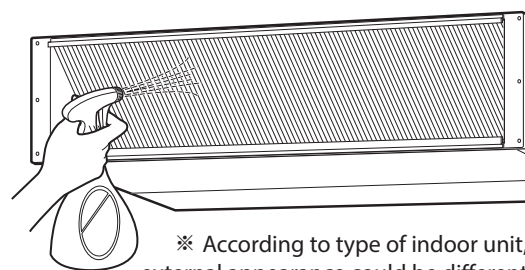


8.4.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

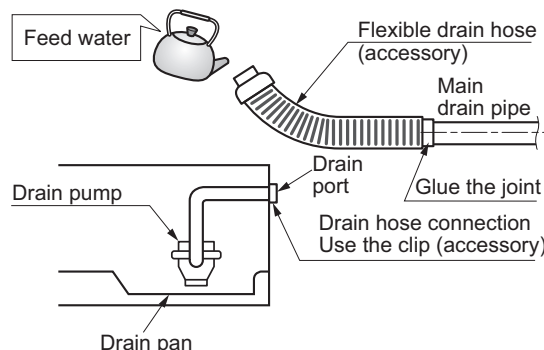
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

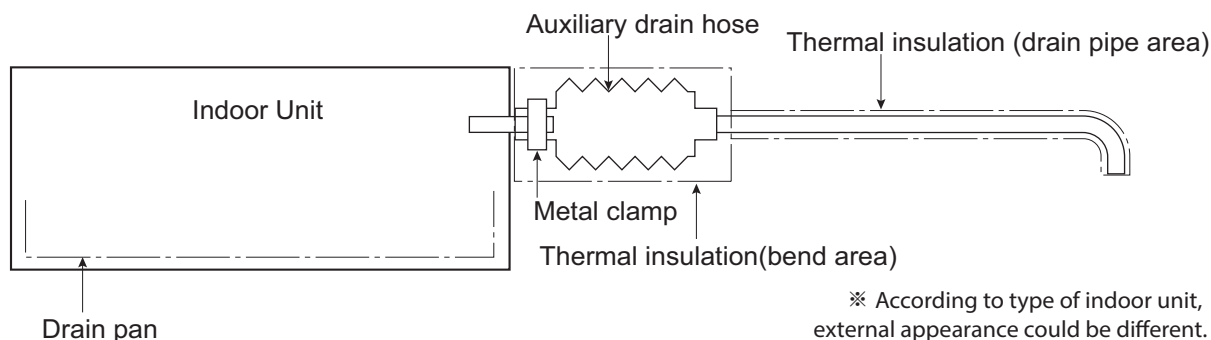
Use the following procedure to test the drain pump operation.

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.



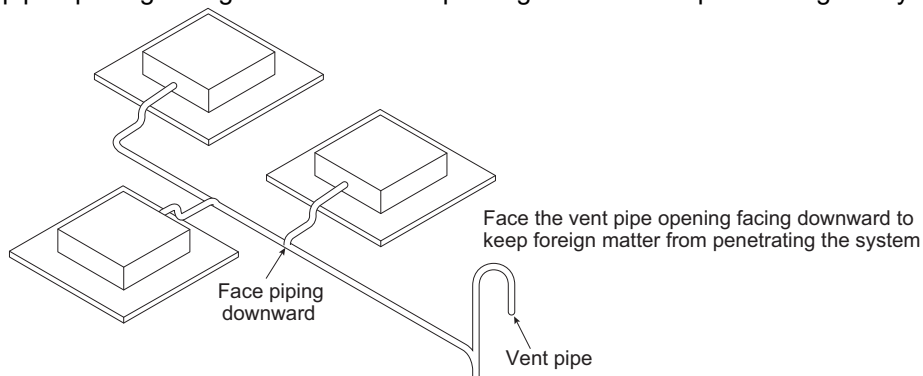
8. Installation

⚠ 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.

8.4.5 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

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	ABNW18GM1A0 [CM18 N14], ABNW24GM1A0 [CM24 N14] ABNW30GM1A0 [UM30 N14], ABNW36GM2A0 [UM36 N24] ABNW42GM2A0 [UM42 N24], ABNW48GM3A0 [UM48 N34] ABNW60GM3A0 [UM60 N34]
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	ABDPG
	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	X
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ABNW18GM1A0 [CM18 N14], ABNW24GM1A0 [CM24 N14], ABNW30GM1A0 [UM30 N14], ABNW36GM2A0 [UM36 N24], ABNW42GM2A0 [UM42 N24], ABNW48GM3A0 [UM48 N34], ABNW60GM3A0 [UM60 N34]
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	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 ₂ 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*	PWFMD200	-	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. 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))

• *** : In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

2. Specifications

Model Name				ABNW18GM1A0 [CM18 N14]	ABNW24GM1A0 [CM24 N14]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
				220, 1, 60	220, 1, 60	
Power Input			W	80	90	
Running Current			A	0.40	0.50	
Dimensions	Body		W x H x D	mm	900 × 270 × 700	
			W x H x D	inch	35-7/16 x 10-5/8 x 27-9/16	
Net Weight			kg (lbs)	23.8 (52.5)	24.2 (53.4)	
Heat Exchanger	(Row x Column x Fins per inch) x No.			-	(2 x 13 x 18) x 1	
	Face Area			m ² (ft ²)	0.21 (2.25)	
Fan	Type			-	Sirocco Fan	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	16.5 / 14.5 / 13.0	
			H / M / L	ft ³ /min	582 / 512 / 459	
			External Static Pressure	Pa (mmAq)	58.8 (6)	
Fan Motor	Type			-	BLDC	
	Output			W x No.	136.5 x 1	
Sound Pressure Level			H / M / L	dB(A)	34 / 32 / 30	
Sound Power Level			Max.	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(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices				-	Fuse	
				-	-	
Power and Communication Cable (included Earth)				No. x mm ² (AWG)	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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
 - 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 Zero.
- * : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

2. Specifications

Model Name				ABNW30GM1A0 [UM30 N14]	ABNW36GM2A0 [UM36 N24]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
				220, 1, 60	220, 1, 60	
Power Input			W	150	210	
Running Current			A	0.80	1.30	
Dimensions	Body	W x H x D	mm	900 × 270 × 700	1,250 × 270 × 700	
		W x H x D	inch	35-7/16 x 10-5/8 x 27-9/16	49-7/32 x 10-5/8 x 27-9/16	
Net Weight	Body		kg (lbs)	25.3 (55.8)	36.0 (79.4)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 13 x 18) x 1	(2 x 13 x 18) x 1	
	Face Area		m ² (ft ²)	0.21 (2.25)	0.30 (3.27)	
Fan	Type		-	Sirocco Fan	Sirocco Fan	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	22.0 / 20.0 / 18.0	32.0 / 28.0 / 24.0
			H / M / L	ft ³ /min	777 / 706 / 635	1,130 / 988 / 847
			External Static Pressure	Pa (mmAq)	58.8 (6)	58.8 (6)
Fan Motor	Type		-	BLDC	BLDC	
	Output		W x No.	136.5 x 1	295 x 1	
Sound Pressure Level		H / M / L	dB(A)	37 / 35 / 34	36 / 34 / 33	
Sound Power Level		Max.	dB(A)	62	60	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)	
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse	Fuse	
			-	-	-	
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

Model Name				ABNW42GM2A0 [UM42 N24]	ABNW48GM3A0 [UM48 N34]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
				220, 1, 60	220, 1, 60	
Power Input			W	260	180	
Running Current			A	1.50	1.10	
Dimensions	Body	W x H x D	mm	1,250 × 270 × 700	1,250 × 360 × 700	
		W x H x D	inch	49-7/32 x 10-5/8 x 27-9/16	49-7/32 x 14-3/16 x 27-9/16	
Net Weight	Body		kg (lbs)	37.0 (81.6)	42.5 (93.7)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 13 x 18) x 1	(3 x 16 x 18) x 1	
	Face Area		m ² (ft ²)	0.30 (3.27)	0.36 (3.85)	
Fan	Type		-	Sirocco Fan	Sirocco Fan	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	38.0 / 33.0 / 28.0	40.0 / 34.0 / 28.0
			H / M / L	ft ³ /min	1,341 / 1,165 / 988	1,412 / 1,200 / 988
			External Static Pressure	Pa (mmAq)	58.8 (6)	58.8 (6)
Fan Motor	Type		-	BLDC	BLDC	
	Output		W x No.	295 x 1	290 x 1	
Sound Pressure Level		H / M / L	dB(A)	38 / 36 / 34	39 / 37 / 35	
Sound Power Level		Max.	dB(A)	62	65	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)	
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse	Fuse	
			-	-	-	
Power and Communication Cable (included Earth)			No. x mm ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)	

Note

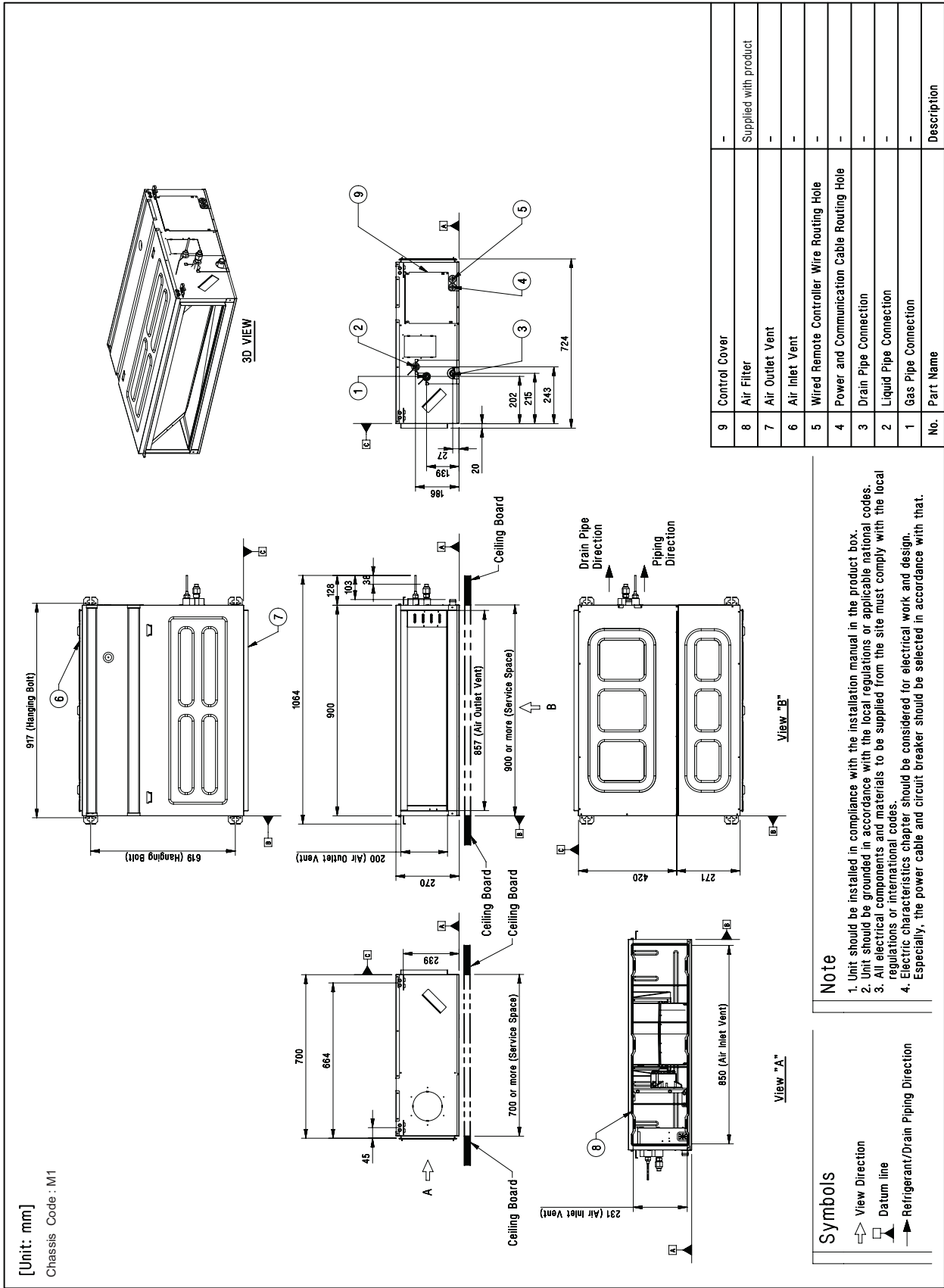
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

Model Name				ABNW60GM3A0 [UM60 N34]	
Power Supply			V, Ø, Hz	220-240, 1, 50	
				220, 1, 60	
Power Input			W	290	
Running Current			A	1.65	
Dimensions	Body		W x H x D	mm	1,250 × 360 × 700
			W x H x D	inch	49-7/32 x 14-3/16 x 27-9/16
Net Weight	Body		kg (lbs)	42.5 (93.7)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 16 x 18) x 1	
	Face Area		m ² (ft ²)	0.36 (3.85)	
Fan	Type		-	Sirocco Fan	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	50.0 / 45.0 / 40.0
			H / M / L	ft ³ /min	1,765 / 1,589 / 1,412
			External Static Pressure	Pa (mmAq)	58.8 (6)
Fan Motor	Type		-	BLDC	
	Output		W x No.	290 x 1	
Sound Pressure Level		H / M / L	dB(A)	42 / 40 / 39	
Sound Power Level		Max.	dB(A)	66	
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	
	Gas		mm(inch)	Ø 15.88 (5/8)	
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse	
			-	-	
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoot 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 Zero.					

3. Dimensions

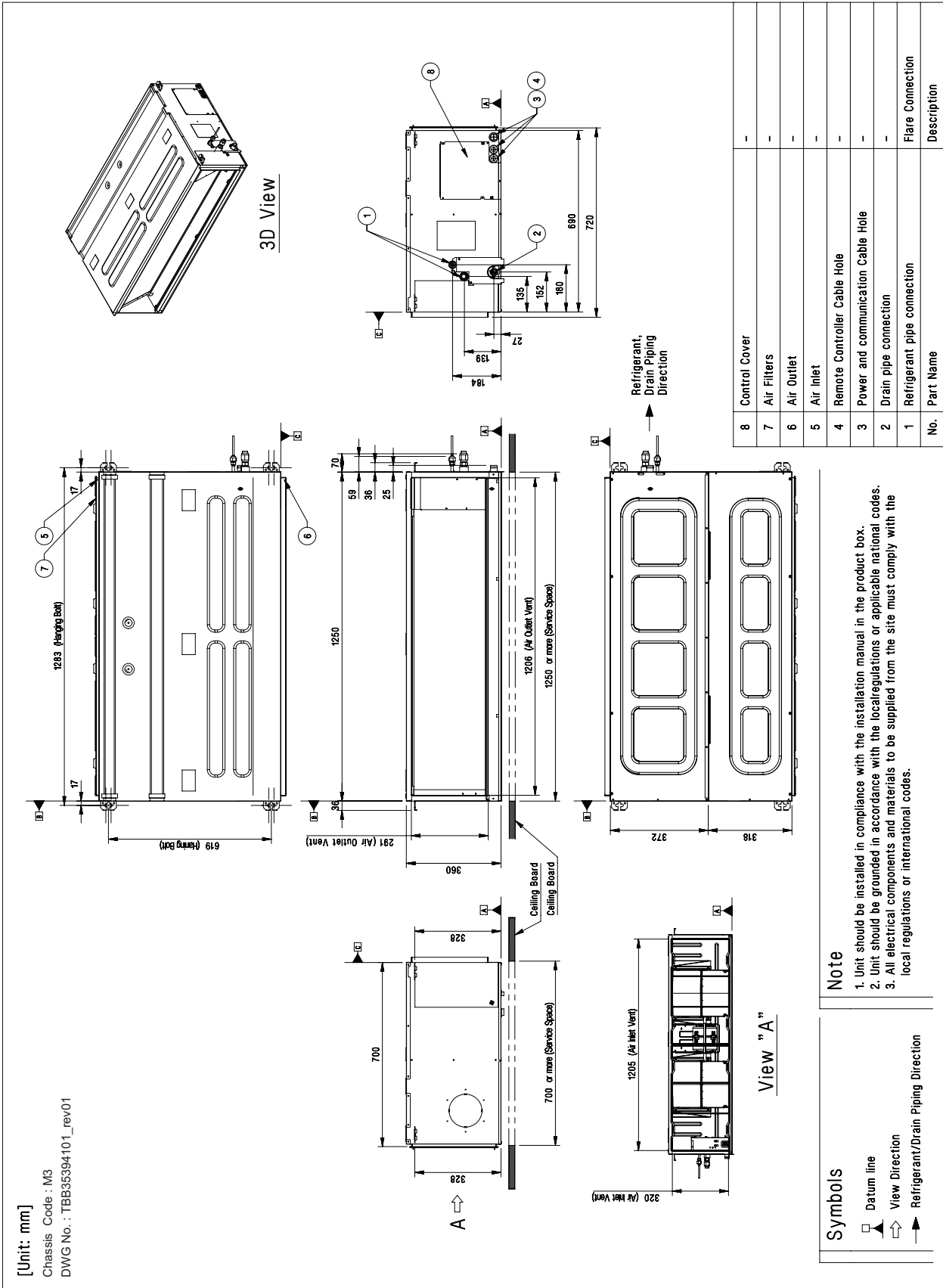
ABNW18GM1A0 [CM18 N14] / ABNW24GM1A0 [CM24 N14] / ABNW30GM1A0 [UM30 N14]



ABNW36GM2A0 [UM36 N24] / ABNW42GM2A0 [UM42 N24]

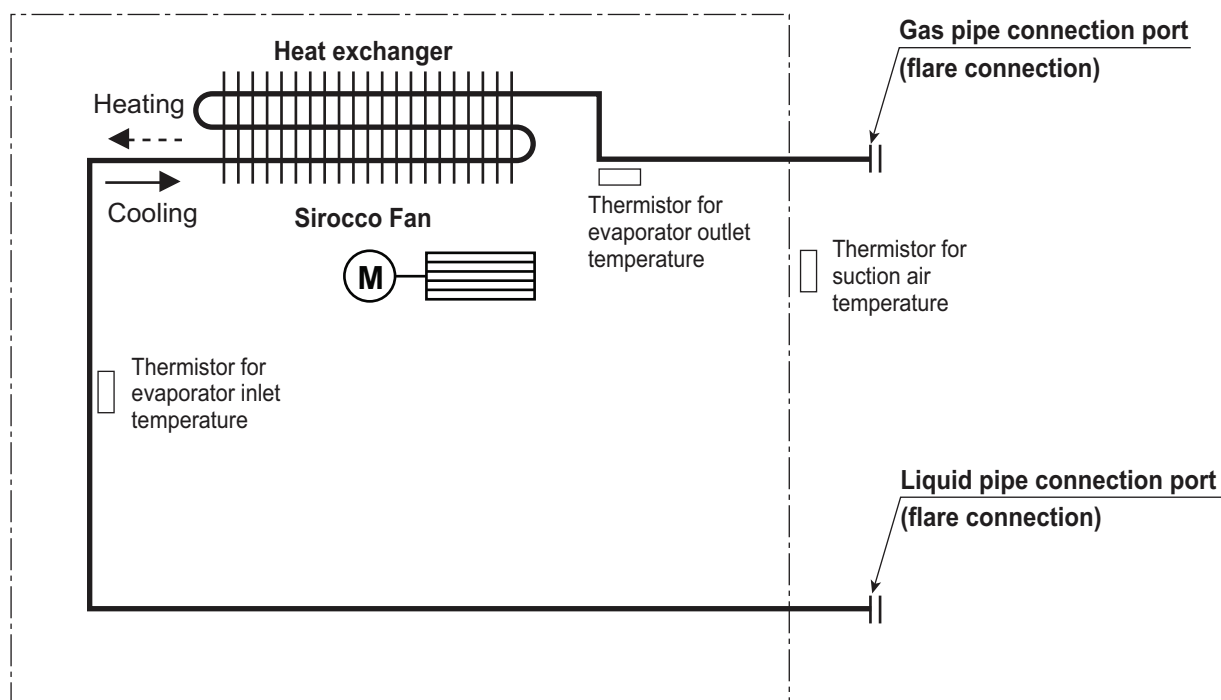
3. Dimensions

ABNW48GM3A0 [UM48 N34] / ABNW60GM3A0 [UM60 N34]



4. Piping diagrams

■ Model : ABNW-GM1A0 [CM- N14]



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

◆ Refrigerant pipe connection port diameters

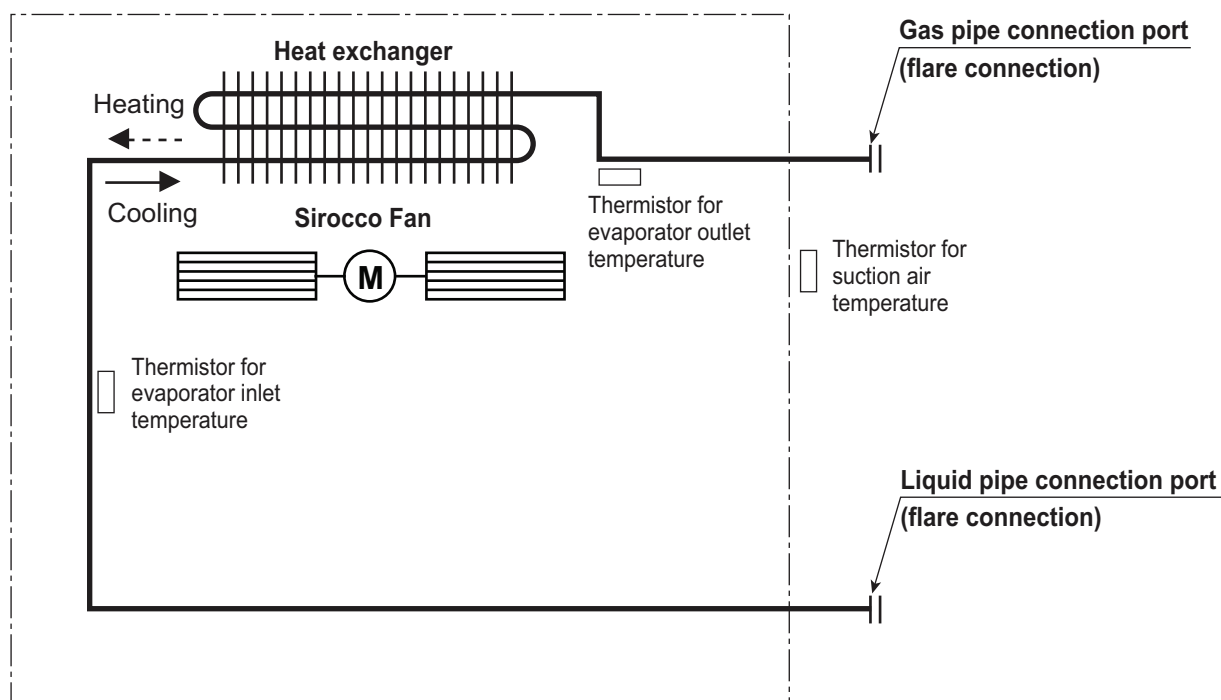
[Unit : mm]

Model	Gas	Liquid
ABNW18GM1A0 [CM18 N14]	Ø12.7	Ø6.35
ABNW24GM1A0 [CM24 N14]	Ø15.88	Ø9.52
	* Ø12.7	* Ø6.35
ABNW30GM1A0 [CM30 N14]	Ø15.88	Ø9.52

* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

4. Piping diagrams

■ Models : ABNW-GM2A0 [CM- N24], ABNW-GM3A0 [CM- N34]



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

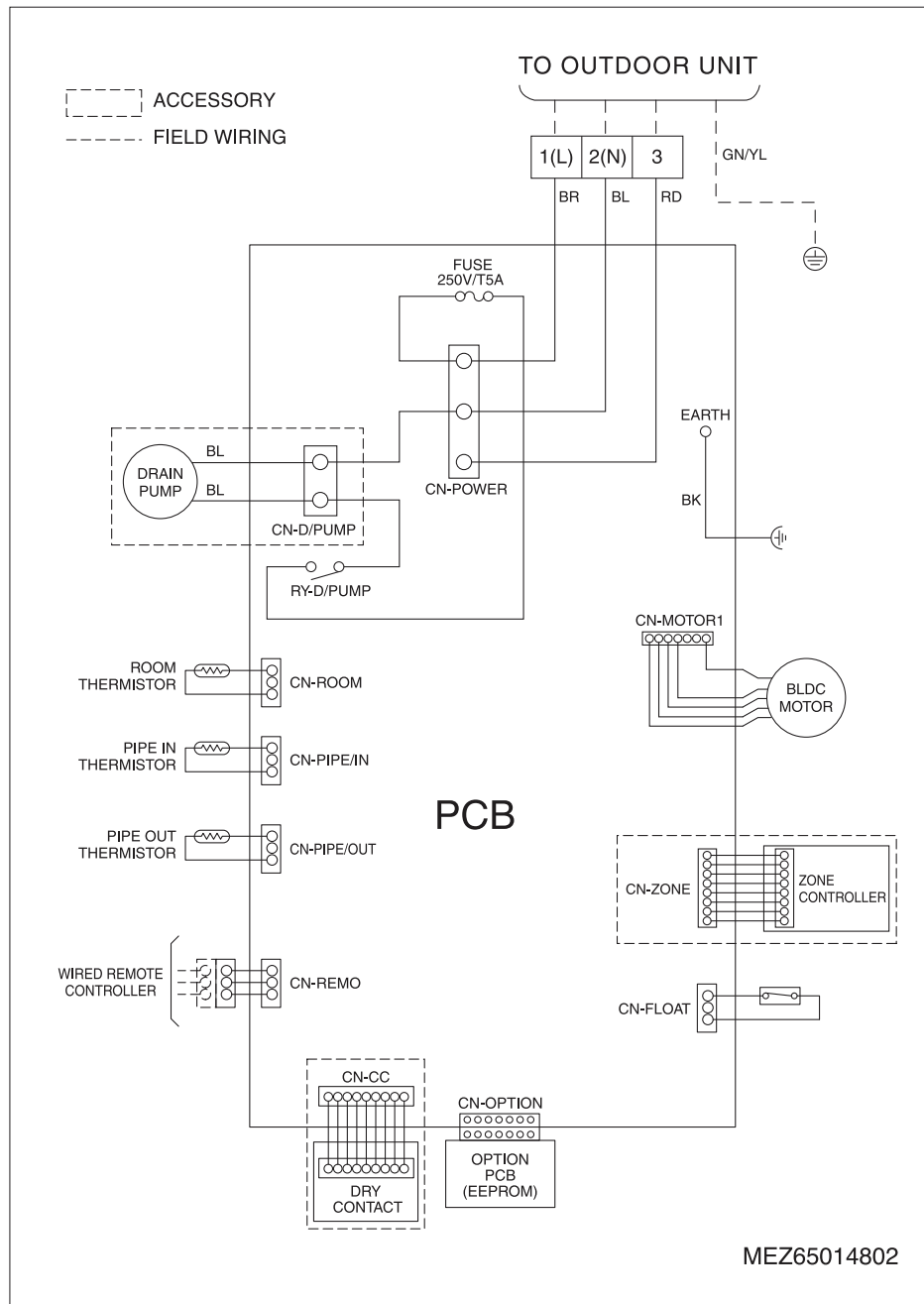
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
ABNW36GM2A0 [CM36 N24] ABNW42GM2A0 [CM42 N24] ABNW48GM3A0 [CM48 N34] ABNW60GM3A0 [CM60 N34]	Ø15.88	Ø9.52

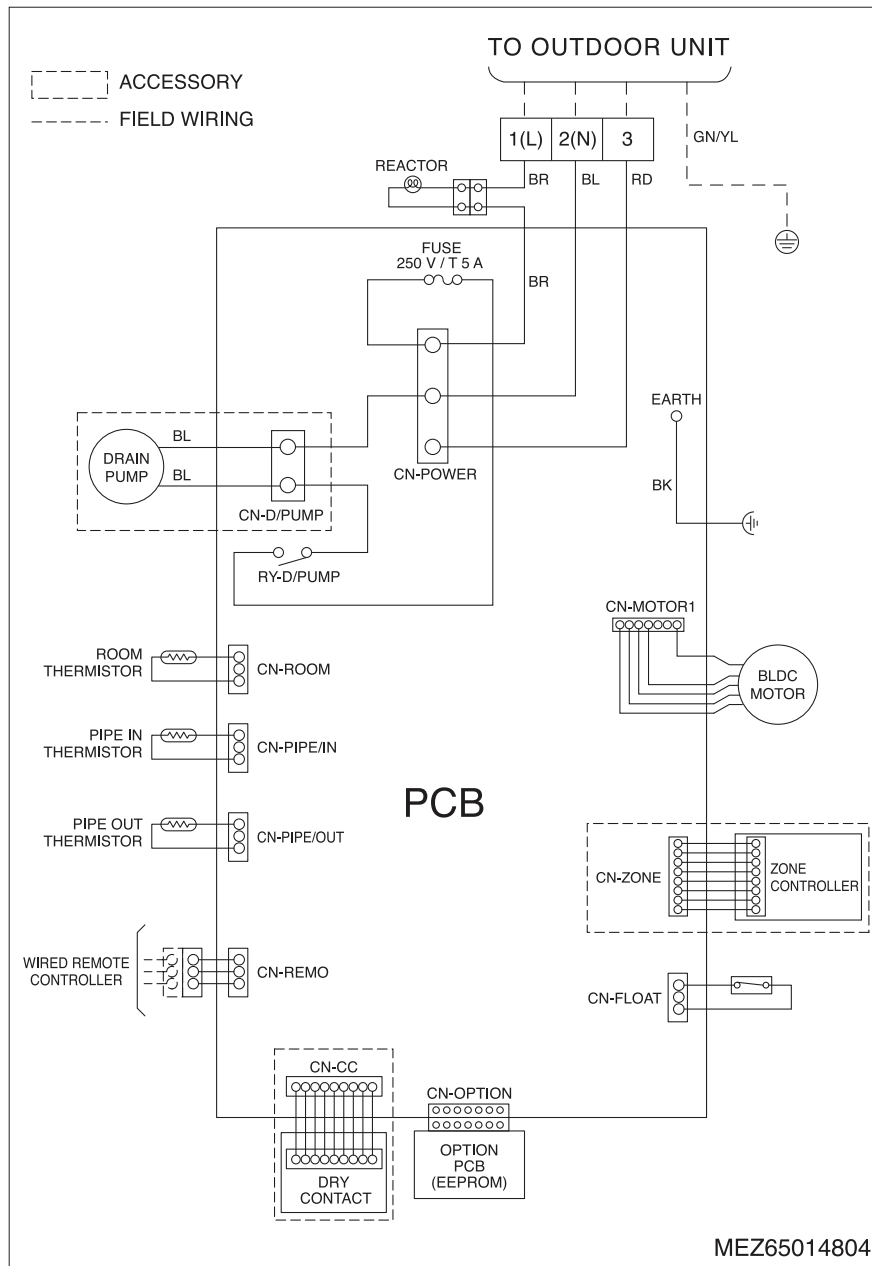
5. Wiring Diagrams

■ Model : ABNW18GM1A0 [CM18 N14]



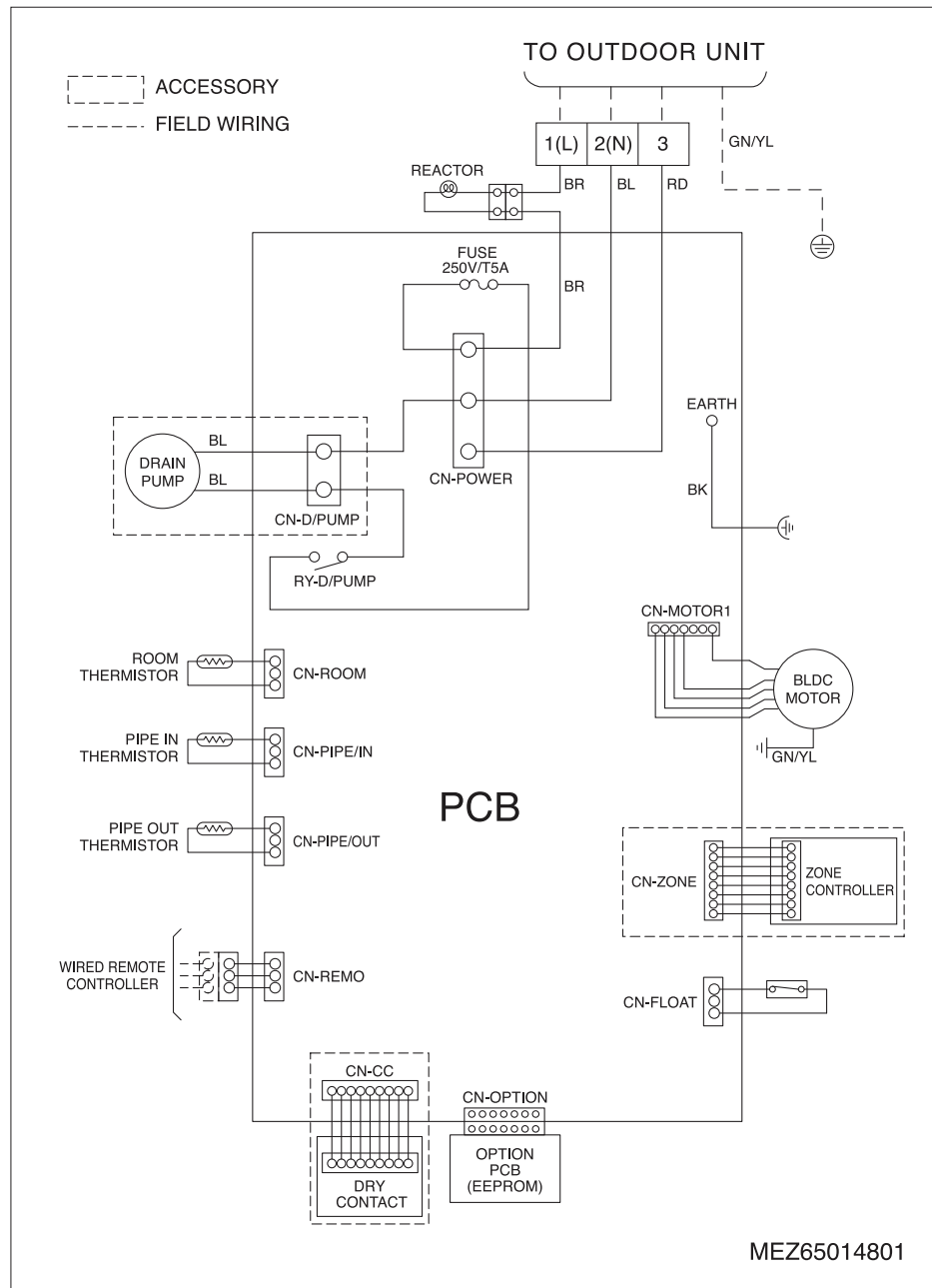
5. Wiring Diagrams

■ Model : ABNW24GM1A0 [CM24 N14], ABNW30GM1A0 [CM30 N14]



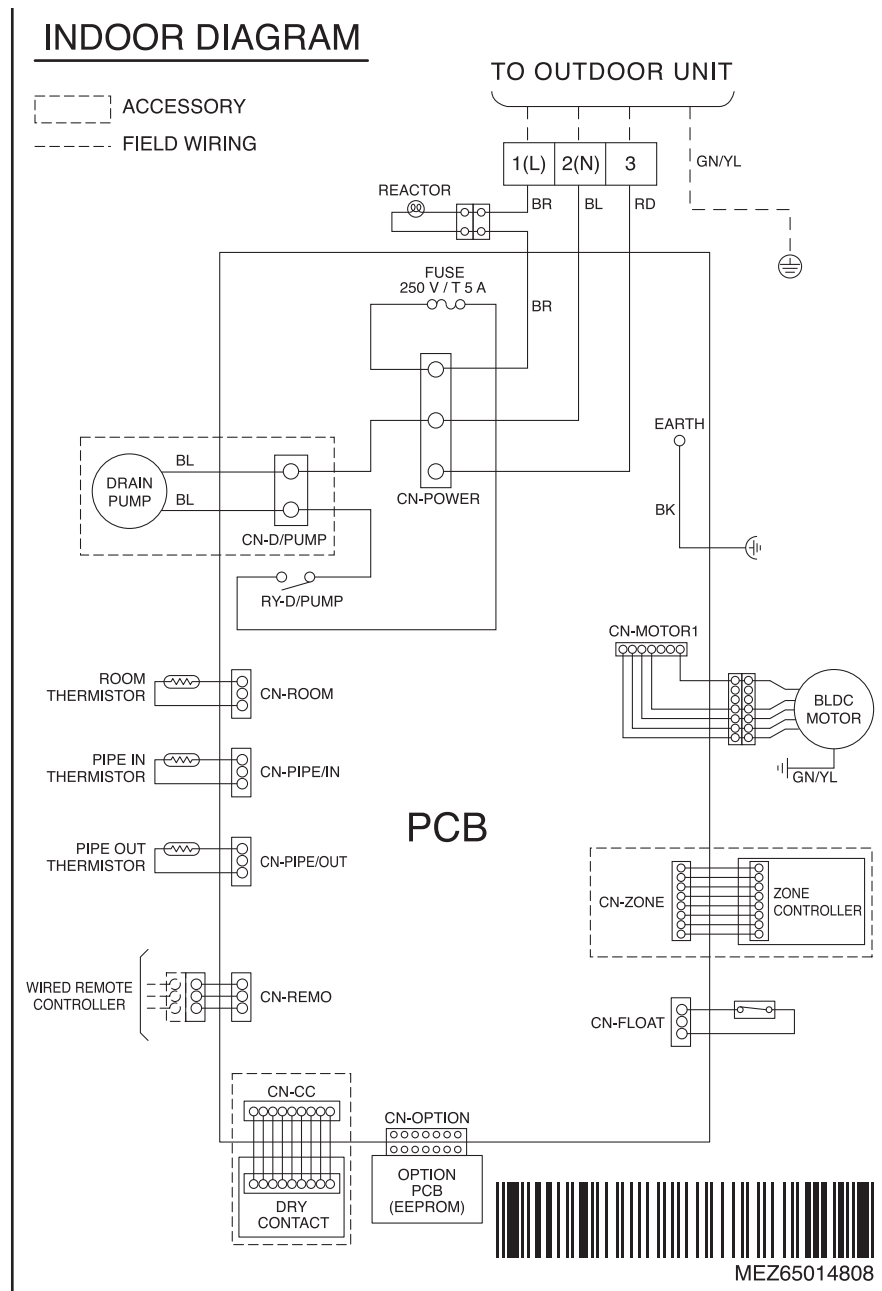
5. Wiring Diagrams

■ Model : ABNW36GM2A0 [CM36 N24], ABNW42GM2A0 [CM42 N24]



5. Wiring Diagrams

■ Model : ABNW48GM3A0 [CM48 N34], ABNW60GM3A0 [CM60 N34]

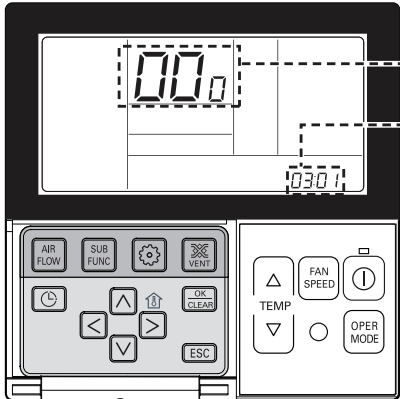


6. External Static Pressure & Air Flow

■ How to Set E.S.P. on the remote controller?







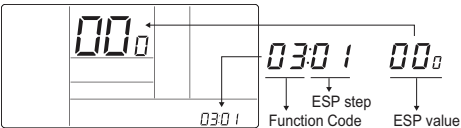


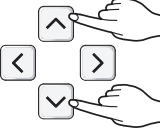



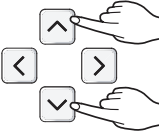





This is the function that decides the strength of the wind for each wind level and because this function is to make the installation easier.

- If you set ESP incorrectly, the air conditioner may malfunction.
- This setting must be carried out by a certificated-technician.



ESP value

Function code, ESP code

<p>1 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>4 Move to ESP value setting by pressing  button. (It is 000 when delivering from the warehouse.)</p>  
<p>2 If entering into ESP setup mode by using  button, it indicates as the picture below.</p> 	<p>5 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>3 Select ESP fan step by pressing   button. (01: very low, 02: low, 03: medium, 04: high, 05: very high)</p>  	<p>6 Select ESP fan step again by using   button and setup ESP value, as No. 4 and 5, that corresponds each wind flow</p> <p>7 Press  button to save.</p>  <p>8 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.

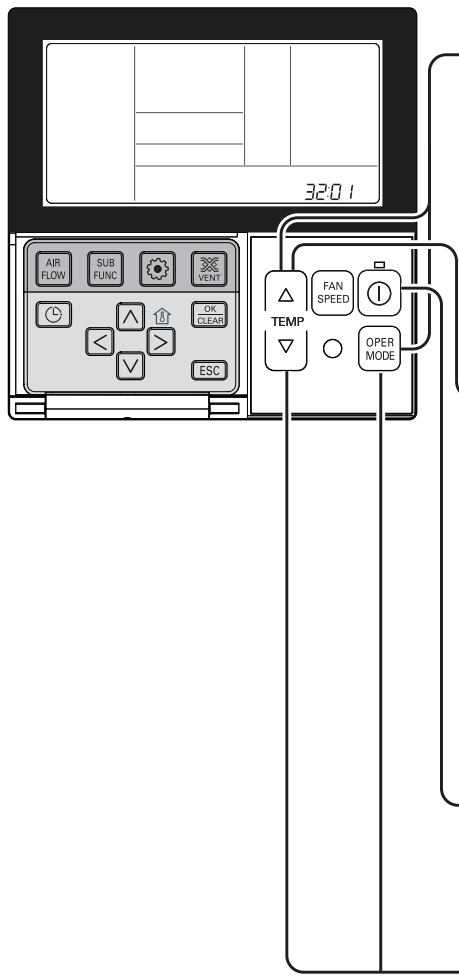
6. External Static Pressure & Air Flow




■ Installer Setting - Static Pressure Step Setting


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(s), down(t) 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

■ 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
ABNW18GM1A0 [CM18 N14]	LOW	13.0	74	76	79	85	93	103	111	117	120	125	128
	MID	14.5	79	81	84	89	97	107	114	121	125	128	131
	HIGH	16.5	85	87	90	94	103	110	118	125	128	131	134
ABNW24GM1A0 [CM24 N14]	LOW	14.5	79	81	84	89	97	107	114	121	125	128	131
	MID	16.5	85	87	90	94	103	110	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
ABNW30GM1A0 [UM30 N14]	LOW	18.0	96	102	107	104	114	118	122	125	127	132	134
	MID	20.0	102	110	114	110	121	125	127	130	133	135	137
	HIGH	22.0	110	117	121	118	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
ABNW36GM2A0 [UM36 N24]	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

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
ABNW42GM2A0 [UM42 N24]	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	141
	HIGH	38.0	117	120	124	127	130	133	135	138	141	144	147

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(68)	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
ABNW48GM3A0	LOW	28	74	76	79	82	89	92	94	96	99	102	107
	MID	34	78	82	84	89	94	96	98	101	104	106	112
	HIGH	40	83	89	92	94	98	1000	102	105	108	110	116

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(68)	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
ABNW60GM3A0	LOW	40	82	89	92	94	98	100	102	105	108	110	113
	MID	45	90	92	96	98	102	104	106	109	112	114	117
	HIGH	50	94	97	1000	104	107	109	112	115	117	119	121

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)
ABNW18GM1A0	6(59)
ABNW24GM1A0	
ABNW30GM1A0	
ABNW36GM2A0	
ABNW42GM2A0	
ABNW48GM3A0	
ABNW60GM3A0	

* If it is zero static pressure, please set value below Maximum value.

Model	Maximum value
ABNW18GM1A0	115
ABNW24GM1A0	
ABNW30GM1A0	120
ABNW36GM2A0	
ABNW42GM2A0	
ABNW48GM3A0	98
ABNW60GM3A0	

6. External Static Pressure & Air Flow

■ Table 2

◆ ABNW18GM1A0 [CM18 N14], ABNW24GM1A0 [CM24 N14]

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))							
	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
700	11.3							
750	12.8							
800	14.4	11.4						
850	15.9	13.2	10.2					
900	17.5	15.0	12.0					
950	19.0	16.7	13.7	10.7				
1000	20.6	18.5	15.5	12.5				
1050	22.1	20.3	17.3	14.3	11.1			
1100	23.7	22.1	19.0	16.1	13.1	10.0		
1150		23.8	20.8	17.9	15.1	12.2		
1200			22.6	19.7	17.1	14.3	11.3	
1250				21.5	19.1	16.5	13.6	11.9
1300				23.3	21.2	18.7	15.8	14.3
1350					23.2	20.8	18.0	16.7
1400						23.0	20.3	19.1
1450							22.5	21.5
1500								23.8

◆ ABNW30GM1A0 [CM30 N14]

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))							
	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
850	16.8	14.6						
900	18.1	15.9						
950	19.4	17.2	15.0					
1000	20.7	18.5	16.3	13.9				
1050	22.0	19.8	17.7	15.3	13.0			
1100	23.3	21.1	19.1	16.8	14.6			
1150	24.6	22.4	20.5	18.3	16.3	14.2		
1200	25.9	23.7	21.8	19.7	17.9	15.9	13.3	
1250		25.1	23.2	21.2	19.6	17.5	15.2	14.6
1300			24.6	22.7	21.2	19.2	17.1	16.3
1350				24.2	22.9	20.9	19.0	18.1
1400					24.5	22.6	20.9	19.9

◆ ABNW36GM2A0 [CM36 N24]

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))						
	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
850	24.9						
900	27.6	22.7					
950	30.4	25.7	20.7				
1000	33.1	28.7	24.0				
1050	35.9	31.7	27.3	20.8			
1100	38.6	34.7	30.5	24.3	20.6		
1150		37.8	33.8	27.9	23.8		
1200			37.1	31.4	27.0	22.4	20.5
1250				35.0	30.1	25.7	23.7
1280				37.1	32.0	27.6	25.7

Note

The above table shows the correlation between the air rates and E.S.P.

6. External Static Pressure & Air Flow

◆ ABNW42GM2A0 [CM42 N24]

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))						
	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
900	22.2						
950	25.1	22.3					
1000	28.0	25.4					
1050	30.9	28.5	23.3				
1100	33.8	31.6	26.8				
1150	36.7	34.8	30.3	24.4			
1200	39.7	37.9	33.8	28.3	23.5		
1250	42.6	41.0	37.3	32.2	27.5		
1300		44.1	40.8	36.1	31.6	26.1	
1350			44.3	40.0	35.6	30.4	28.0
1400				43.9	39.7	34.6	32.4
1450					43.7	38.9	36.8
1500						43.1	41.2
1550							45.6

◆ ABNW48GM3A0, ABNW60GM3A0

(Unit : CMM)

Setting value	Static Pressure (mmAq(Pa))						
	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
700	25.1						
750	29.5	26.1					
800	34.0	30.8	25.9				
850	38.4	35.4	30.6	23.2			
900	42.9	40.1	35.2	28.1	21.0		
950	47.3	44.8	39.9	33.1	26.3	19.5	
1000	51.8	49.4	44.6	38.0	31.7	25.2	22.6
1050	56.2	54.1	49.2	43.0	37.1	31.0	28.5
1100		58.8	53.9	47.9	42.4	36.7	34.4
1150			58.6	52.9	47.8	42.5	40.3
1200				57.8	53.1	48.2	46.1
1210					54.2	49.4	47.3

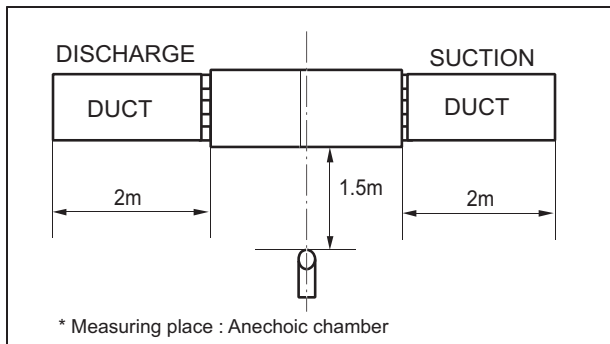
Note

The above table shows the correlation between the air rates and E.S.P.

7. Sound levels

7.1 Sound pressure level

Overall



Note

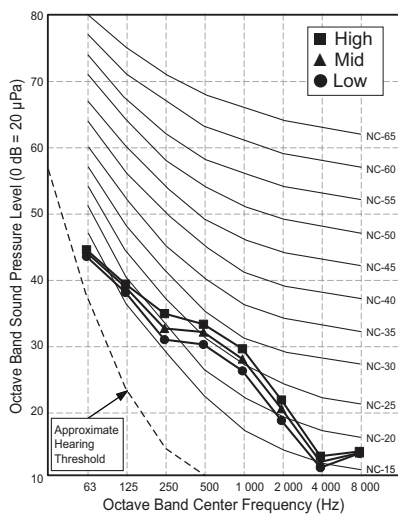
1. Sound measured at 1.5m away from the center of the unit.
2. Operating condition
 - Power source : 220-240V 50 Hz / 220V 60 Hz
 - Cooling : Indoor temperature (27°C DB, 19°C WB), Outdoor temperature (35°C DB, 24°C WB)
 - Heating : Indoor temperature (20°C DB, 15°C WB), Outdoor temperature (7°C DB, 6°C WB)
3. Reference acoustic intensity 0dB = 10E-6μW/m²
4. 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.

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)
ABNW18GM1A0 [CM18 N14]	34-32-30	35-33-32	36-35-34	38-37-36	40-39-38
ABNW24GM1A0 [CM24 N14]	35-34-32	36-35-34	37-36-35	39-38-37	41-40-39

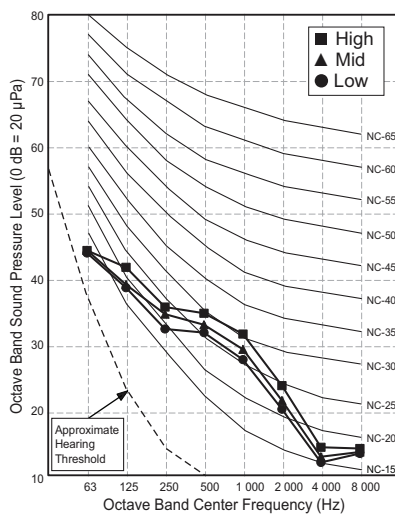
Model	Sound Pressure Levels (dB(A),H-M-L)					
	External Static Pressure [mmAq(Pa)]					
	2.5(25)	4(39)	5(49)	7(69)	10(98)	15(147)
ABNW30GM1A0 [UM30 N14]	37-35-34	39-37-35	40-38-36	41-39-38	42-41-39	43-42-41
ABNW36GM2A0 [UM36 N24]	-	36-34-33	37-36-34	38-37-35	39-38-37	42-40-39
ABNW42GM2A0 [UM42 N24]	-	-	38-36-34	40-39-37	41-40-39	44-43-42
ABNW48GM3A0 [UM48 N34]	-	-	39-37-35	40-38-36	41-39-37	43-42-41
ABNW60GM3A0 [UM60 N34]	-	-	42-40-39	43-41-40	44-42-40	45-44-43

◆ External Static Pressure 2.5(25) [mmAq(Pa)]

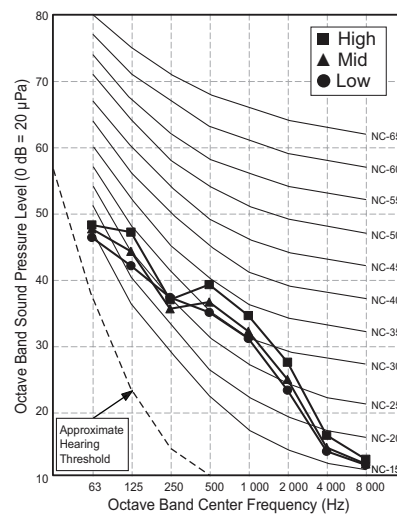
ABNW18GM1A0 [CM18 N14]



ABNW24GM1A0 [CM24 N14]



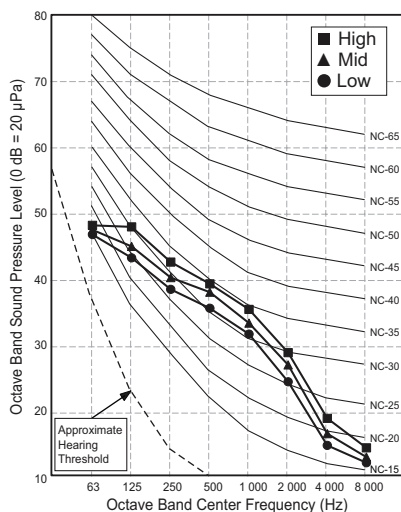
ABNW30GM1A0 [UM30 N14]



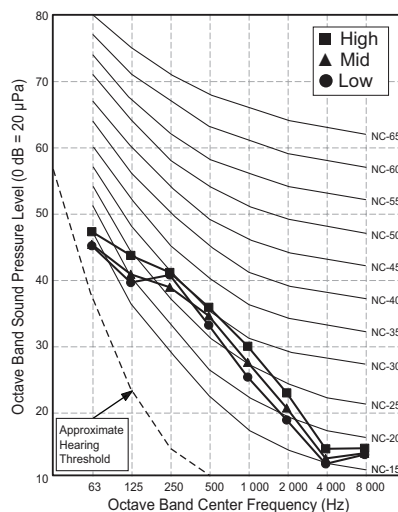
7. Sound levels

◆ External Static Pressure 4(39) [mmAq(Pa)]

ABNW30GM1A0 [UM30 N14]

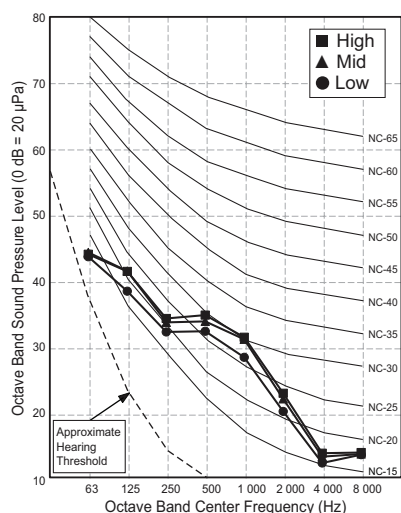


ABNW36GM2A0 [UM36 N24]

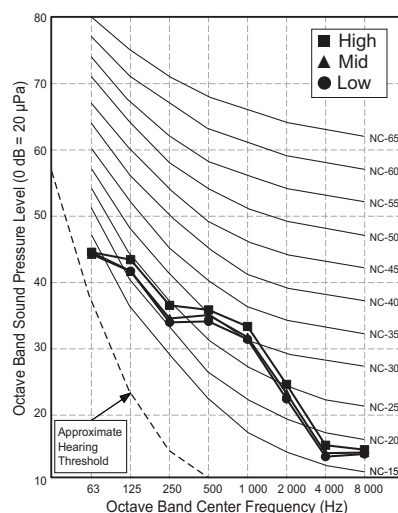


◆ External Static Pressure 5(49) [mmAq(Pa)]

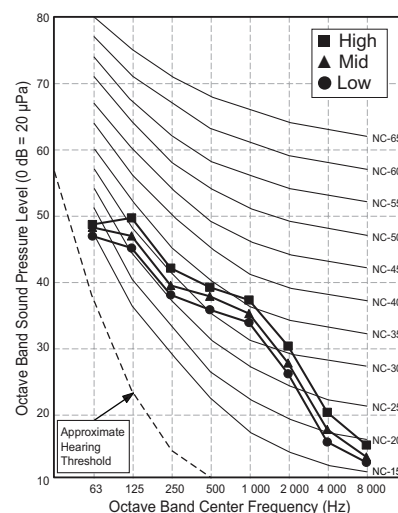
ABNW18GM1A0 [CM18 N14]



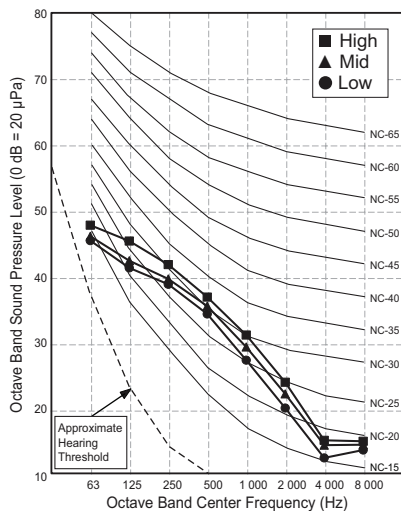
ABNW24GM1A0 [CM24 N14]



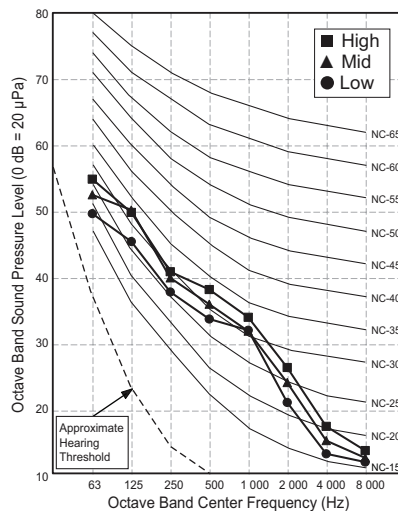
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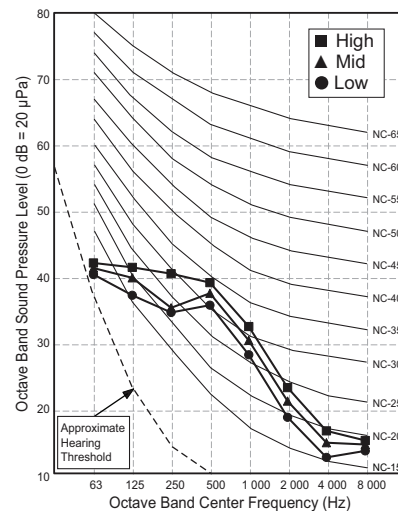
ABNW36GM2A0 [UM36 N24]



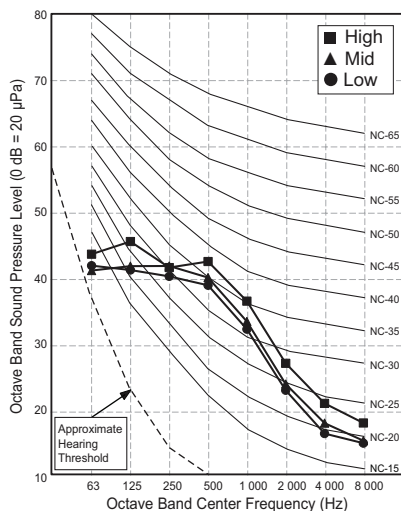
ABNW42GM2A0 [UM42 N24]



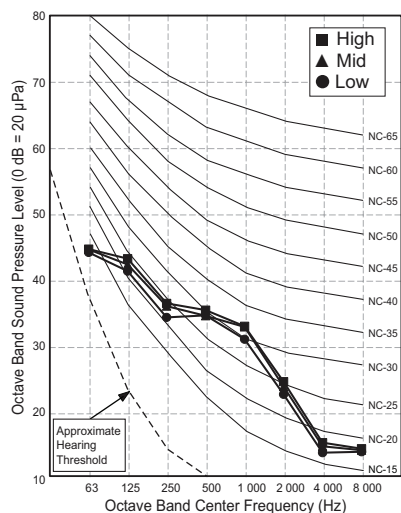
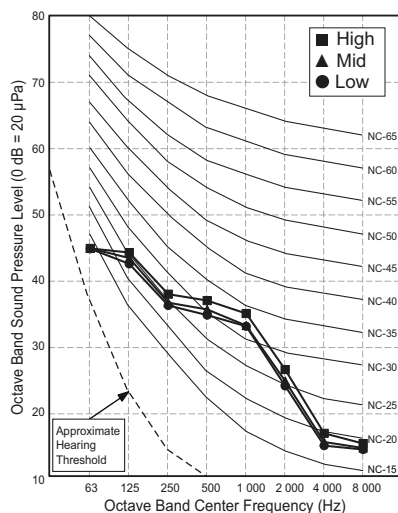
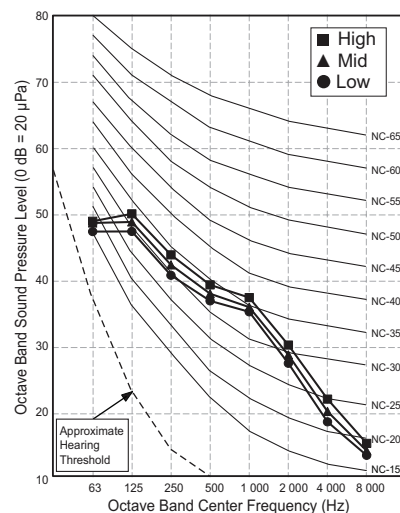
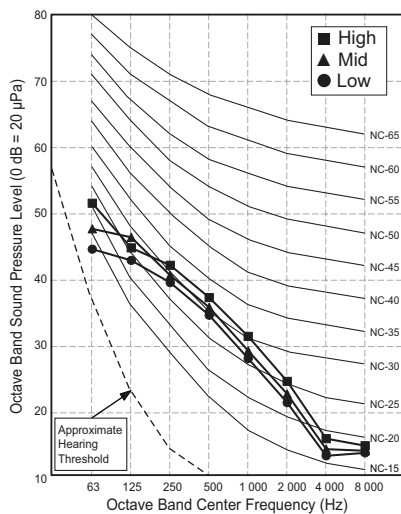
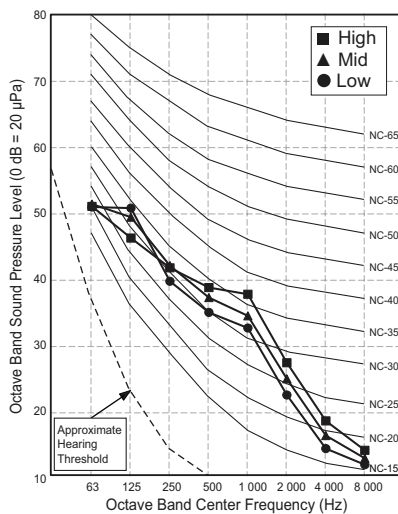
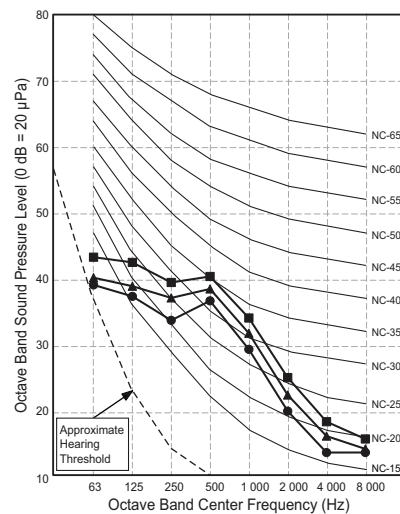
ABNW48GM3A0 [UM48 N34]



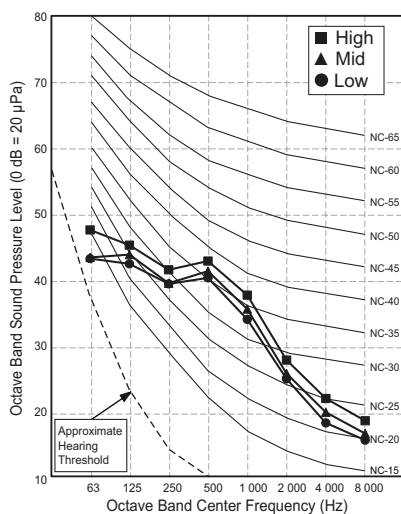
7. Sound levels

ABNW60GM3A0 [UM60 N34]


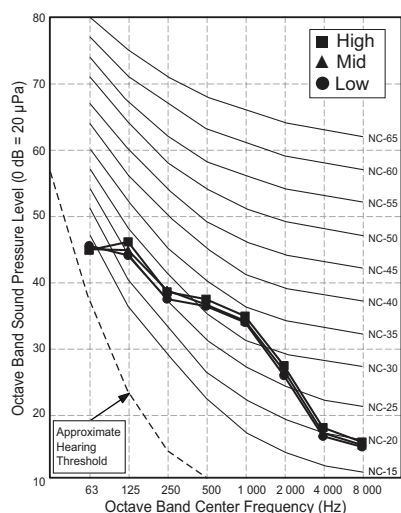
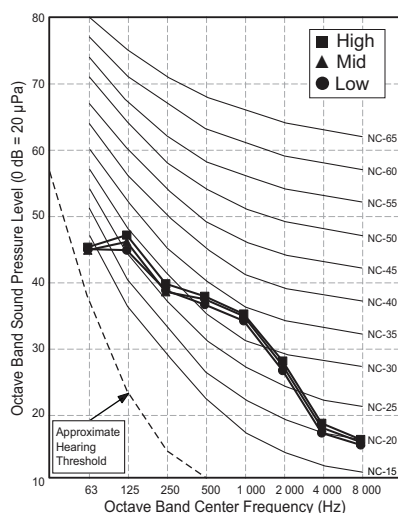
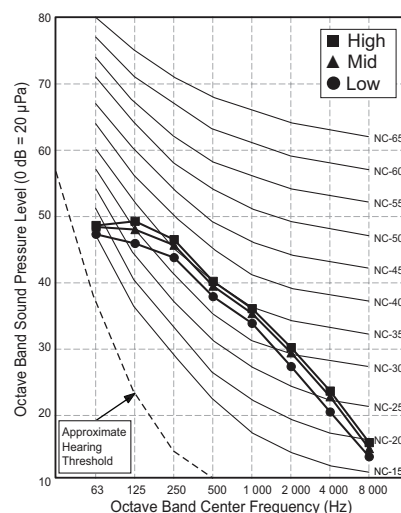
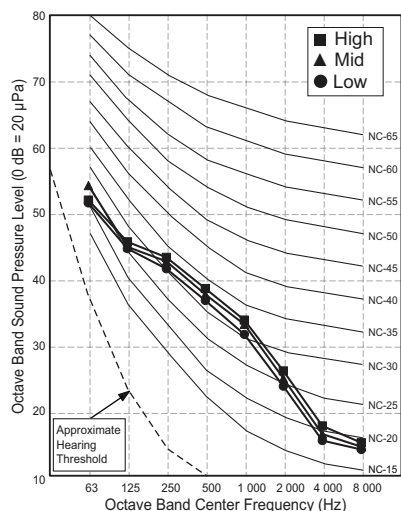
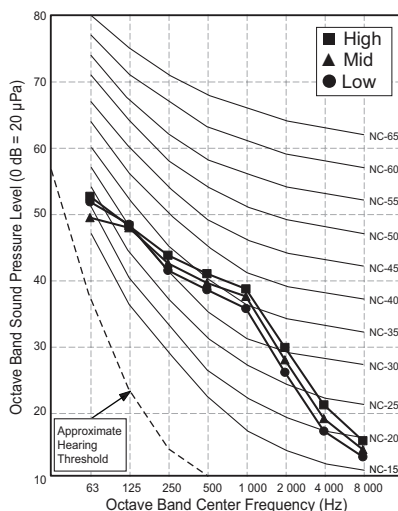
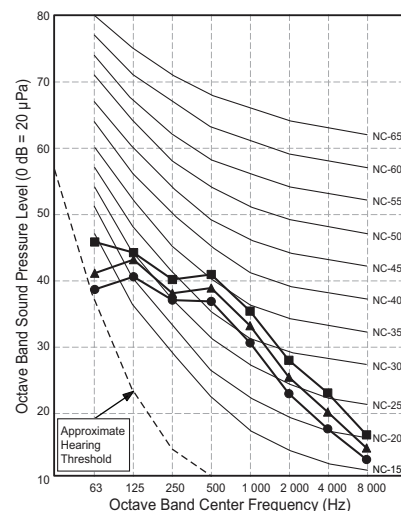
◆ External Static Pressure 7(69) [mmAq(Pa)]

ABNW18GM1A0 [CM18 N14]

ABNW24GM1A0 [CM24 N14]

ABNW30GM1A0 [UM30 N14]

ABNW36GM2A0 [UM36 N24]

ABNW42GM2A0 [UM42 N24]

ABNW48GM3A0 [UM48 N34]


7. Sound levels

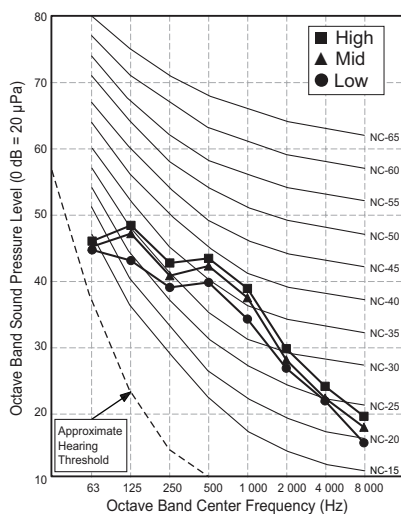
ABNW60GM3A0 [UM60 N34]


◆ External Static Pressure 10(98) [mmAq(Pa)]

ABNW18GM1A0 [CM18 N14]

ABNW24GM1A0 [CM24 N14]

ABNW30GM1A0 [UM30 N14]

ABNW36GM2A0 [UM36 N24]

ABNW42GM2A0 [UM42 N24]

ABNW48GM3A0 [UM48 N34]


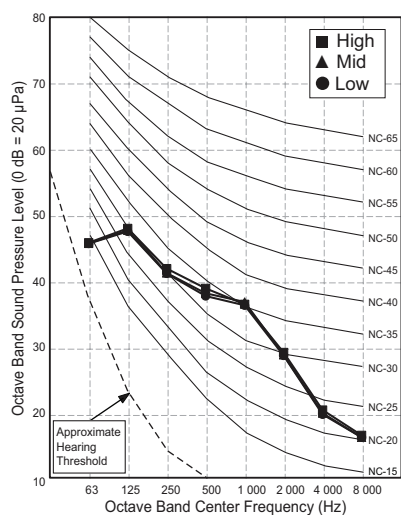
7. Sound levels

ABNW60GM3A0 [UM60 N34]

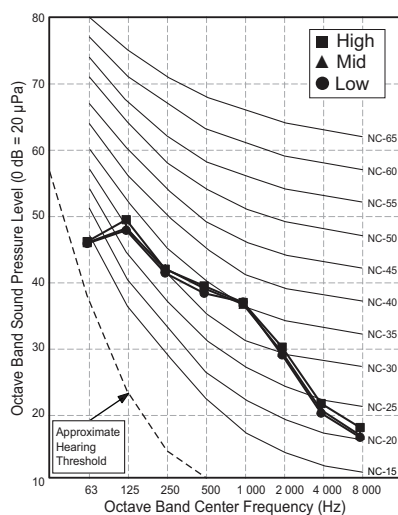


◆ External Static Pressure 15(147) [mmAq(Pa)]

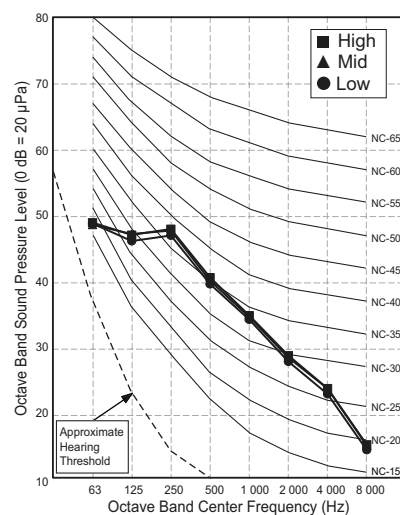
ABNW18GM1A0 [CM18 N14]



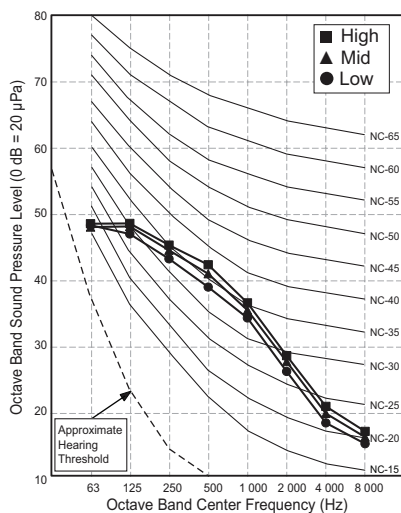
ABNW24GM1A0 [CM24 N14]



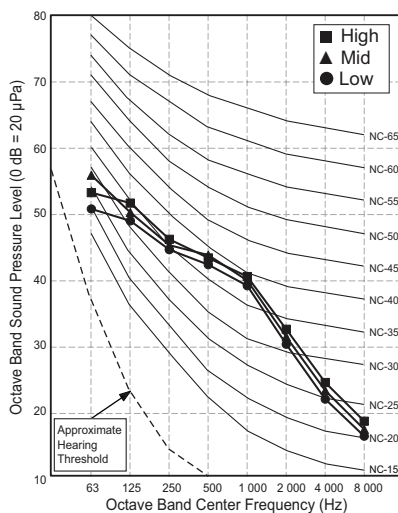
ABNW30GM1A0 [UM30 N14]



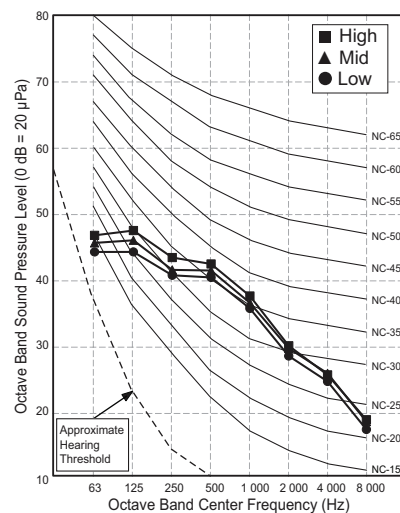
ABNW36GM2A0 [UM36 N24]



ABNW42GM2A0 [UM42 N24]

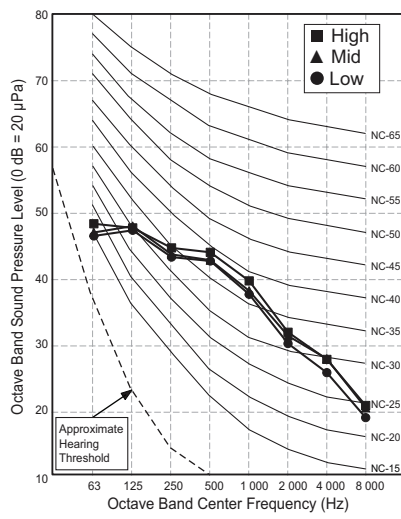


ABNW48GM3A0 [UM48 N34]



7. Sound levels

ABNW60GM3A0 [UM60 N34]



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 the specifications.

2. Reference acoustic intensity 0dB = 10E-6μW/m²

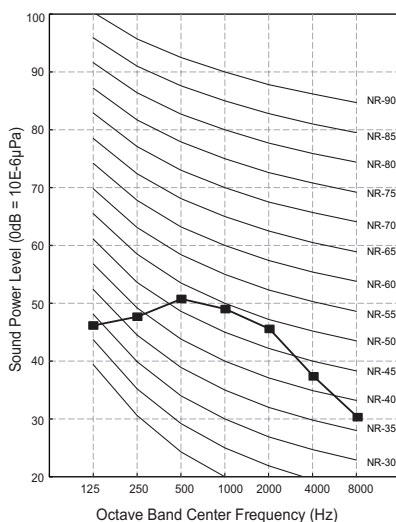
- ##### 3. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound Pressure Levels (dB(A),H-M-L)	
	External Static Pressure [mmAq(Pa)]	
	2.5(25)	
ABNW18GM1A0 [CM18 N14]	59	
ABNW24GM1A0 [CM24 N14]	60	
ABNW30GM1A0 [UM30 N14]	62	

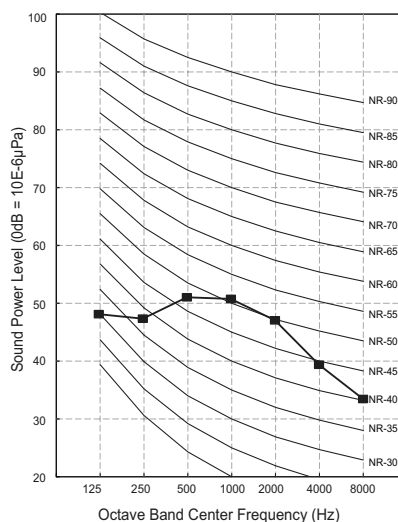
Model	Sound Pressure Levels (dB(A),H-M-L)	
	External Static Pressure [mmAq(Pa)]	
	4(39)	5(49)
ABNW36GM2A0 [UM36 N24]	60	-
ABNW42GM2A0 [UM42 N24]	-	62
ABNW48GM3A0 [UM48 N34]	-	65
ABNW60GM3A0 [UM60 N34]	-	66

◆ External Static Pressure 2.5(25) [mmAq(Pa)]

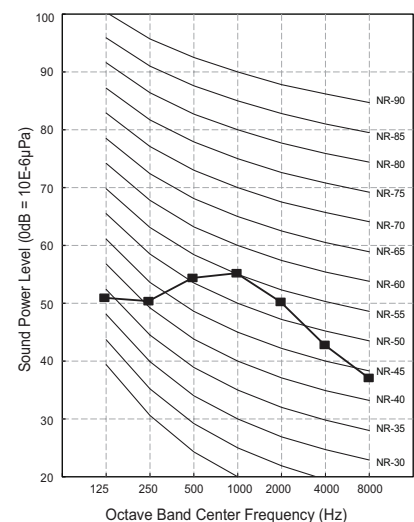
ABNW18GM1A0 [CM18 N14]



ABNW24GM1A0 [CM24 N14]



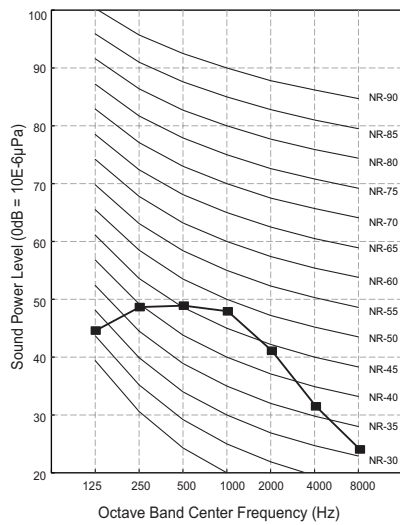
ABNW30GM1A0 [UM30 N14]



7. Sound levels

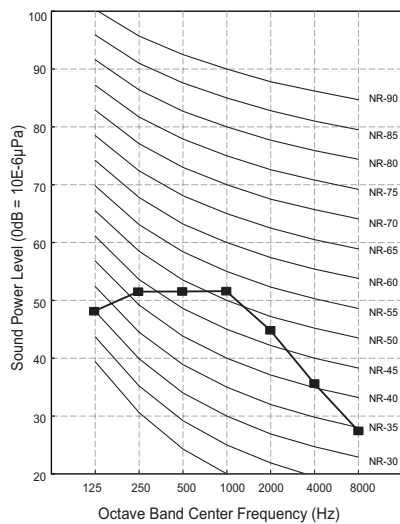
◆ External Static Pressure 4(39) [mmAq(Pa)]

ABNW36GM2A0 [UM36 N24]

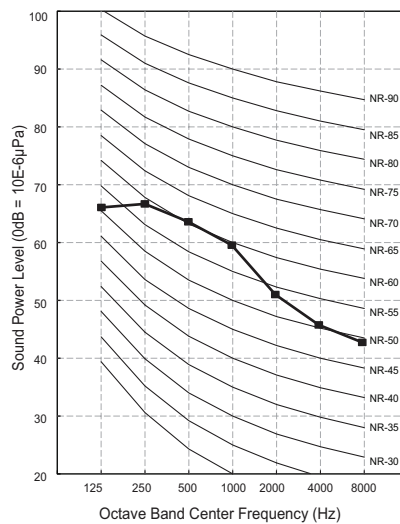


◆ External Static Pressure 5(49) [mmAq(Pa)]

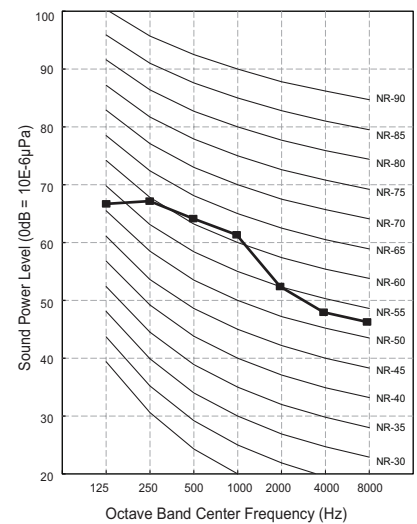
ABNW42GM2A0 [UM42 N24]



ABNW48GM3A0 [UM48 N34]



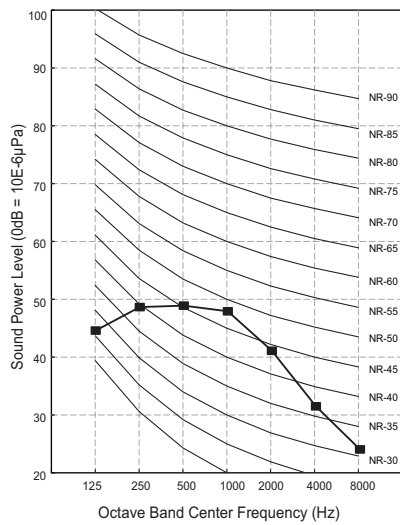
ABNW60GM3A0 [UM60 N34]



7. Sound levels

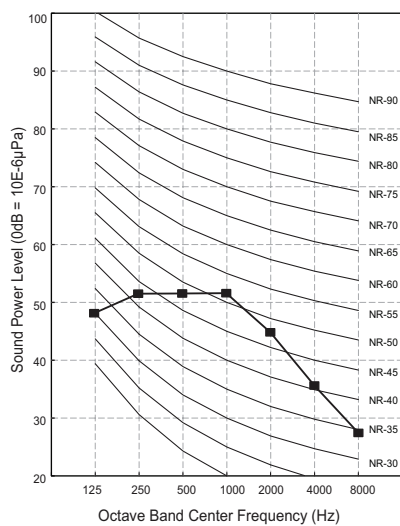
◆ External Static Pressure 4(39) [mmAq(Pa)]

ABNW36GM2A0 [UM36 N24]

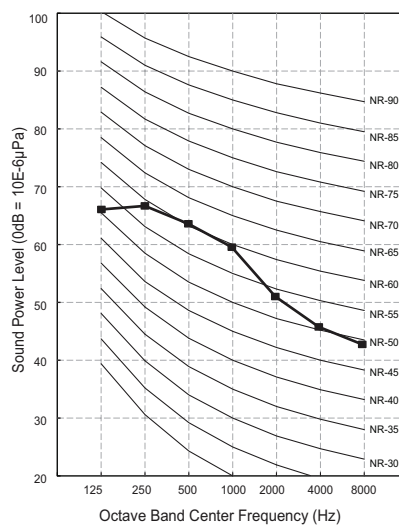


◆ External Static Pressure 5(49) [mmAq(Pa)]

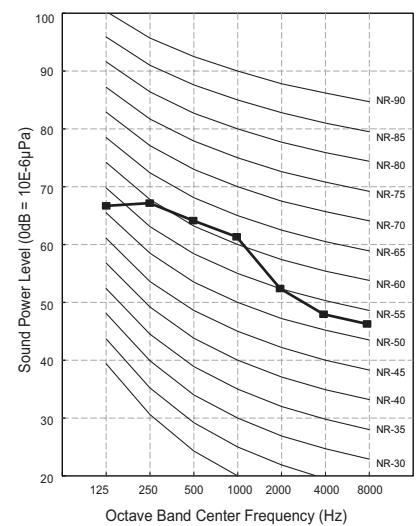
ABNW36GM2A0 [UM36 N24]



ABNW48GM3A0 [UM48 N34]

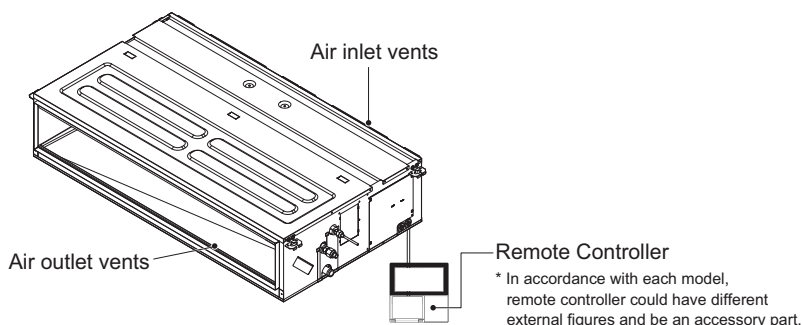


ABNW60GM3A0 [UM60 N34]



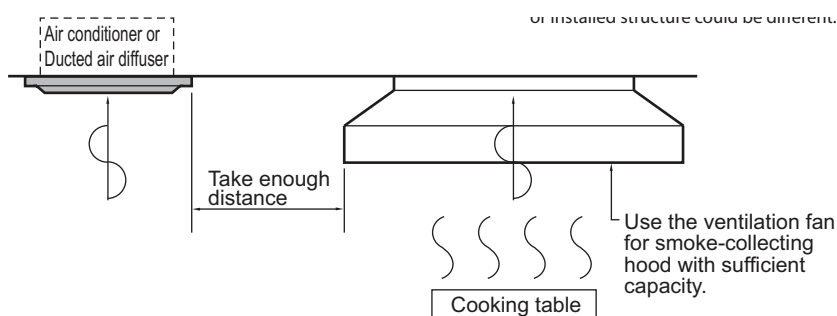
8. Installation

- 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.



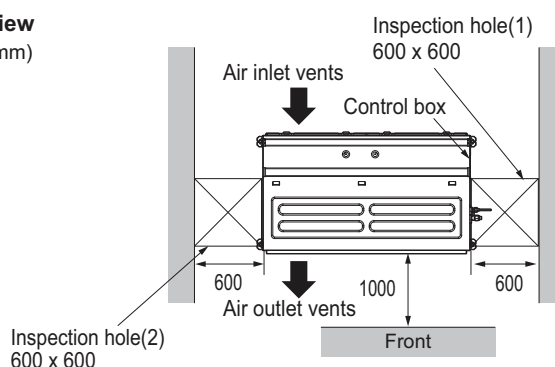
8. Installation

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.

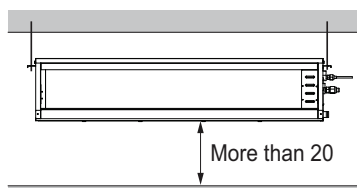
⚠ CAUTION

- 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

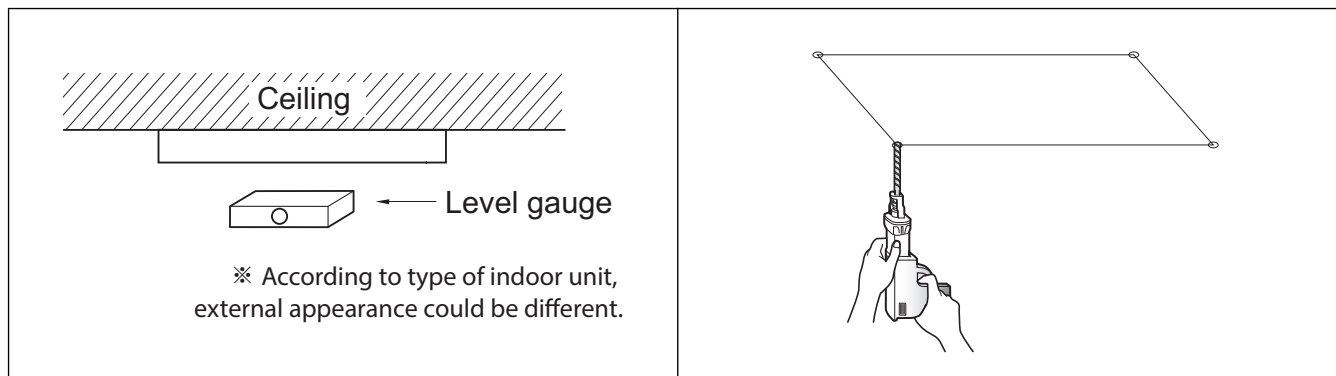
Distance between false ceiling & actual ceiling	Number of in spection hole	Remarks
More than 100cm	1	Sufficient space in the ceiling for servicing.
20cm to 100cm	2	Insufficient space. Difficult for servicing
Less than 20cm	Hole size should be more than the size of IDU.	Minimum height for motor replacement.

8. Installation

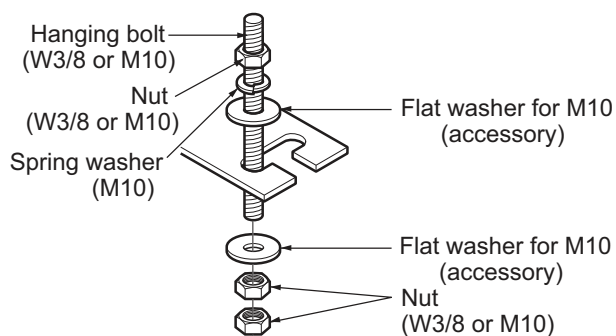
8.2 Ceiling dimension and hanging bolt location

⚠ 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.

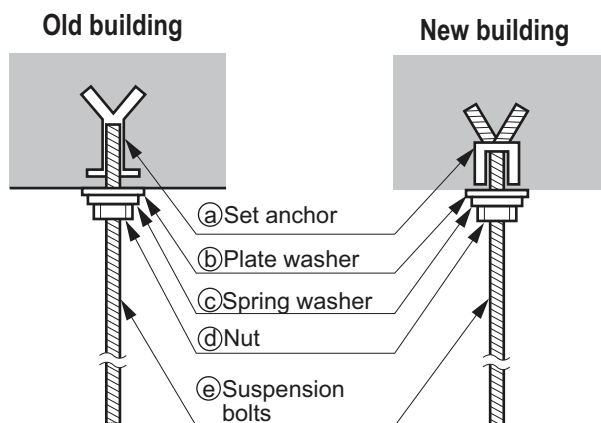


- The following parts are local purchasing.

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

⚠ CAUTION

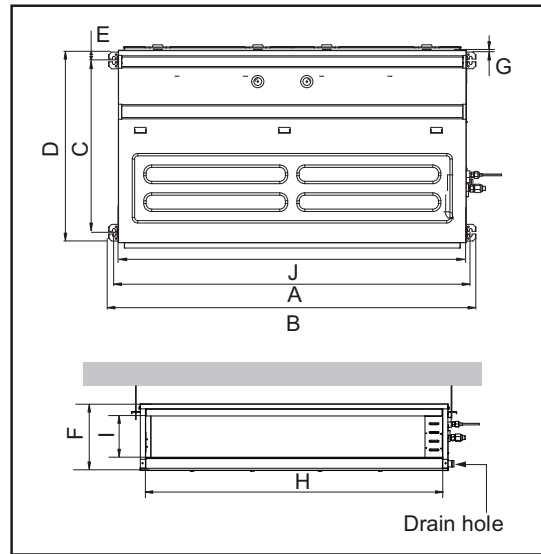
- Tighten the nut and bolt to prevent the unit from falling.



8. Installation

■ Installation dimension of Indoor unit

M1/M2/M3 Chassis



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	1283.4	1321.6	619.2	689.6	30	270	15.2	1208	201.4	1250
M3	1283.4	1321.6	619.2	689.6	30	360	15.2	1208	291.4	1250

8. Installation

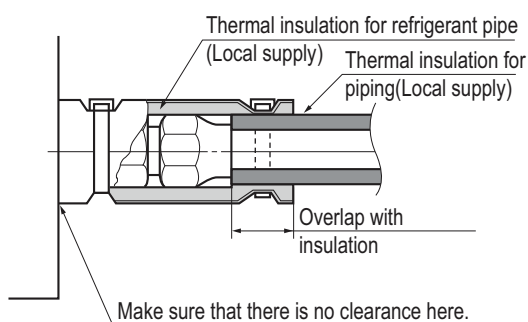
8.3 Connecting pipes to the indoor unit

■ 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

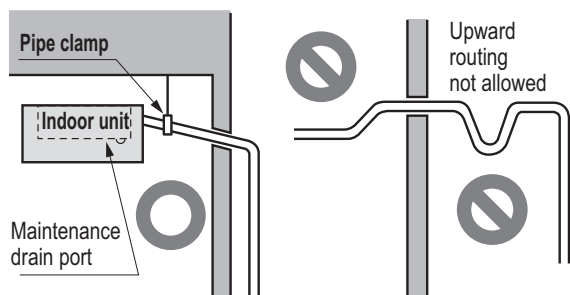
8.4 Indoor Unit Drain Piping

Important

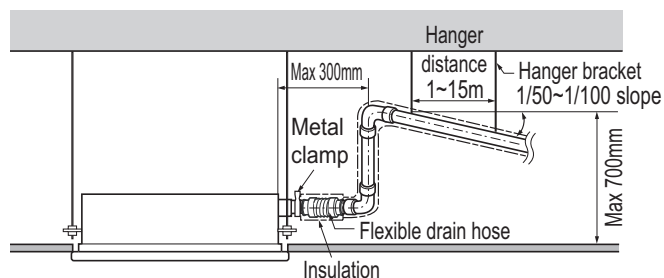
- The drain pipe should be at least equal in size to drain conduit of the indoor unit.
- The drain pipe is thermally insulated to prevent the formation of condensation inside the pipe.
- The drain up mechanism should be fitted before the indoor unit is installed and when the electricity has been connected 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.

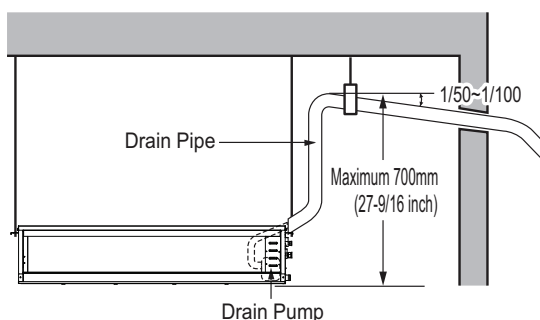


※ According to type of indoor unit, external appearance could be different.

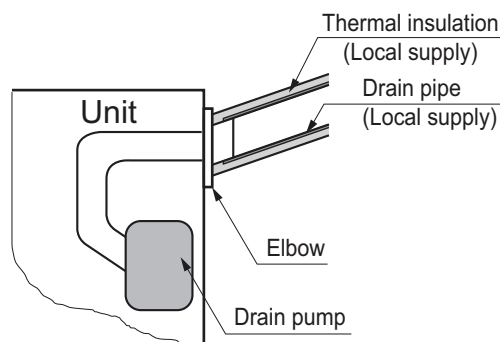


※ According to type of indoor unit, external appearance could be different.

- 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.

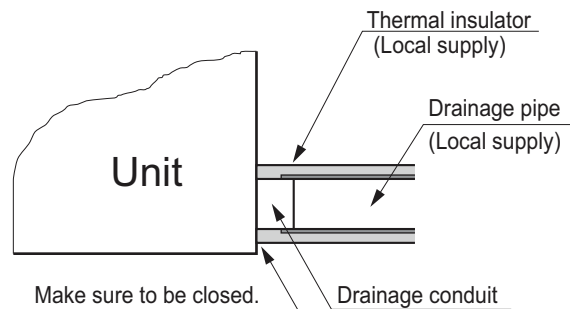
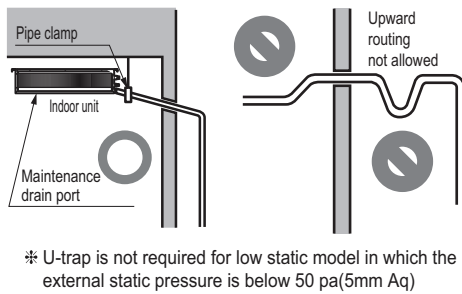


8.4.2 Drain pipe connection without drain pump

- 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 is 32 mm (1-1/4 inch).
 - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.
- Be sure to install heat insulation on the drain piping.

8. Installation

- Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).

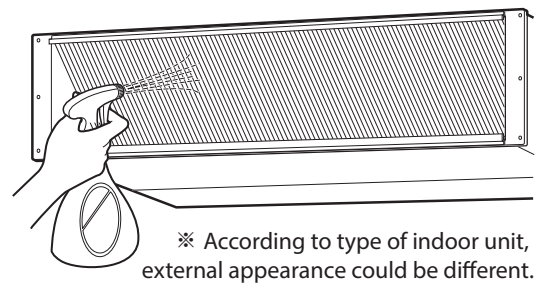


8.4.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

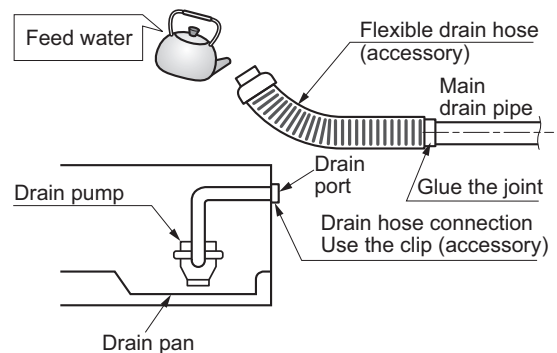
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

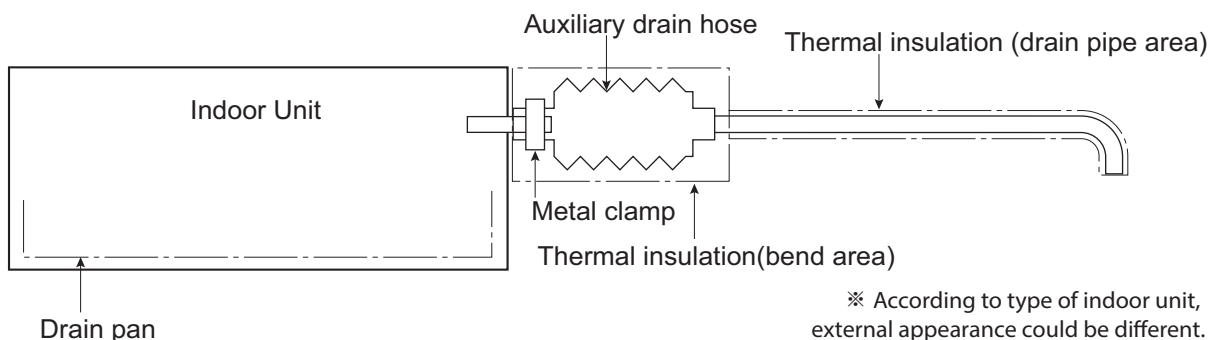
Use the following procedure to test the drain pump operation.

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.



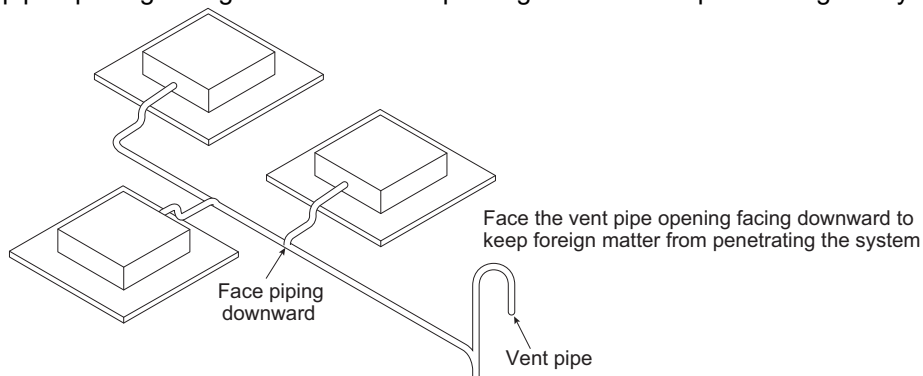
8. Installation

⚠ 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.

8.4.5 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

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 and visually 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 0.75mm² 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.

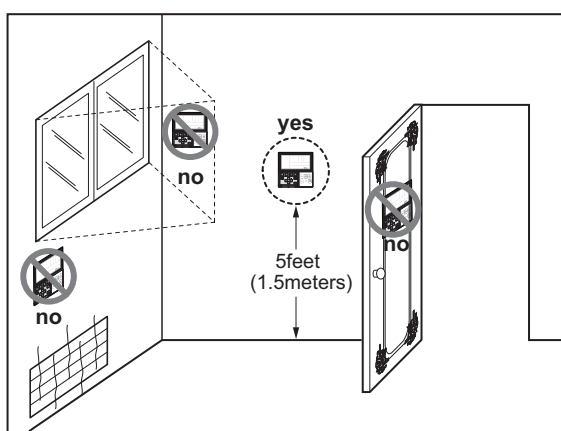
8. Installation

- 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 - Middle static pressure(2)

- 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	ABNW18GBHC0 [UB18C NH0] ABNW24GBHC0 [UB24C NH0]
Air flow	Air supply outlet	2
	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	ABDPG
	E.S.P. control*	O
	Electric heater	X
	High ceiling operation*	X
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	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
Special Functions	Auto Elevation Grille	X
	Wi-Fi	X
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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ABNW18GBHC0 [UB18C NH0] ABNW24GBHC0 [UB24C NH0]
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	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 ₂ 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	-	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. 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))

• *** : In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

2. Specifications

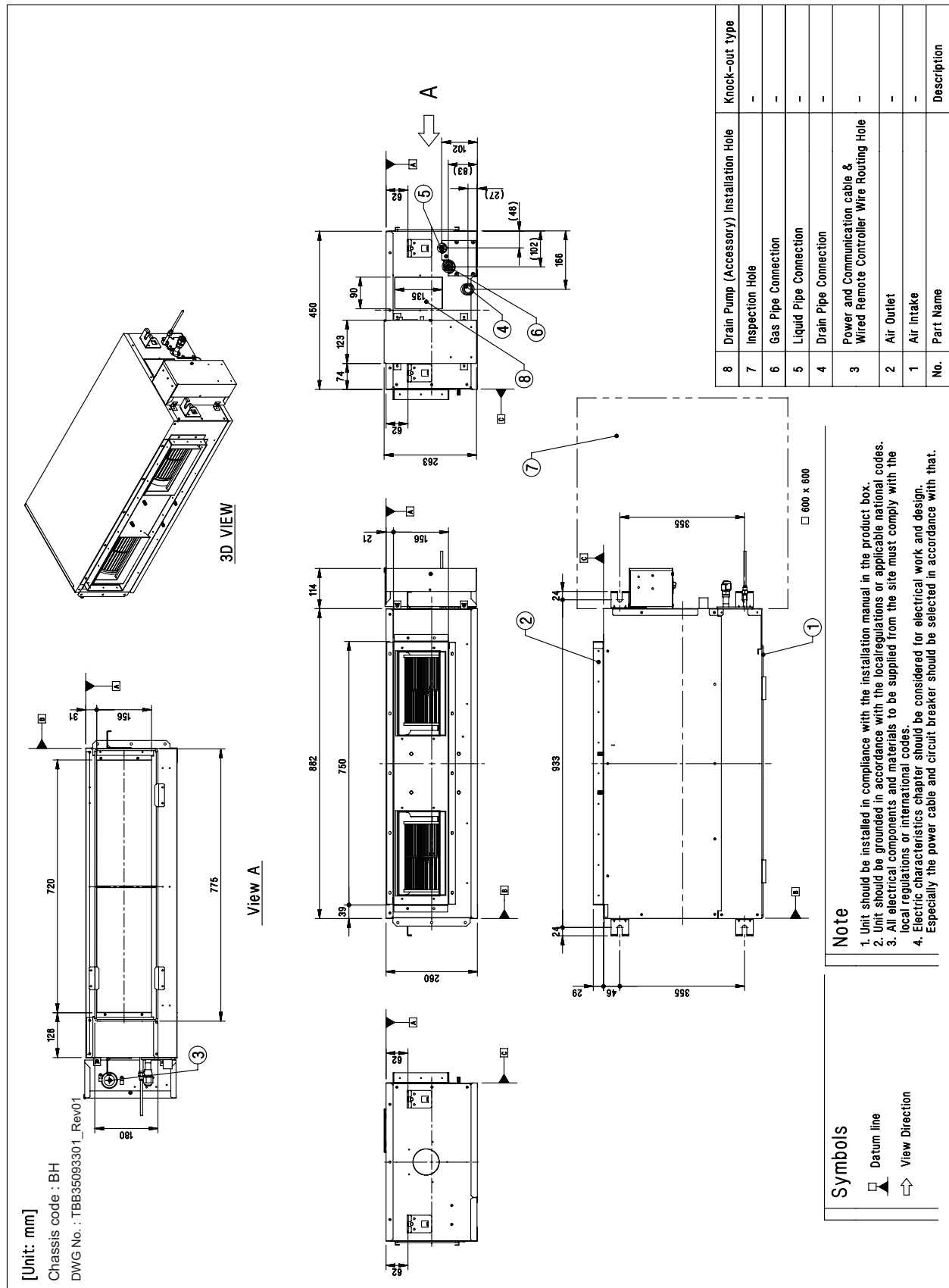
Model Name				ABNW18GBHC0 [UB18C NH0]	ABNW24GBHC0 [UB24C NH0]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Dimensions	Body		W x H x D	mm	882 × 260 × 450
			W x H x D	inch	34-23/32 x 10-1/4 x 17-23/32
Net Weight	Body		kg (lbs)	25.3 (55.7)	26.1 (57.5)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 20x 18) x 1	(3 x 20x 18) x 1
	Face Area		m ² (ft2)	0.58 (6.28)	0.58 (6.28)
Fan	Type		-	Sirocco Fan	Sirocco Fan
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m ³ /min	13.5 / 12.0 / 10.5
			H / M / L	ft ³ /min	476 / 423 / 370
			External Static Pressure	Pa (mmAq)	58.8 (6)
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	154 x 1	154 x 1
Dehumidification Rate			l / h (pts/h)	1.1 (2.5)	2.12 (4.9)
Sound Pressure Level			H / M / L	dB(A)	36 / 34 / 32
Sound Power Level			Max.	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
	Drain (O.D. / I.D.)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Safety Devices			-	Fuse	Fuse
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
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 Zero.

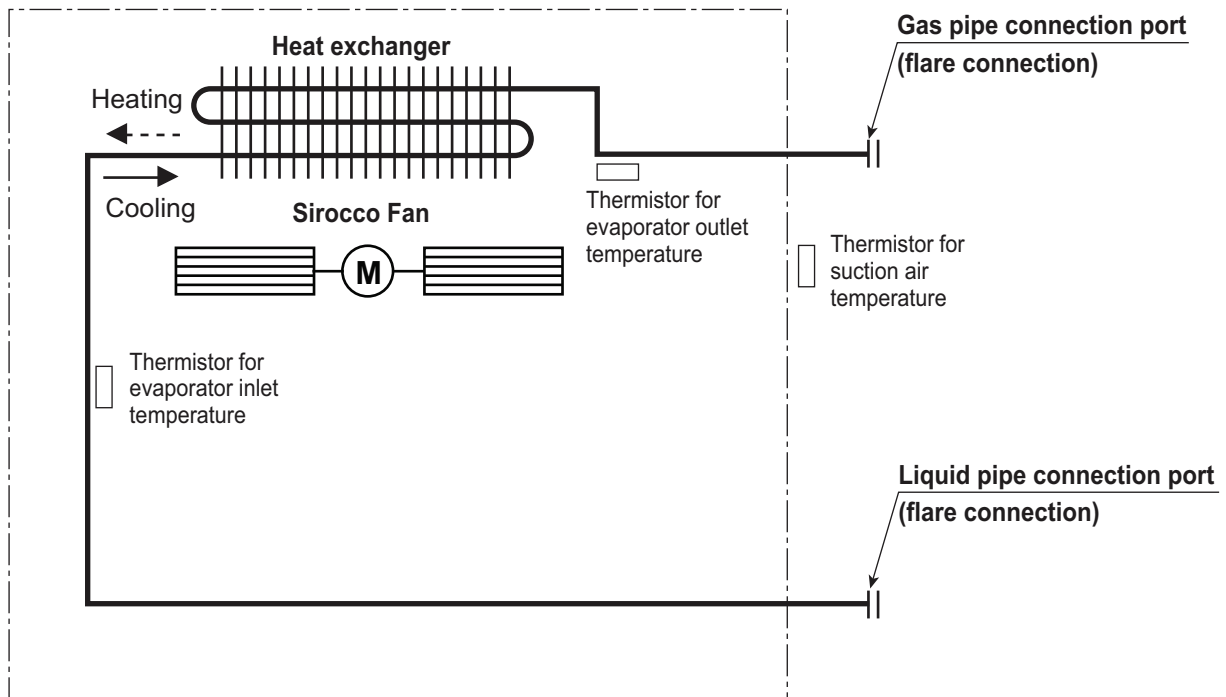
3. Dimensions

ABNW18GBHC0 [UB18C NH0] / ABNW24GBHC0 [UB24C NH0]



4. Piping diagrams

■ Models : ABNW18GBHC0 [UB18C NH0] / ABNW24GBHC0 [UB24C NH0]



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

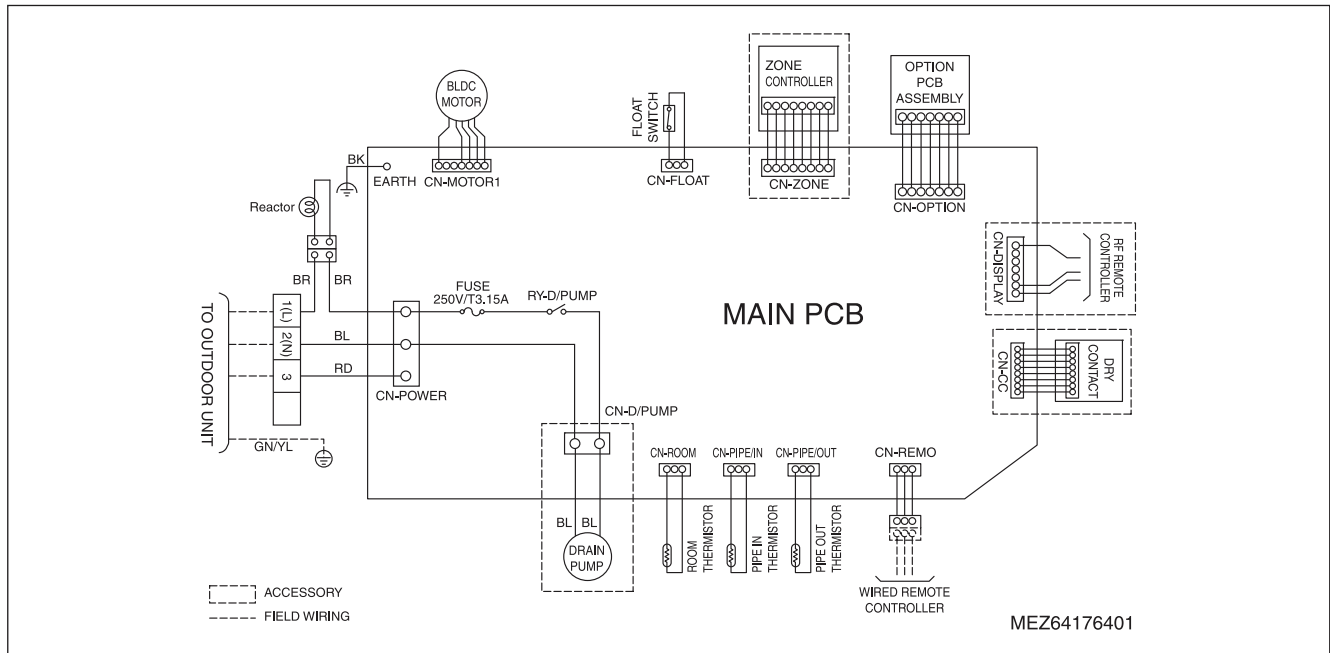
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
ABNW18GBHC0 [UB18C NH0]	Ø12.7	Ø6.35
ABNW24GBHC0 [UB24C NH0]	Ø15.88	Ø9.52

5. Wiring diagrams

■ Models : ABNW18GBHC0 [UB18C NH0] / ABNW24GBHC0 [UB24C NH0]

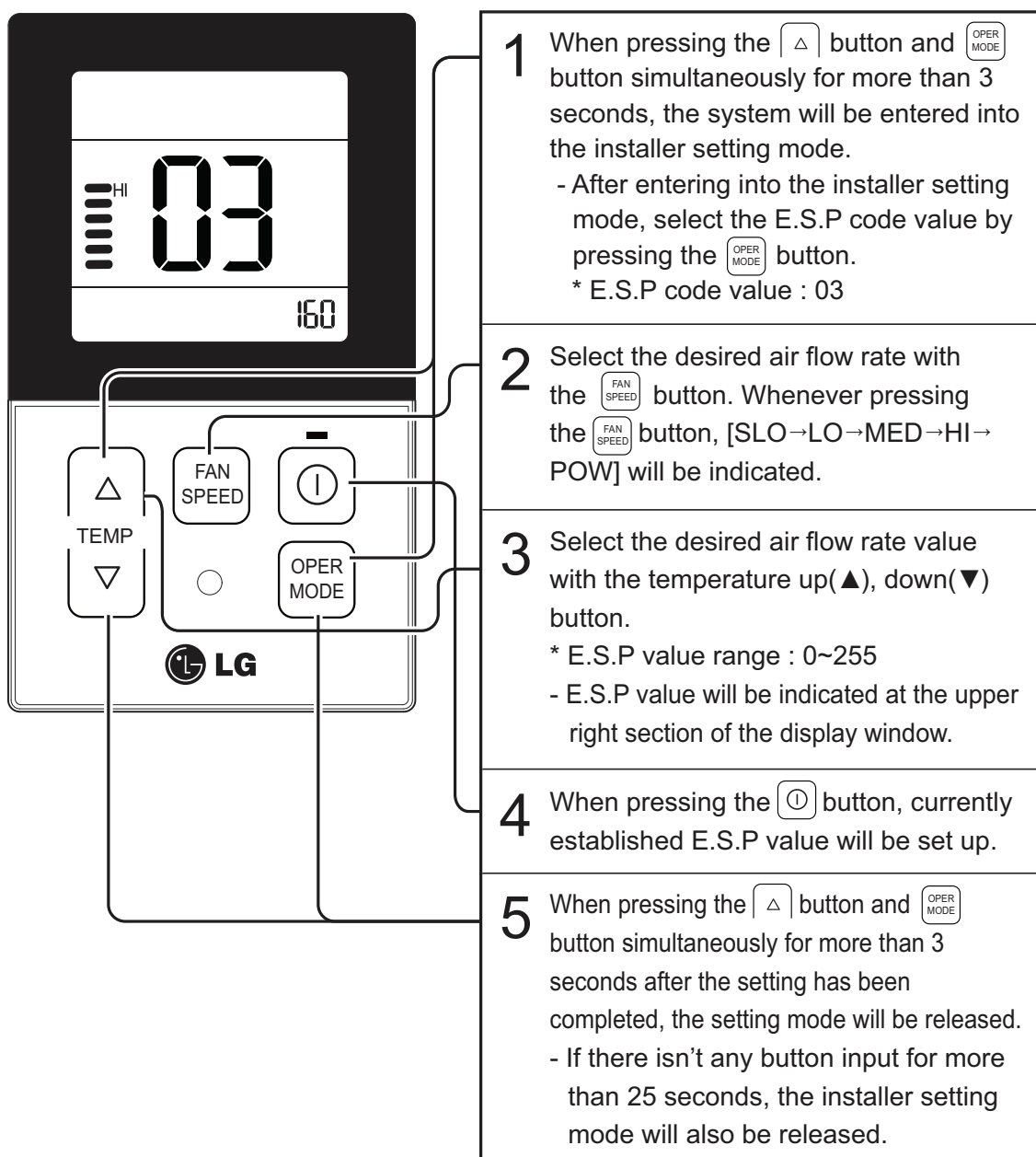


6. External Static Pressure & Air Flow

■ How to Set E.S.P. on the remote controller?

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.



- Precaution shall be taken not to alter the E.S.P value corresponded to each air flow section.
- E.S.P value can be varied according to the products.
- In the case of going to the next air flow rate stage by pressing the fan-speed button during the setup of the E.S.P value, the E.S.P value of previous air flow rate will be maintained by remembering the E.S.P value prior to the shift.

6. External Static Pressure & Air Flow

■ Table 1

◆ Models : ABNW18GBHC0 [UB18C NH0]

(Unit: CMM)

Setting Value	Static Pressure[mmAq(Pa)]			
	2.5(25)	4(39)	6(59)	8(78)
100	12.8	-	-	-
105	13.9	-	-	-
110	15.2	12.7	-	-
115	16.5	14.0	-	-
120	17.8	15.3	12.7	-
125	-	16.5	14.0	-
130	-	17.8	15.3	12.6
135	-	-	16.5	13.5
140	-	-	17.5	14.5
145	-	-	-	16.5

◆ Models : ABNW24GBHC0 [UB24C NH0]

(Unit: CMM)

Setting Value	Static Pressure[mmAq(Pa)]			
	2.5(25)	4(39)	6(59)	8(78)
105	13.9	-	-	-
110	15.2	12.7	-	-
115	16.5	14.0	-	-
120	17.8	15.3	12.7	-
125	-	16.5	14.0	-
130	-	17.8	15.3	12.6
135	-	-	16.5	13.5
140	-	-	17.6	14.5
145	-	-	-	16.5
150	-	-	-	18.0

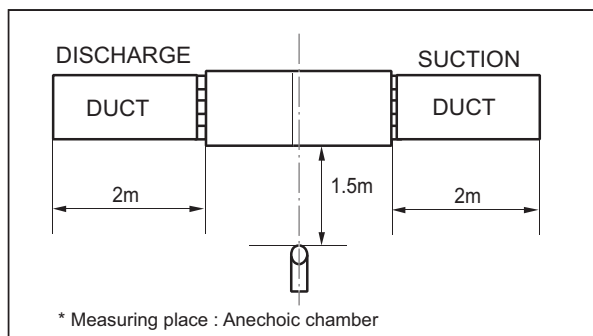
■ Table 2

Model	Mode		Set value	External Static Pressure (mmAq(Pa))	CMM	Lower Limit of External Static Pressure (mmAq(Pa))	Upper Limit of External Static Pressure (mmAq(Pa))
ABNW18GBHC0 [UB18C NH0]	High-static Mode (Factory Set)	HI	125	6(59)	13.5	2.5(25)	8(78)
		Mid	119		12.0		
		Low	114		10.5		
ABNW24GBHC0 [UB24C NH0]	High-static Mode (Factory Set)	HI	142	6(59)	18.0	2.5(25)	8(78)
		Mid	135		16.5		
		Low	125		14.5		

7. Sound levels

7.1 Sound pressure level

Overall



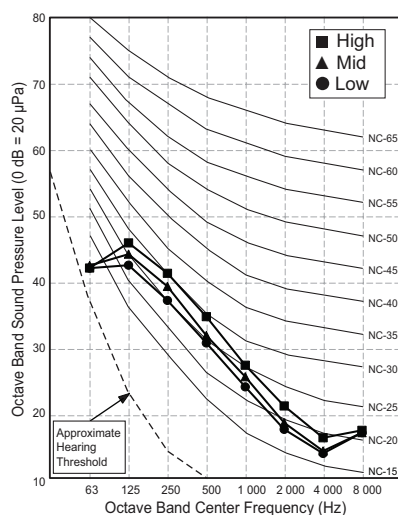
Note

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.

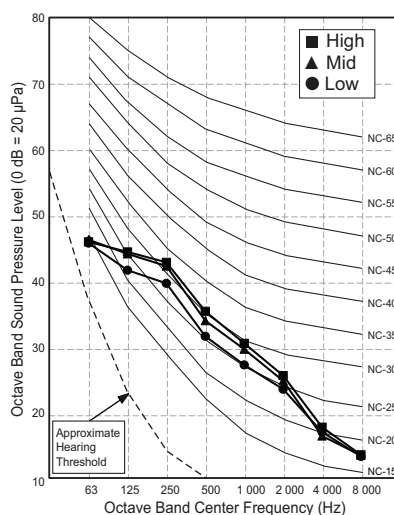
Model	Sound Pressure Levels (dB(A), H-M-L)			
	External Static Pressure [mmAq(Pa)]			
	2.5(25)	4(39)	6(59)	8(78)
ABNW18GBHC0 [UB18C NH0]	36-34-32	38-35-33	39-36-34	40-37-35
ABNW24GBHC0 [UB24C NH0]	38-36-34	39-37-35	40-38-36	41-39-37

◆ External Static Pressure 2.5(25) [mmAq(Pa)]

ABNW18GBHC0 [UB18C NH0]



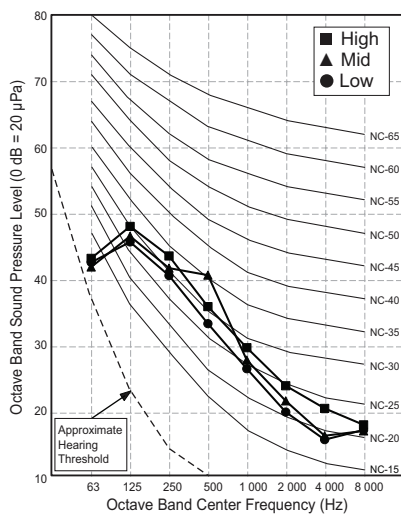
ABNW24GBHC0 [UB24C NH0]



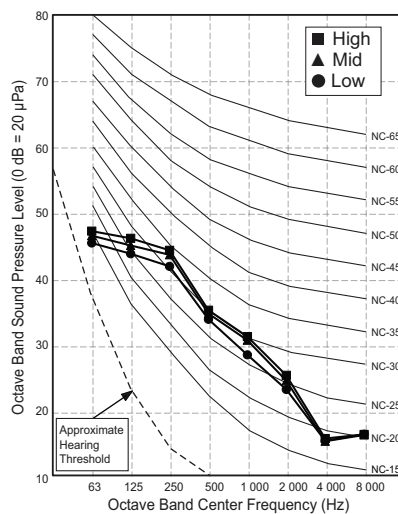
7. Sound levels

◆ External Static Pressure 4(39) [mmAq(Pa)]

ABNW18GBHC0 [UB18C NH0]

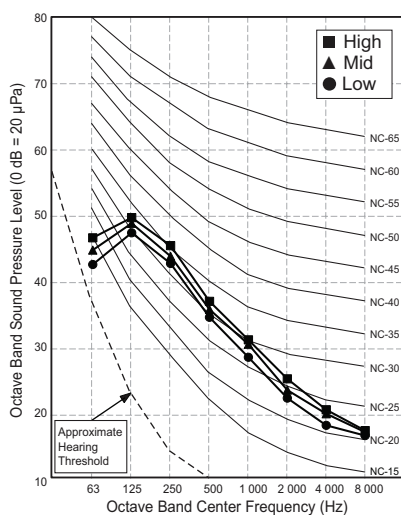


ABNW24GBHC0 [UB24C NH0]

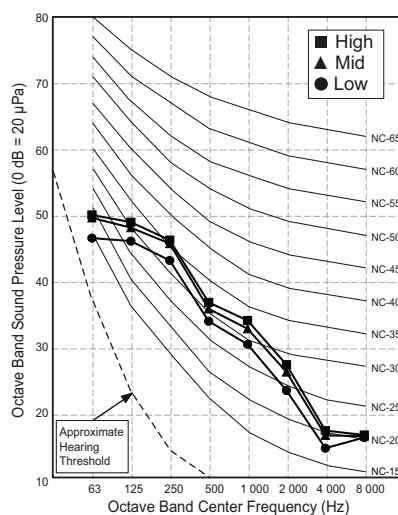


◆ External Static Pressure 6(59) [mmAq(Pa)]

ABNW18GBHC0 [UB18C NH0]



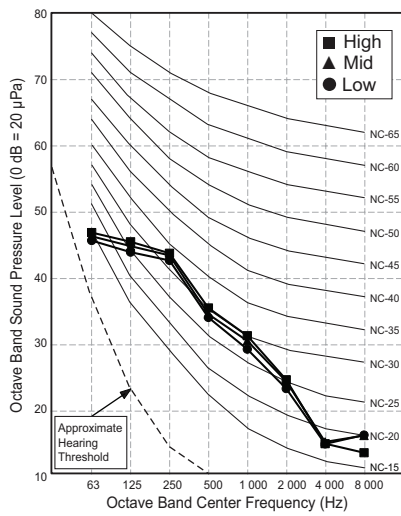
ABNW24GBHC0 [UB24C NH0]



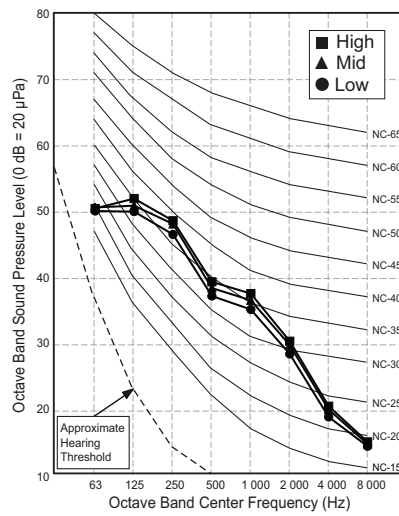
7. Sound levels

◆ External Static Pressure 8(78) [mmAq(Pa)]

ABNW18GBHC0 [UB18C NH0]



ABNW24GBHC0 [UB24C NH0]



7. Sound levels

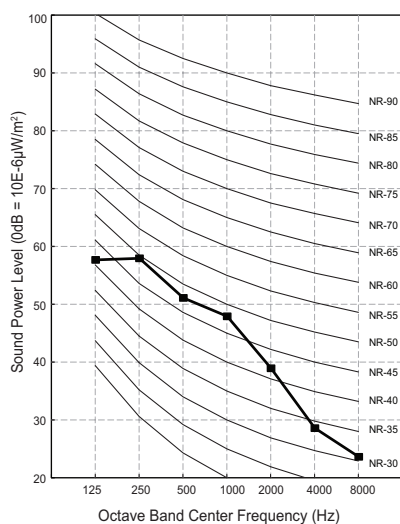
7.2 Sound power level

Note

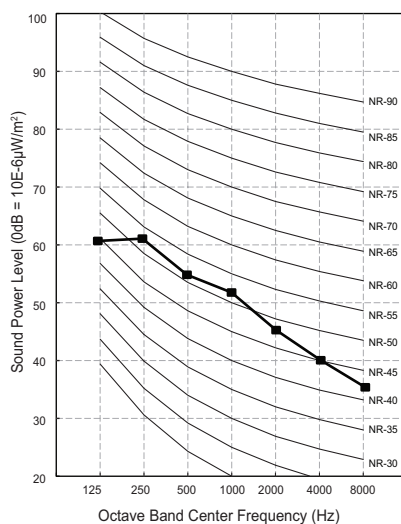
1. Data is valid at diffuse field condition.
2. Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
3. Data is valid at nominal operating condition.
4. Sound power level is measured on the nominal condition in the reverberation rooms.
5. Sound levels can be increased in accordance with installation and operating conditions. (Operating conditions include some functional condition like Static pressure mode, air guide use, Room target temperature setting, etc and these functions are different in accordance with each model.)
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.

Model	Sound power level [dB(A)]
	H
ABNW18GBHC0 [UB18C NH0]	59
ABNW24GBHC0 [UB24C NH0]	63

ABNW18GBHC0 [UB18C NH0]

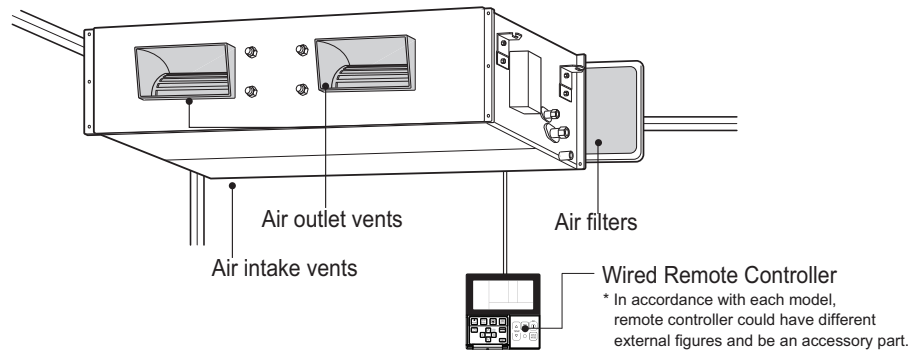


ABNW24GBHC0 [UB24C NH0]



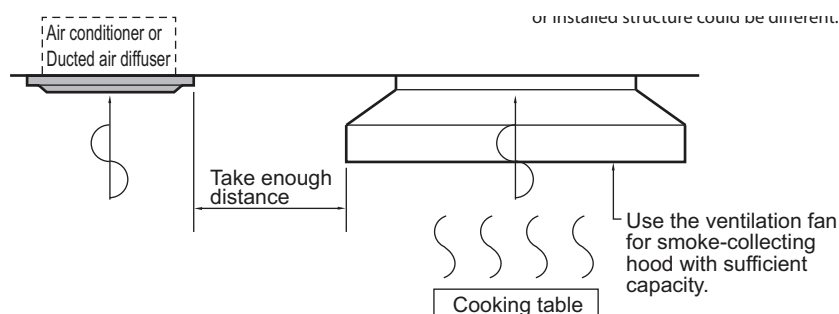
8. Installation

- 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.



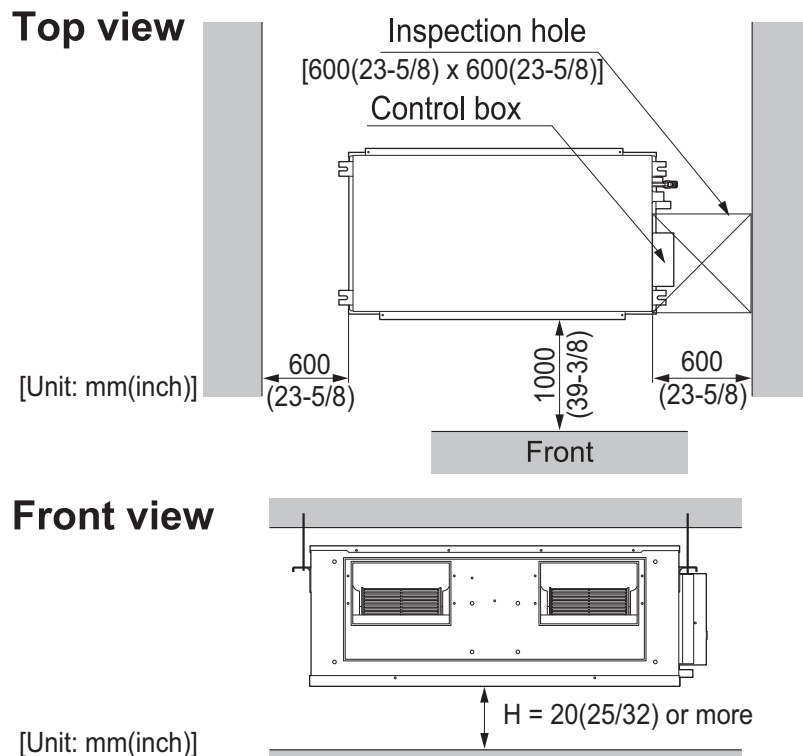
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.

8. Installation

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℃ 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.

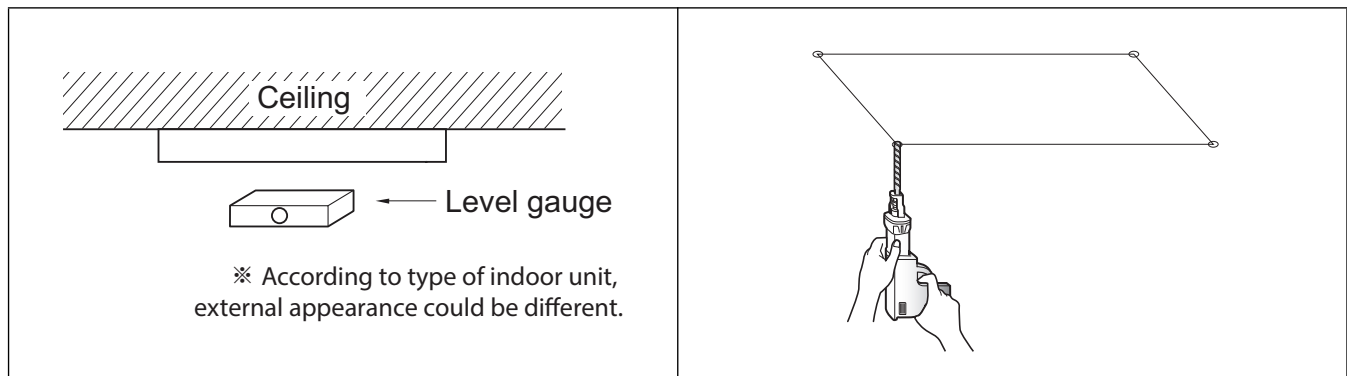


8. Installation

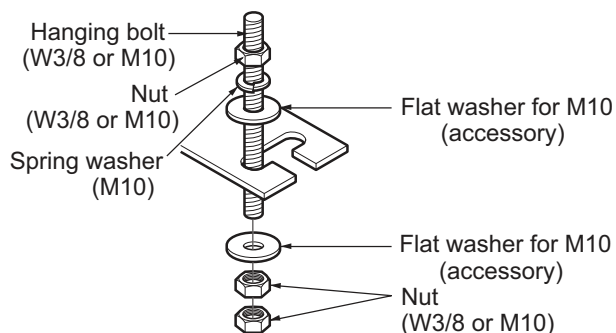
8.2 Ceiling dimension and hanging bolt location

⚠ 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.

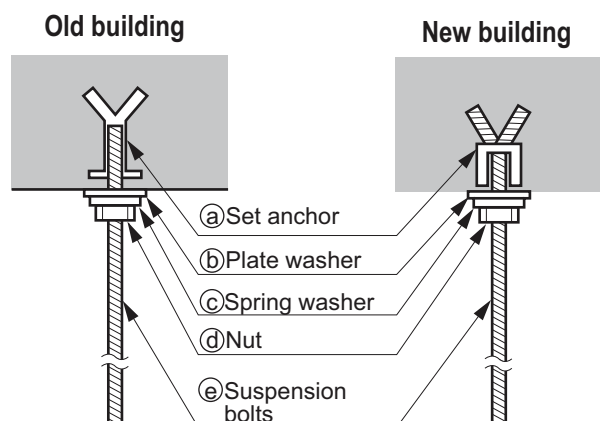


- The following parts are local purchasing.

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.

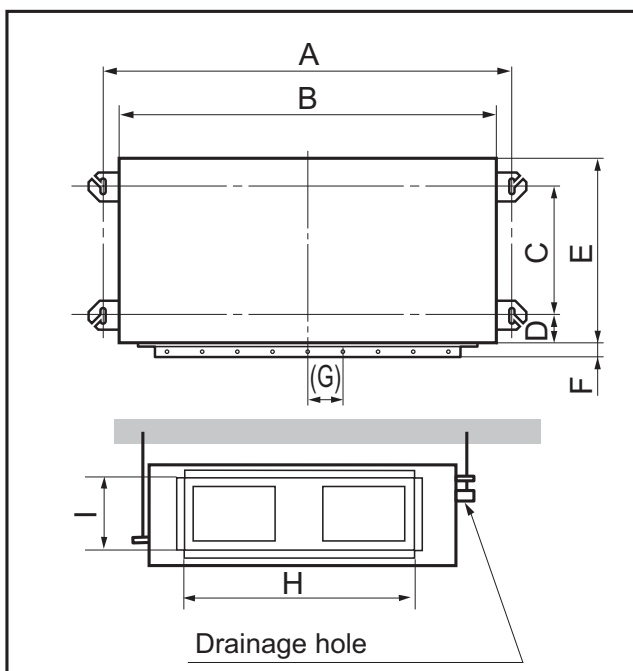


8. Installation

■ Installation dimension of Indoor unit

BH/BG/BR Chassis

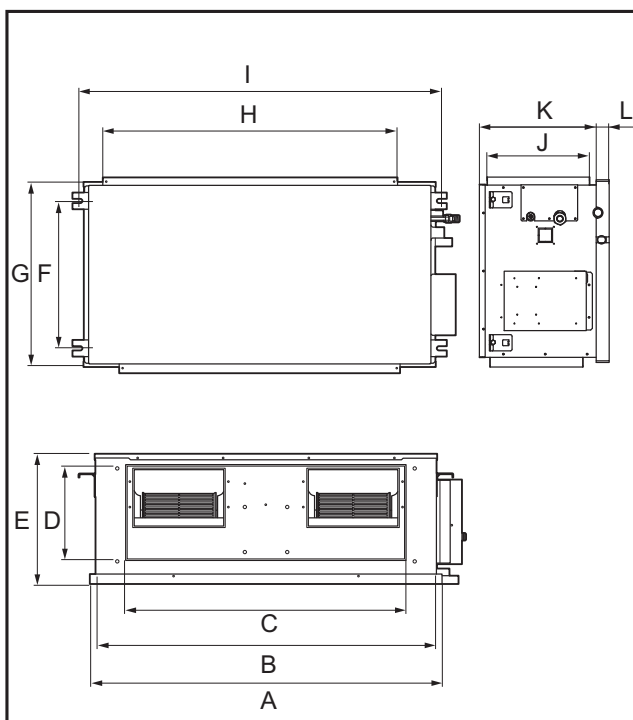
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



Chassis	Dimension (mm)								
	A	B	C	D	E	F	G	H	I
BH	932	882	355	47	450	30	(87)	750	158
BG	1232	1182	355	47	450	30	(87)	830	186
BR	1282	1230	477	56	590	30	(120)	1006	294

B7/B9 Chassis

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

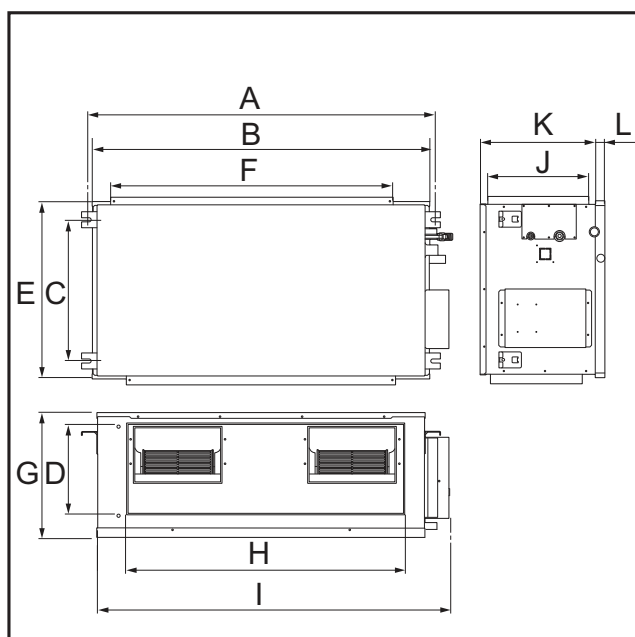


Chassis	Dimension (mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
B7	1,352	1,320	840	287	400	441	563	1,172	1,365	317	360	40
B9	1,594	1,563	984	275	458	657	821	1,368	1,627	391	-	-

8. Installation

B8 Chassis

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



Chassis	Dimension (mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
B8	1622	1565	580	292	695	1400	460	1122	1680	390	445	15

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. Installation

8.3.2 Wiring connection

- Connect the wires to the terminals on the control board and visually 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 0.75mm² 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.

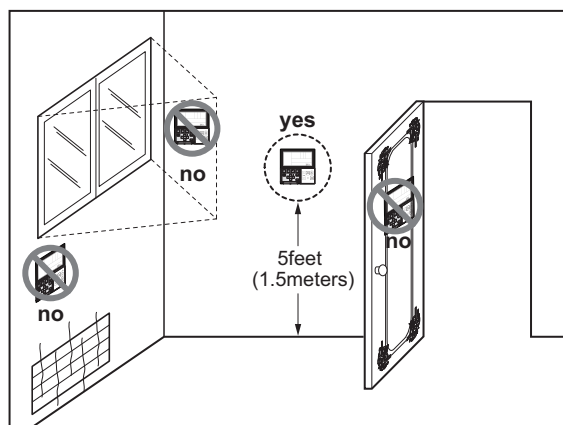
WARNING

- 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.

8.3.4 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 :

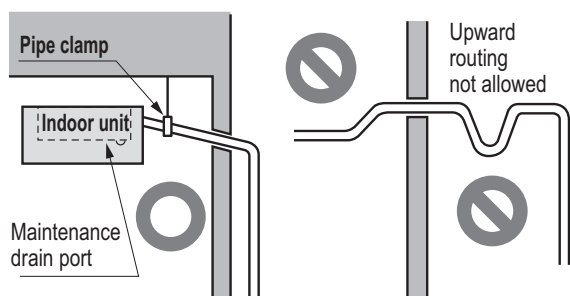
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. 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.)

8. Installation

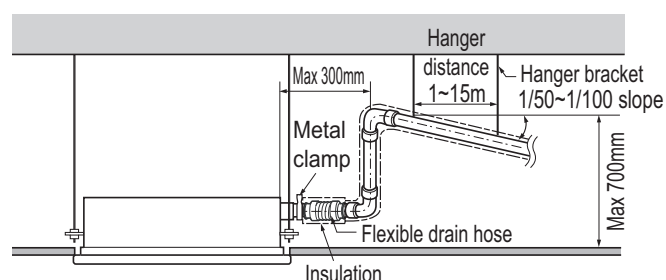
8.4 Indoor Unit Drain Piping

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.

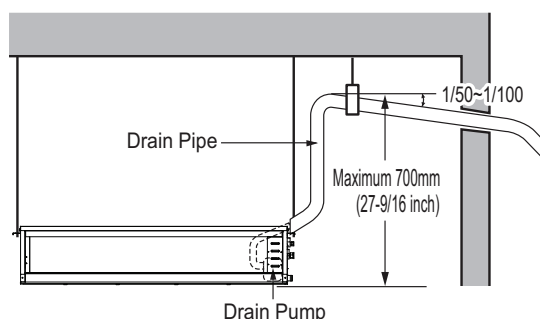


※ According to type of indoor unit, external appearance could be different.

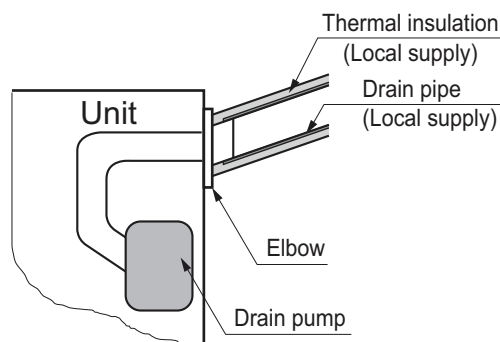


※ According to type of indoor unit, external appearance could be different.

- 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.

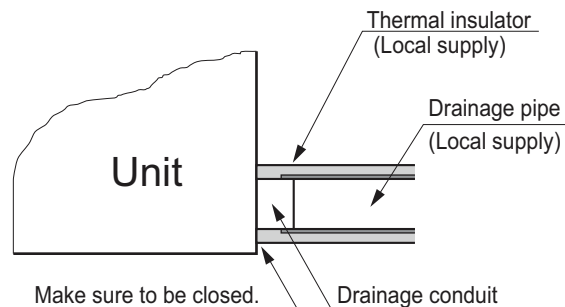
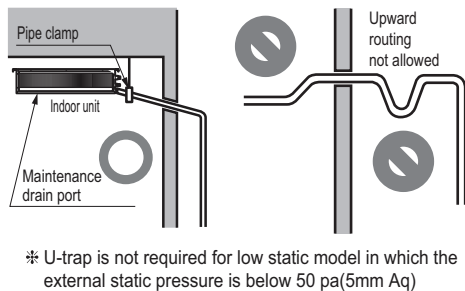


8.4.2 Drain pipe connection without drain pump

- 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 is 32 mm (1-1/4 inch).
 - Piping material: Use the Polyvinyl chloride pipe, 25 mm (1 inch) pipe fittings.
- Be sure to install heat insulation on the drain piping.

8. Installation

- Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).

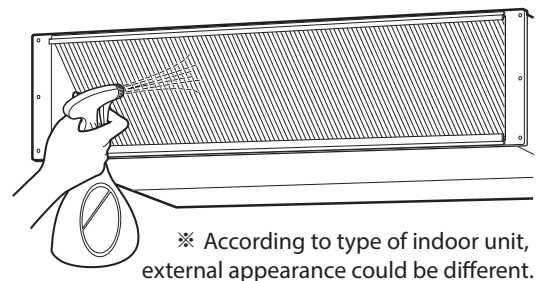


8.4.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

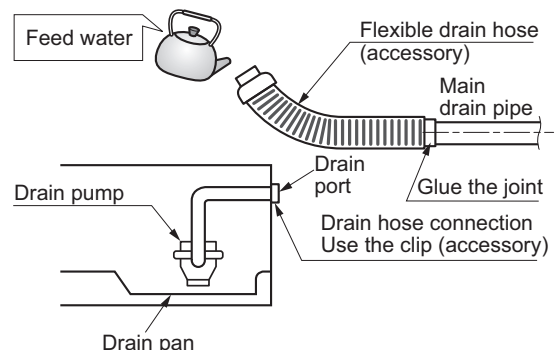
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

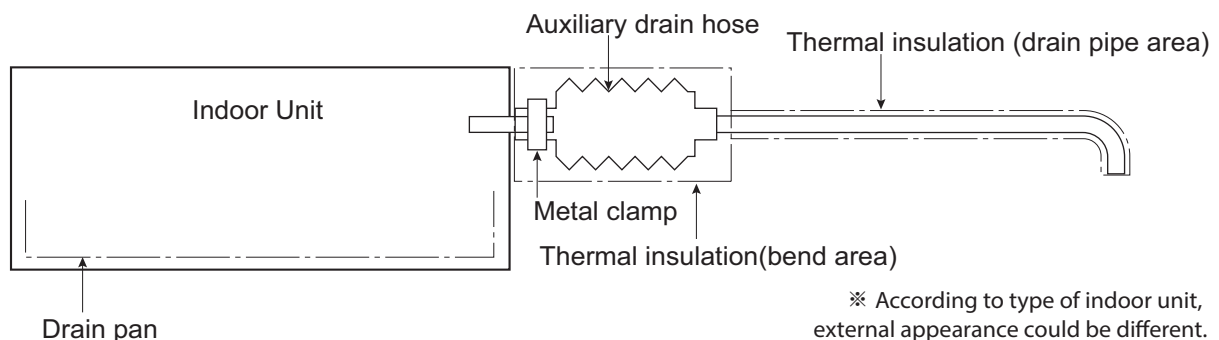
Use the following procedure to test the drain pump operation.

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.



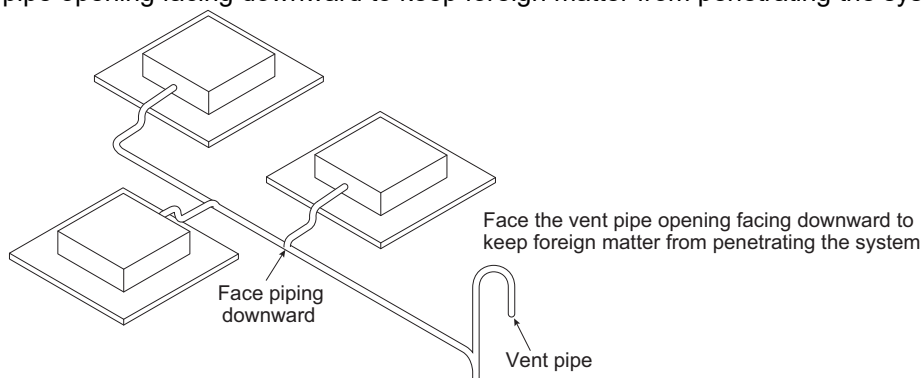
8. Installation

⚠ 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.

8.4.5 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 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	ABNH09GL1A2 [CB09L N12] ABNW09GL2A2 [CB09L N22] ABNH12GL2A2 [CB12L N22] ABNH18GL2A2 [CB18L N22] ABNH24GL3A2 [CB24L N32]
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	X
	Humidity Control	X
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O**
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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ABNH09GL1A2 [CB09L N12] ABNW09GL2A2 [CB09L N22] ABNH12GL2A2 [CB12L N22] ABNH18GL2A2 [CB18L N22] ABNH24GL3A2 [CB24L N32]
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	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 ₂ 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	-	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. 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))
- *** : In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

2. Specifications

Model Name				ABNH09GL1A2 [CB09L N12]	
Power Supply			V, Ø, Hz	220-240, 1, 50	
				220, 1, 60	
Power Input			W	50	
Running Current			A	0.40	
Dimensions	Body		W x H x D	mm	700 × 190 × 700
			W x H x D	inch	27-9/16 x 7-15/32 x 27-9/16
Net Weight	Body		kg (lbs)	17.5 (38.6)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 11 x 14) x 1	
	Face Area		m² (ft²)	0.12 (1.32)	
Fan	Type		-	Sirocco	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m³/min	9.0 / 7.0 / 5.5
			H / M / L	ft³/min	318 / 247 / 194
			External Static Pressure	Pa (mmAq)	24.5 (2.5)
Fan Motor	Type		-	BLDC	
	Output		W × No.	19 x 1	
Dehumidification Rate			l / h (pts/h)	1.1 (2.3)	
Sound Pressure Level		H / M / L	dB(A)	30 / 26 / 23	
Sound Power Level		Max.	dB(A)	49	
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	
	Gas		mm(inch)	Ø 9.52 (3/8)	
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse	
			-	-	
Power and Communication Cable (included Earth)			No. x mm² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.					
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 Zero.					

2. Specifications

Model Name				ABNW09GL2A2 [CB09L N22]	ABNH12GL2A2 [CB12L N22]		
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50		
				220, 1, 60	220, 1, 60		
Power Input			W	95	95		
Running Current			A	0.80	0.80		
Dimensions	Body		W × H × D	mm	900 × 190 × 700	900 × 190 × 700	
			W × H × D	inch	35-7/16 × 7-15/32 × 27-9/16	35-7/16 × 7-15/32 × 27-9/16	
Net Weight	Body			kg (lbs)	23.0 (50.7)	23.0 (50.7)	
Heat Exchanger	(Row × Column × Fins per inch) × No.			-	(2 × 11 × 18) × 1	(2 × 11 × 18) × 1	
	Face Area			m² (ft²)	0.17 (1.81)	0.17 (1.81)	
Fan	Type			-	Sirocco	Sirocco	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m³/min	10.0 / 8.5 / 7.0	10.0 / 8.5 / 7.0	
			H / M / L	ft³/min	353 / 300 / 247	353 / 300 / 247	
			External Static Pressure	Pa (mmAq)	24.5 (2.5)	24.5 (2.5)	
Fan Motor	Type			-	BLDC	BLDC	
	Output			W × No.	19 × 1 + 5 × 1	19 × 1 + 5 × 1	
Dehumidification Rate			l / h (pts/h)			1.2 (2.6)	1.2 (2.6)
Sound Pressure Level			H / M / L	dB(A)	31 / 28 / 27	31 / 28 / 27	
Sound Power Level			Max.	dB(A)	52	52	
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(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse			
			-	-			
Power and Communication Cable (included Earth)			No. x mm² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)		

Note

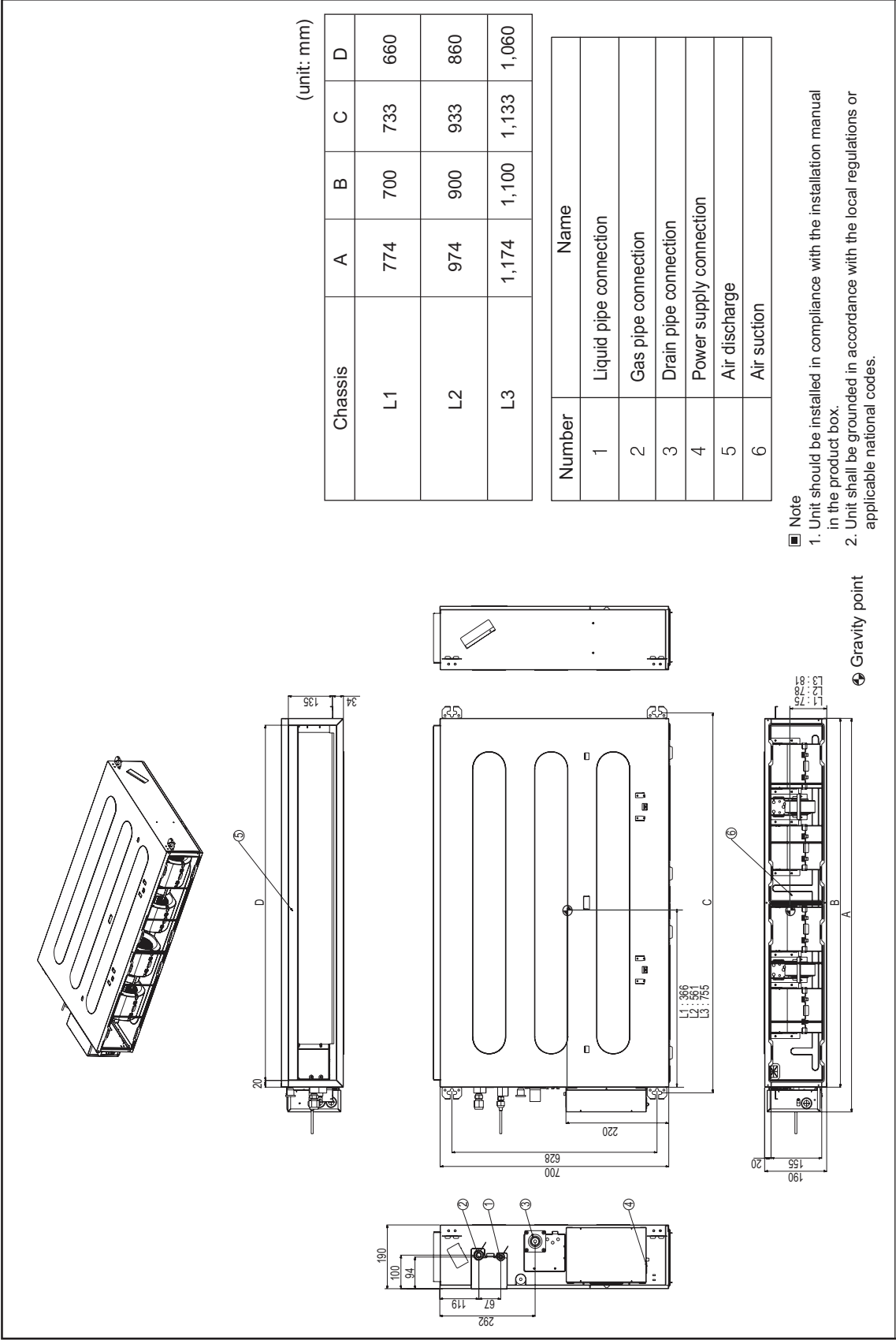
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
3. Sound Level Values are measured at Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
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 Zero.

2. Specifications

Model Name				ABNH18GL2A2 [CB18L N22]	ABNH24GL3A2 [CB24L N32]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
				220, 1, 60	220, 1, 60	
Power Input			W	120	150	
Running Current			A	0.80	1.00	
Dimensions	Body	W x H x D	mm	900 × 190 × 700	1,100 × 190 × 700	
		W x H x D	inch	35-7/16 x 7-15/32 x 27-9/16	43-5/16 x 7-15/32 x 27-9/16	
Net Weight	Body		kg (lbs)	23.0 (50.7)	27.0 (59.5)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 11 x 18) x 1	(3 x 11 x 18) x 1	
	Face Area		m ² (ft ²)	0.17 (1.81)	0.21 (2.31)	
Fan	Type		-	Sirocco	Sirocco	
	Air Flow Rate	High-static Mode (Factory Set)	H / M / L	m³/min	15.0 / 12.5 / 10.0	20.0 / 16.0 / 12.0
			H / M / L	ft³/min	530 / 441 / 353	706 / 565 / 424
			External Static Pressure	Pa (mmAq)	24.5 (2.5)	24.5 (2.5)
Fan Motor	Type		-	BLDC	BLDC	
	Output		W × No.	19 x 1 + 5 x 1	19 x 2	
Dehumidification Rate			l / h (pts/h)	1.7 (3.6)	2.2 (4.7)	
Sound Pressure Level		H / M / L	dB(A)	36 / 34 / 31	39 / 35 / 32	
Sound Power Level		Max.	dB(A)	54	58	
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)	Ø 6.35 (1/4)*
	Gas		mm(inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)	Ø 12.7 (1/2)*
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)	Ø 32.0(1-1/4) / 25.0(31/32)	
Safety Devices			-	Fuse		
			-	-		
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.						
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 Zero.						
* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.						

3. Dimensions

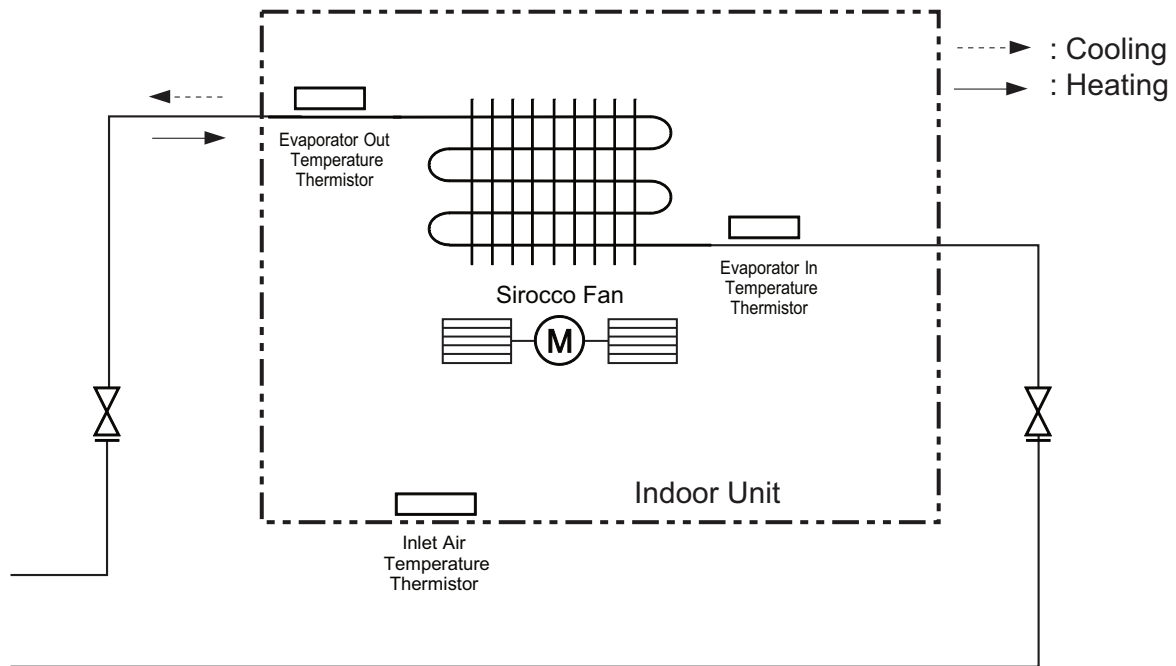
ABNH09GL1A2 [CB09L N12]
ABNW09GL2A2 [CB09L N22] / ABNH12GL2A2 [CB12L N22]
ABNH18GL2A2 [CB18L N22] / ABNH24GL3A2 [CB24L N32]



4. Piping diagrams

■ L1 Chassis

ABNH09GL1A2 [CB09L N12]



Description	PCB Connector
Inlet Air Temperature Thermistor	CN-ROOM
Evaporator In Temperature Thermistor	CN-PIPE / IN
Evaporator Out Temperature Thermistor	CN-PIPE / OUT

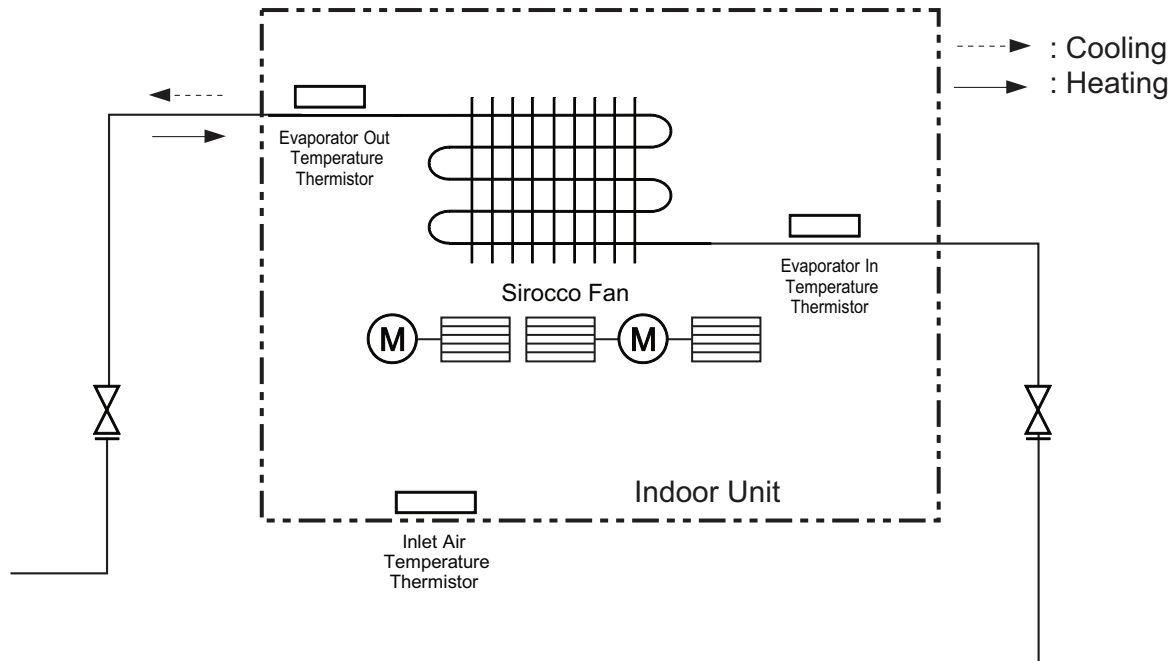
◆ Refrigerant pipe connection port diameters

Model	Gas [mm]	Liquid [mm]
ABNH09GL1A2 [CB09L N12]	Ø9.52	Ø6.35

4. Piping diagrams

■ L2 Chassis

ABNW09GL2A2 [CB09L N22] / ABNH12GL2A2 [CB12L N22] / ABNH18GL2A2 [CB18L N22]



Description	PCB Connector
Inlet Air Temperature Thermistor	CN-ROOM
Evaporator In Temperature Thermistor	CN-PIPE / IN
Evaporator Out Temperature Thermistor	CN-PIPE / OUT

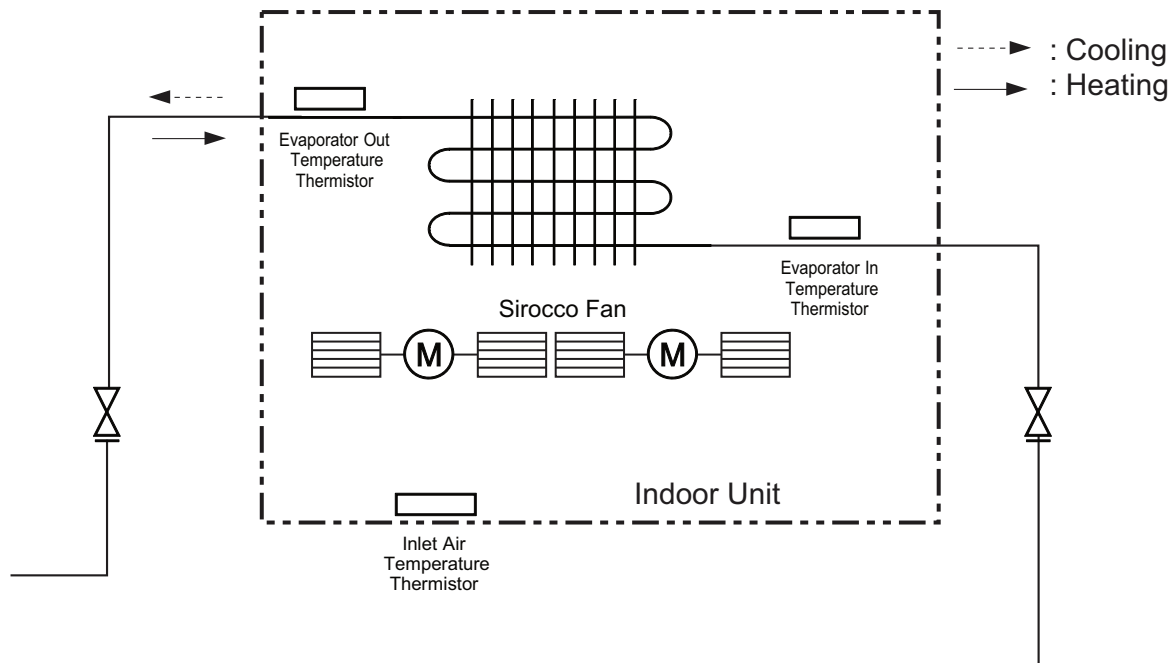
◆ Refrigerant pipe connection port diameters

Model	Gas [mm]	Liquid [mm]
ABNW09GL2A2 [CB09L N22]	Ø9.52	Ø6.35
ABNH12GL2A2 [CB12L N22]	Ø9.52	
ABNH18GL2A2 [CB18L N22]	Ø12.7	

4. Piping diagrams

■ L3 Chassis

ABNH24GL3A2 [CB24L N32]



Description	PCB Connector
Inlet Air Temperature Thermistor	CN-ROOM
Evaporator In Temperature Thermistor	CN-PIPE / IN
Evaporator Out Temperature Thermistor	CN-PIPE / OUT

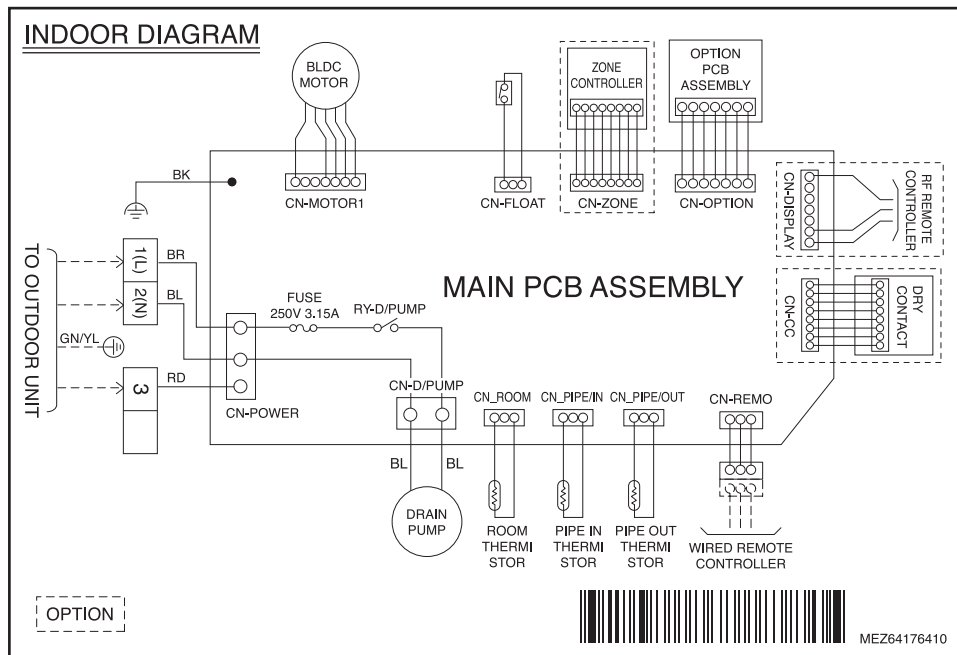
◆ Refrigerant pipe connection port diameters

Model	Gas [mm]	Liquid [mm]
ABNH24GL3A2 [CB24L N32]	Ø15.88	Ø9.52
	Ø 12.7 (1/2)*	Ø 6.35 (1/4)*

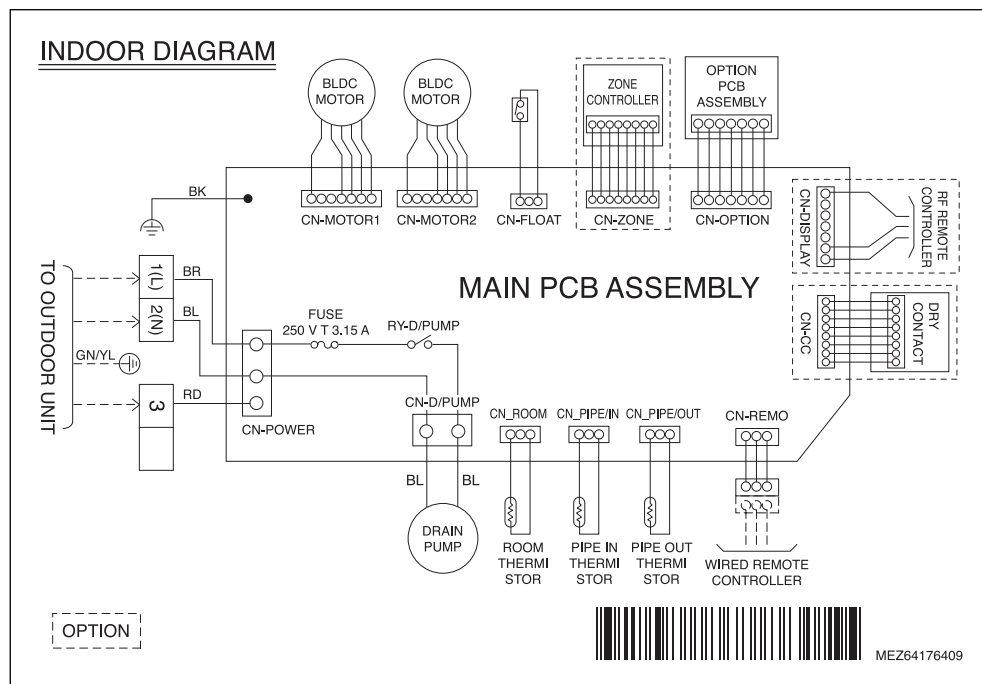
* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

5. Wiring Diagrams

■ Models: ABNH09GL1A2 [CB09L N12]



■ Models: ABNW09GL2A2 [CB09L N22] / ABNH12GL2A2 [CB12L N22] ABNH18GL2A2 [CB18L N22] / ABNH24GL3A2 [CB24L N32]

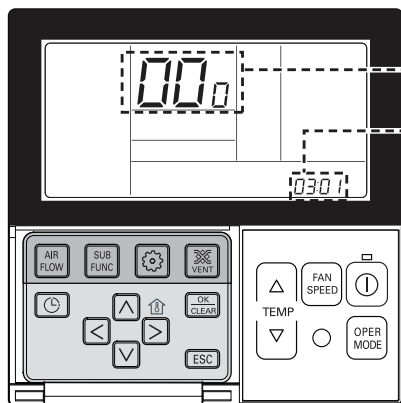


6. External Static Pressure & Air Flow

■ How to Set E.S.P. on the remote controller?

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>1 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>4 Move to ESP value setting by pressing button. (It is 000 when delivering from the warehouse.)</p>
<p>2 If entering into ESP setup mode by using button, it indicates as the picture below.</p>	<p>5 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>3 Select ESP fan step by pressing button. (01: very low, 02: low, 03: medium, 04: high, 05: very high)</p>	<p>6 Select ESP fan step again by using button and setup ESP value, as No. 4 and 5, that corresponds each wind flow</p> <p>7 Press button to save.</p> <p>8 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.

6. External Static Pressure & Air Flow

◆ ABNH09GL1A2 [CB09L N12]

Setting Value	Static Pressure [mmAq(Pa)]					
	0 (0)	1 (10)	2 (20)	3 (30)	4 (40)	5 (50)
	Air Flow Rate [m³/min]					
60	-	-	-	-	-	-
65	5.03	-	-	-	-	-
70	5.60	4.85	-	-	-	-
75	6.19	5.44	4.57	-	-	-
80	6.79	6.05	5.17	-	-	-
85	7.41	6.67	5.80	4.80	-	-
90	8.05	7.31	6.43	5.44	-	-
95	8.71	7.96	7.09	6.09	4.97	-
100	9.38	8.63	7.76	6.76	5.64	-
105	10.07	9.32	8.45	7.45	6.33	5.08
110	-	10.03	9.16	8.16	7.04	5.79
115	-	-	9.88	8.88	7.76	6.51
120	-	-	-	9.62	8.50	7.25
125	-	-	-	10.38	9.26	8.01
130	-	-	-	-	10.03	8.78

◆ ABNW09GL2A2 [CB09L N22] / ABNH12GL2A2 [CB12L N22] / ABNH18GL2A2 [CB18L N22]

Setting Value	Static Pressure [mmAq(Pa)]					
	0 (0)	1 (10)	2 (20)	3 (30)	4 (40)	5 (50)
	Air Flow Rate [m³/min]					
75	6.50	-	-	-	-	-
80	7.34	6.70	-	-	-	-
85	8.20	7.55	6.69	-	-	-
90	9.07	8.43	7.56	6.47	-	-
95	9.96	9.32	8.45	7.36	-	-
100	10.87	10.22	9.36	8.27	6.96	-
105	11.79	11.15	10.28	9.19	7.89	6.35
110	12.73	12.09	11.22	10.14	8.83	7.30
115	13.69	13.05	12.18	11.09	9.78	8.25
120	14.67	14.02	13.16	12.07	10.76	9.23
125	15.66	15.01	14.15	13.06	11.75	10.22
130	16.67	16.02	15.16	14.07	12.76	11.23
135	-	-	16.18	15.10	13.79	12.26
140	-	-	-	16.14	14.83	13.30
145	-	-	-	-	15.89	14.36

Note

1. The above table shows the correlation between the air rates and E.S.P.

6. External Static Pressure & Air Flow

◆ ABNH24GL3A2 [CB24L N32]

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

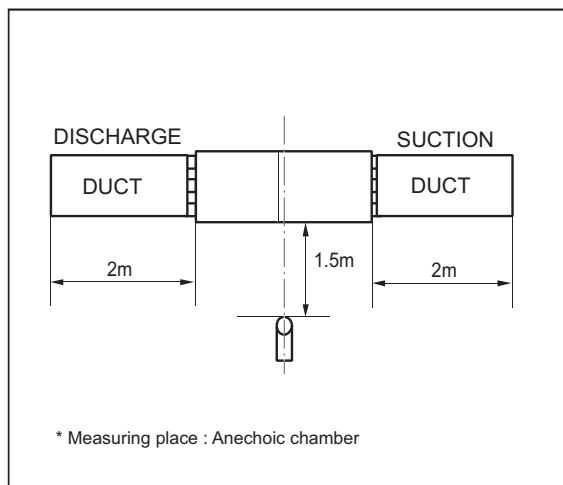
Note

1. The above table shows the correlation between the air rates and E.S.P.

7. Sound levels

7.1 Sound pressure level

■ Overall

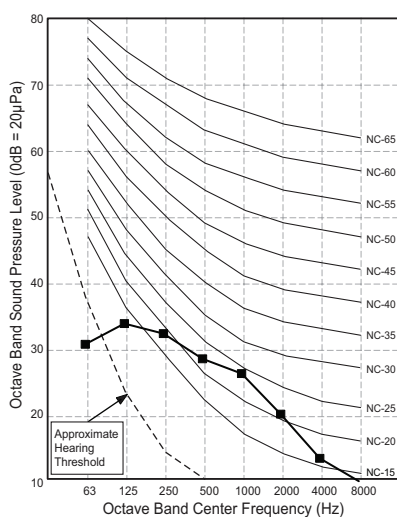


Note

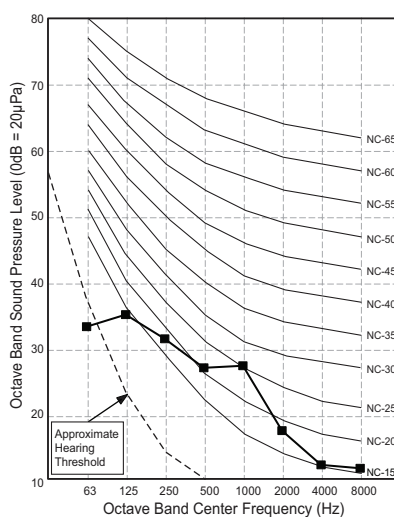
- Data is valid at nominal operation condition
- Reference acoustic pressure 0dB = 20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	50Hz, 220-240V		
	Sound Level [dB(A)]		
	H	M	L
ABNH09GL1A2 [CB09L N12]	30	26	23
ABNW09GL2A2 [CB09L N22]	31	28	27
ABNH12GL2A2 [CB12L N22]	31	28	27
ABNH18GL2A2 [CB18L N22]	36	34	31
ABNH24GL3A2 [CB24L N32]	39	35	32

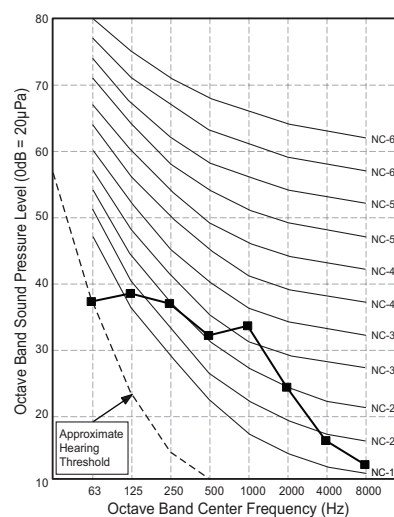
ABNH09GL1A2 [CB09L N12]



ABNW09GL2A2 [CB09L N22]
ABNH12GL2A2 [CB12L N22]

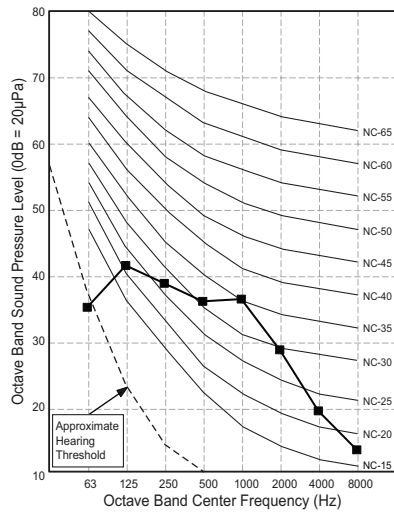


ABNH18GL2A2 [CB18L N22]



7. Sound levels

ABNH24GL3A2 [CB24L N32]



7. Sound levels

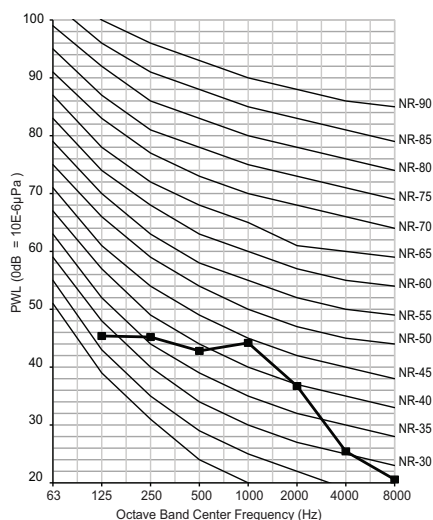
7.2 Sound power level

Note

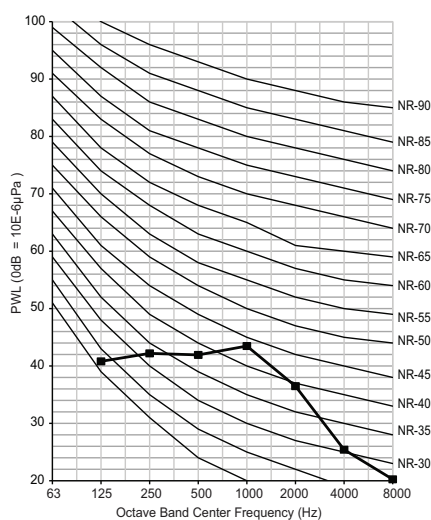
1. Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
2. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound power level [dB(A)]
	H
ABNH09GL1A2 [CB09L N12]	49
ABNW09GL2A2 [CB09L N22]	52
ABNH12GL2A2 [CB12L N22]	52
ABNH18GL2A2 [CB18L N22]	54
ABNH24GL3A2 [CB24L N32]	58

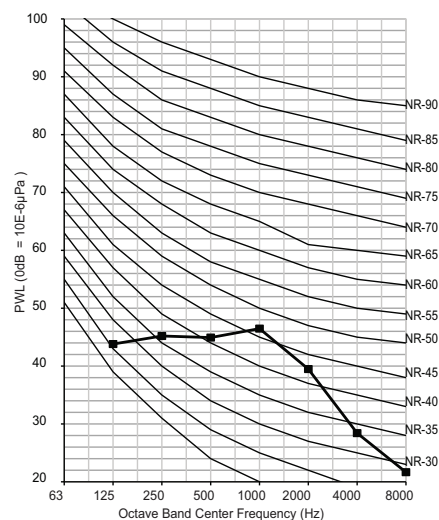
ABNH09GL1A2 [CB09L N12]



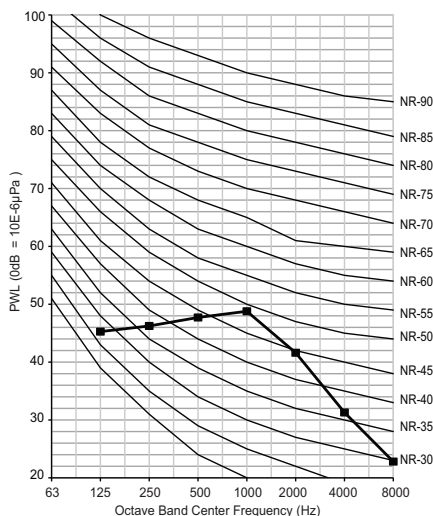
**ABNW09GL2A2 [CB09L N22]
ABNH12GL2A2 [CB12L N22]**



ABNH18GL2A2 [CB18L N22]



ABNH24GL3A2 [CB24L N32]

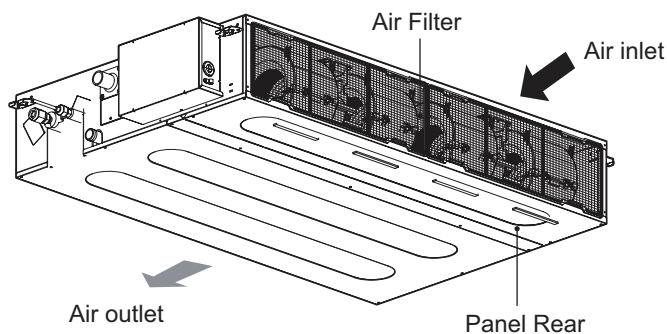


8. Installation

- 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.)

L1/L2/L3 Chassis

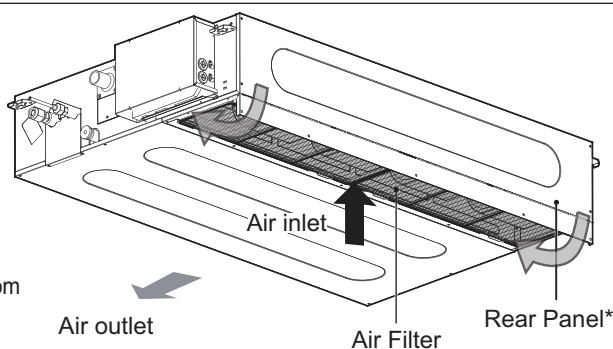
In case of air suction from back side



L1/L2/L3 Chassis

In case of air suction from Bottom side

* Rear panel and Air filter should be moved.
The lower part of rear panel should be bent to bottom and fixed with the cabinet case.

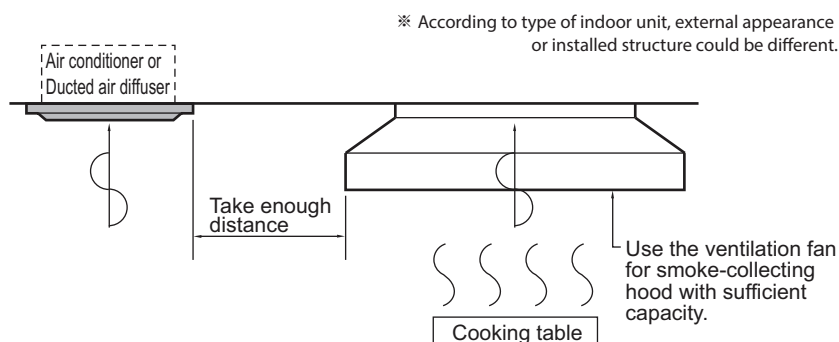


8.1 Selection of the best location

- 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;

8. Installation

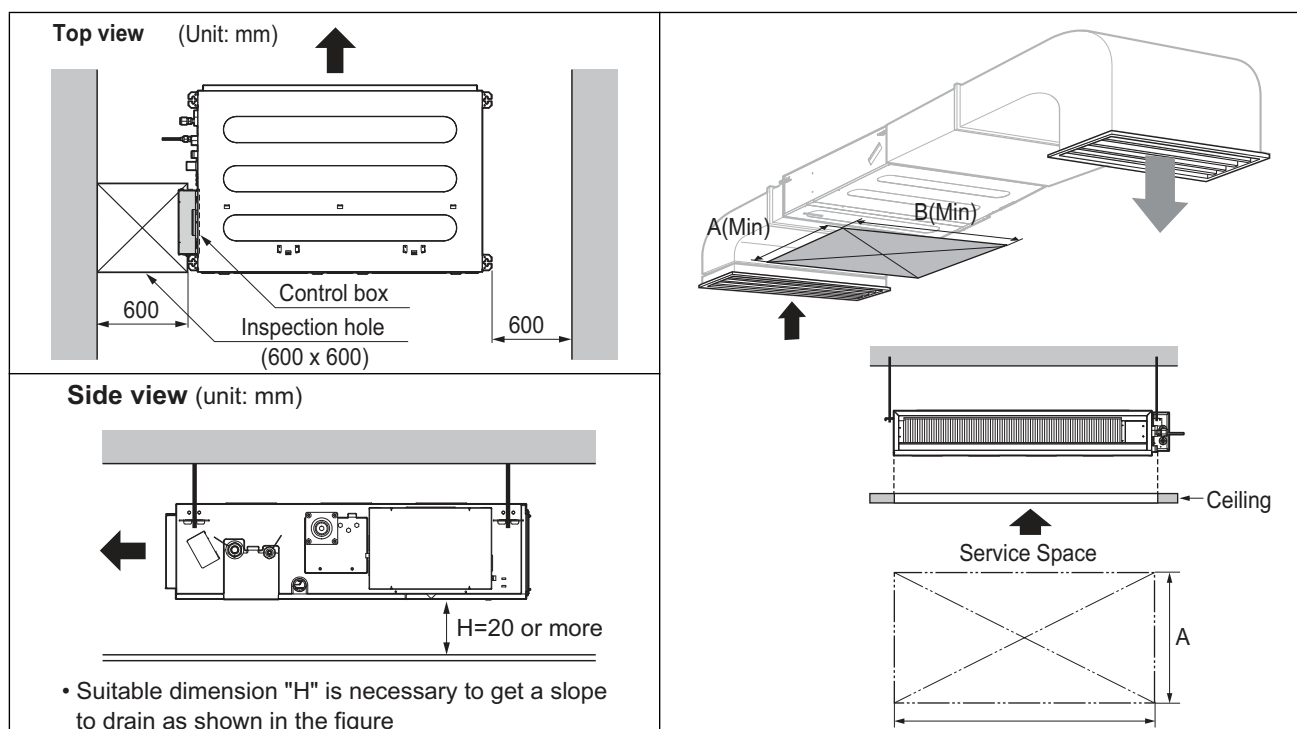
- Make sure that ventilation fan is enough to cover all noxious gases from this place.
- Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



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.

⚠ 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.



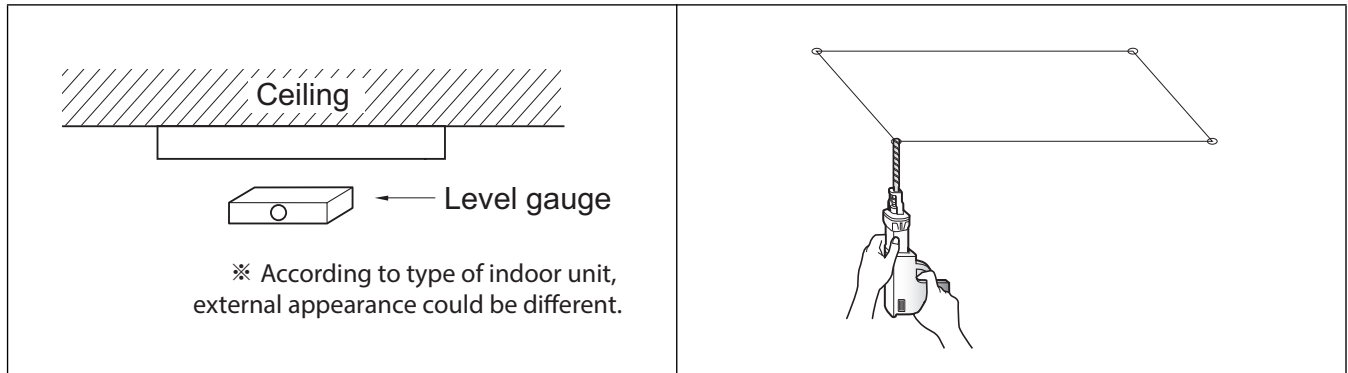
Chassis code	A [mm]	B [mm]
L1	800	800
L2	800	1,000
L3	800	1,200

8. Installation

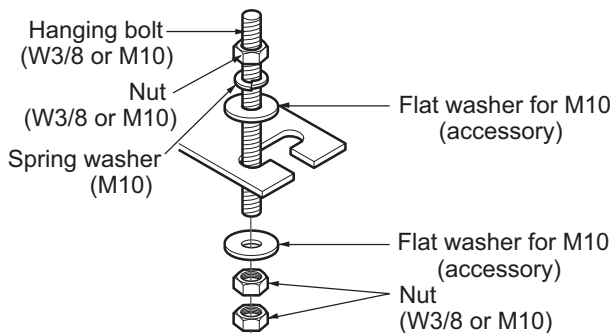
8.2 Ceiling dimension and hanging bolt location

⚠ 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.

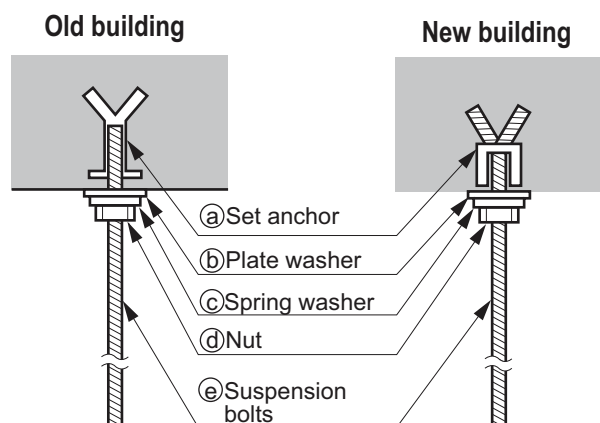


- The following parts are local purchasing.

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

⚠ CAUTION

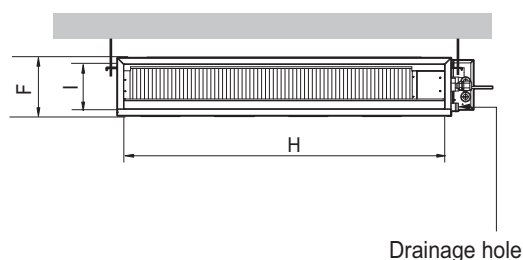
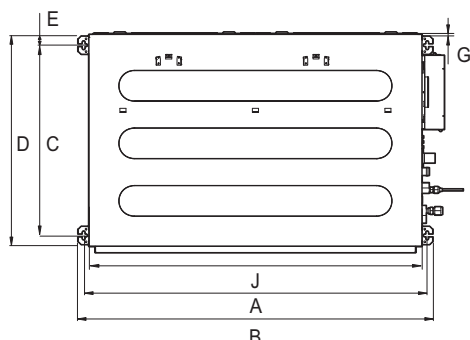
- Tighten the nut and bolt to prevent the unit from falling.



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

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. Installation

8.3.2 Wiring connection

- Connect the wires to the terminals on the control board and visually 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 0.75mm² 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.

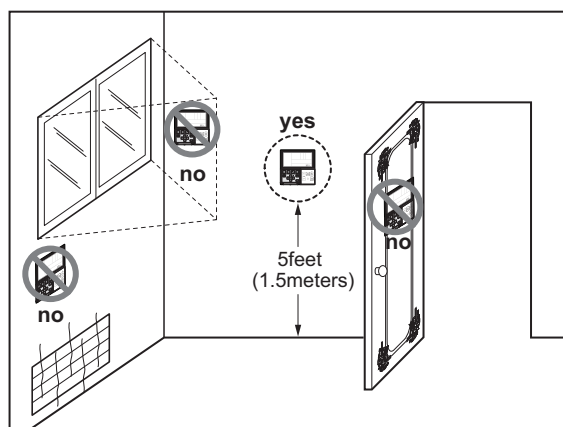
WARNING

- 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.

8.3.4 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 :

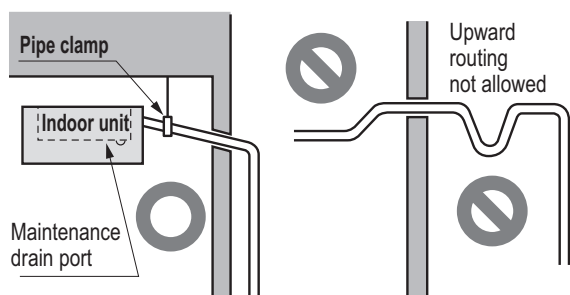
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. 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

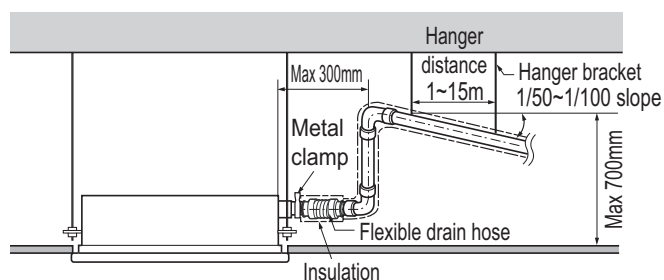
8.4 Indoor Unit Drain Piping

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.

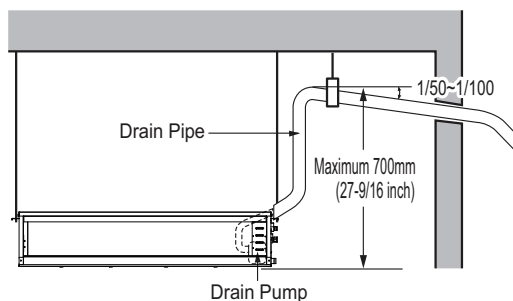


※ According to type of indoor unit, external appearance could be different.

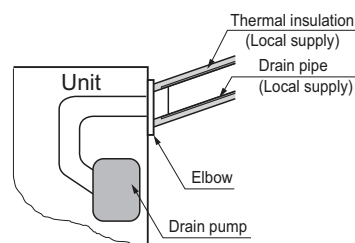


※ According to type of indoor unit, external appearance could be different.

- 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).



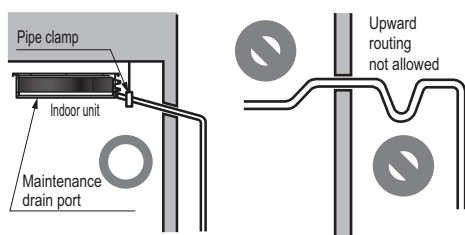
※ According to type of indoor unit, external appearance could be different.



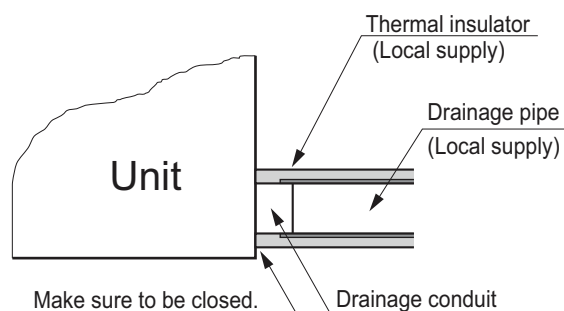
8. Installation

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)



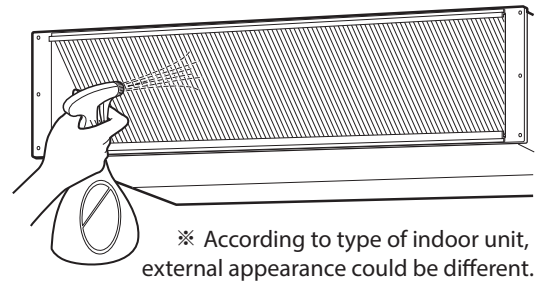
8. Installation

8.4.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

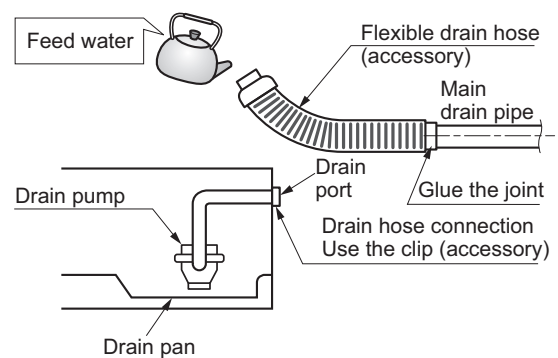
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

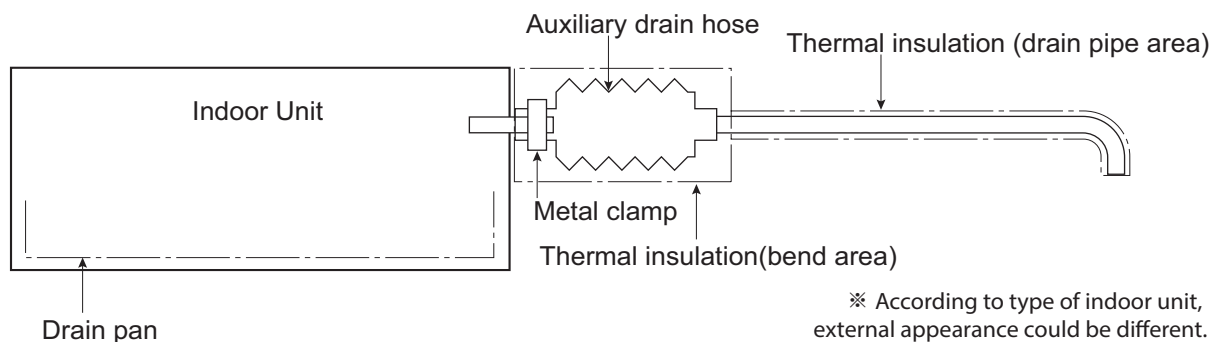
Use the following procedure to test the drain pump operation.

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.



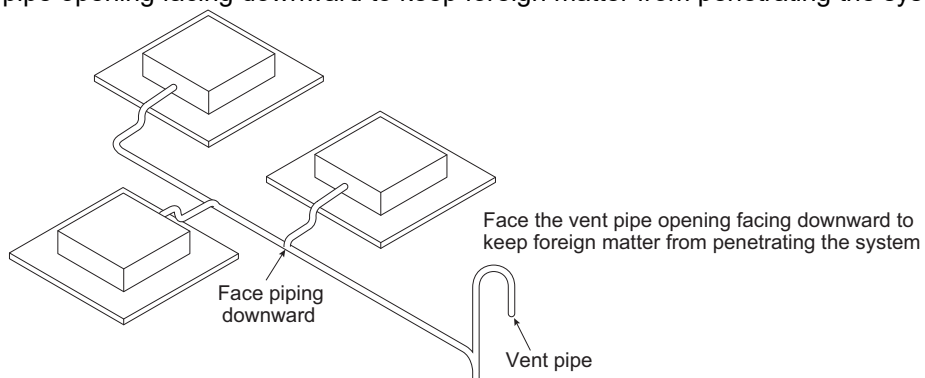
⚠ CAUTION

- 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 & Floor / 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	AVNH09GELA2 [CV09 NE2] AVNH12GELA2 [CV12 NE2] UVNH18GJLA2 [CV18 NJ2] UVNH24GJLA2 [CV24 NJ2] UVNH30GJLA2 [UV30 NJ2] UVNH36GKLA2 [UV36 NK2] UVNH42GLLA2 [UV42 NL2] UVNH60GLLA2 [UV60 NL2]
Air flow	Air supply outlet	1
	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)	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	X
	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	X
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		O(Accessory)
Network Solution(LGAP)		O

Note

1. O : Applied X : Not applied

Accessory model name : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

2. Some functions can be limited by remote controller.

3. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

7. For synchro operation, some functions and accessories are not available. Refer to PDB of outdoor unit.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AVNH09GELA2 [CV09 NE2] AVNH12GELA2 [CV12 NE2] UVNH18GJLA2 [CV18 NJ2] UVNH24GJLA2 [CV24 NJ2] UVNH30GJLA2 [UV30 NJ2] UVNH36GKLA2 [UV36 NK2] UVNH42GLLA2 [UV42 NL2] UVNH60GLLA2 [UV60 NL2]
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	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 ₂ 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	-	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. 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

Type				Ceiling & floor	
Model Name				AVNH09GELA2 [CV09 NE2]	AVNH12GELA2 [CV12 NE2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Max		W	10 / 30	20 / 40
Running Current			A	0.4	0.4
Casing Color			-	Morning Fog	Morning Fog
Dimensions	Body	W x H x D	mm	900 × 490 × 200	900 × 490 × 200
		W x H x D	inch	35-7/16 x 19-9/32 x 7-7/8	35-7/16 x 19-9/32 x 7-7/8
Net Weight	Body		kg (lbs)	13.7 (30.2)	13.7 (30.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 12 x 20) x 1	(2 x 12 x 20) x 1
	Face Area		m ² (ft ²)	0.17 (1.87)	0.17 (1.87)
Fan	Type		-	Cross Flow Fan	Cross Flow Fan
	Air Flow Rate	H / M / L	m ³ /min	7.6 / 6.9 / 6.2	9.2 / 7.6 / 6.6
		H / M / L	ft ³ /min	268 / 244 / 219	325 / 268 / 219
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	20 x 1	20 x 1
Sound Pressure Level		H / M / L	dB(A)	38 / 35 / 32	40 / 36 / 31
Sound Power Level		Max.	dB(A)	52	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	
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

2. Specifications

Type				Ceiling Suspended		
Model Name				UVNH18GJLA2 [CV18 NJ2]	UVNH24GJLA2 [CV24 NJ2]	
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	
				220, 1, 60	220, 1, 60	
Power Input	Min / Max		W	30 / 50	40 / 60	
Running Current			A	0.4	0.6	
Casing Color			-	Morning Fog	Morning Fog	
Dimensions	Body	W x H x D	mm	950 × 650 × 220	950 × 650 × 220	
		W x H x D	inch	37-13/32 x 25-19/32 x 8-21/32	37-13/32 x 25-19/32 x 8-21/32	
Net Weight	Body		kg (lbs)	22.0 (48.5)	23.0 (50.7)	
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 14 x 17) x 1	(3 x 14 x 17) x 1	
	Face Area		m ² (ft ²)	0.20 (2.15)	0.20 (2.15)	
Fan	Type		-	Cross flow Fan	Cross flow Fan	
	Air Flow Rate	H / M / L	m ³ /min	12.4 / 11.4 / 10.4	13.9 / 12.9 / 11.9	
		H / M / L	ft ³ /min	438 / 403 / 367	491 / 456 / 420	
Fan Motor	Type		-	BLDC	BLDC	
	Output		W x No.	43.1 x 1	43.1 x 1	
Sound Pressure Level		H / M / L	dB(A)	42 / 40 / 39	44 / 43 / 41	
Sound Power Level		Max.	dB(A)	57	61	
Piping Connections	Liquid		mm(inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)	Ø 6.35 (1/4)*
	Gas		mm(inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)	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		
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.						
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.						
• Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB						
• Heating : Indoot 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 Zero.						
* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.						

2. Specifications

Type				Ceiling Suspended	
Model Name				UVNH30GJLA2 [UV30 NJ2]	UVNH36GKLA2 [UV36 NK2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Max		W	40 / 60	40 / 90
Running Current			A	0.6	0.7
Casing Color			-	Morning Fog	Morning Fog
Dimensions	Body	W x H x D	mm	950 × 650 × 220	1,350 × 650 × 220
		W x H x D	inch	37-13/32 x 25-19/32 x 8-21/32	53-5/32 x 25-19/32 x 8-21/32
Net Weight	Body		kg (lbs)	23.0 (50.7)	34.1 (75.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 14 x 17) x 1	(3 x 14 x 17) x 1
	Face Area		m ² (ft ²)	0.20 (2.15)	0.32 (3.42)
Fan	Type		-	Cross flow Fan	Cross flow Fan
	Air Flow Rate	H / M / L	m ³ /min	13.9 / 12.9 / 11.9	21.4 / 19.8 / 18.2
		H / M / L	ft ³ /min	491 / 456 / 420	756 / 699 / 643
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43.1 x 1	43.1 x 2
Sound Pressure Level		H / M / L	dB(A)	44 / 43 / 41	45 / 44 / 41
Sound Power Level		Max.	dB(A)	62	63
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	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 ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoot 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 Zero.					

2. Specifications

Type				Ceiling Suspended	
Model Name				UVNH42GLLA2 [UV42 NL2]	UVNH48GLLA2 [UV48 NL2]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Max		W	80 / 130	90 / 140
Running Current			A	1.0	1.1
Casing Color			-	Morning Fog	Morning Fog
Dimensions	Body	W x H x D	mm	1,750 × 650 × 220	1,750 × 650 × 220
		W x H x D	inch	68-29/32 x 25-19/32 x 8-21/32	68-29/32 x 25-19/32 x 8-21/32
Net Weight	Body		kg (lbs)	42.5 (93.7)	42.5 (93.7)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 14 x 17) x 1	(3 x 14 x 17) x 1
	Face Area		m ² (ft ²)	0.44 (4.68)	0.44 (4.68)
Fan	Type		-	Cross flow Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	28.6 / 26.9 / 25.2	30.0 / 28.3 / 26.6
		H / M / L	ft ³ /min	1,010 / 950 / 890	1,060 / 999 / 939
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	43.1 x 2	43.1 x 2
Sound Pressure Level		H / M / L	dB(A)	46 / 44 / 43	47 / 46 / 44
Sound Power Level		Max.	dB(A)	63	63
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	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 ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.					
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.					
• Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB					
• Heating : Indoot 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 Zero.					

2. Specifications

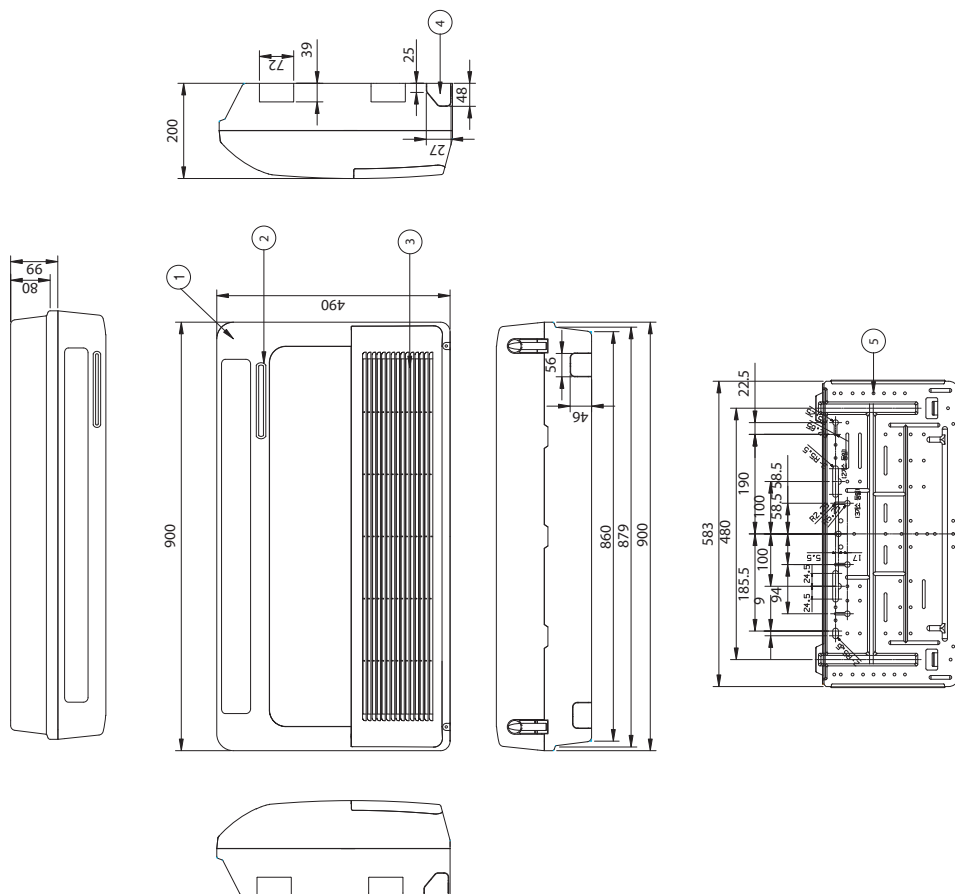
Type				Ceiling Suspended
Model Name				UVNH60GLLA2 [UV60 NL2]
Power Supply		V, Ø, Hz		220-240, 1, 50
Power Input		W	Min / Max	220, 1, 60
Running Current		A		100 / 150
Casing Color		-		1.2
Dimensions		mm	Body	Morning Fog
		inch	W x H x D	1,750 × 650 × 220
Net Weight		kg (lbs)	W x H x D	68-29/32 x 25-19/32 x 8-21/32
Heat Exchanger		-	(Row x Column x Fins per inch) x No.	42.5 (93.7)
		m ² (ft ²)	Face Area	(3 x 14 x 17) x 1
Fan		-	Type	0.44 (4.68)
		m ³ /min	Air Flow Rate	Cross flow Fan
		ft ³ /min	H / M / L	31.5 / 29.7 / 28.0
Fan Motor		-	H / M / L	1,112 / 1,049 / 989
		W x No.	Type	BLDC
Sound Pressure Level		dB(A)	Output	43.1 x 2
Sound Power Level		dB(A)	H / M / L	48 / 47 / 45
		Max.		63
Piping Connections		mm(inch)	Liquid	Ø 9.52 (3/8)
		mm(inch)	Gas	Ø 15.88 (5/8)
		mm	Drain (O.D. / I.D.)	Ø 21.5 / 16.0
Safety Devices		-		Fuse
		-		Thermal Protector for Fan Motor
Power and Communication Cable (included Earth)		No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

3. Dimensions

AVNH09GELA2 [CV09 NE2] / AVNH12GELA2 [CV12 NE2]



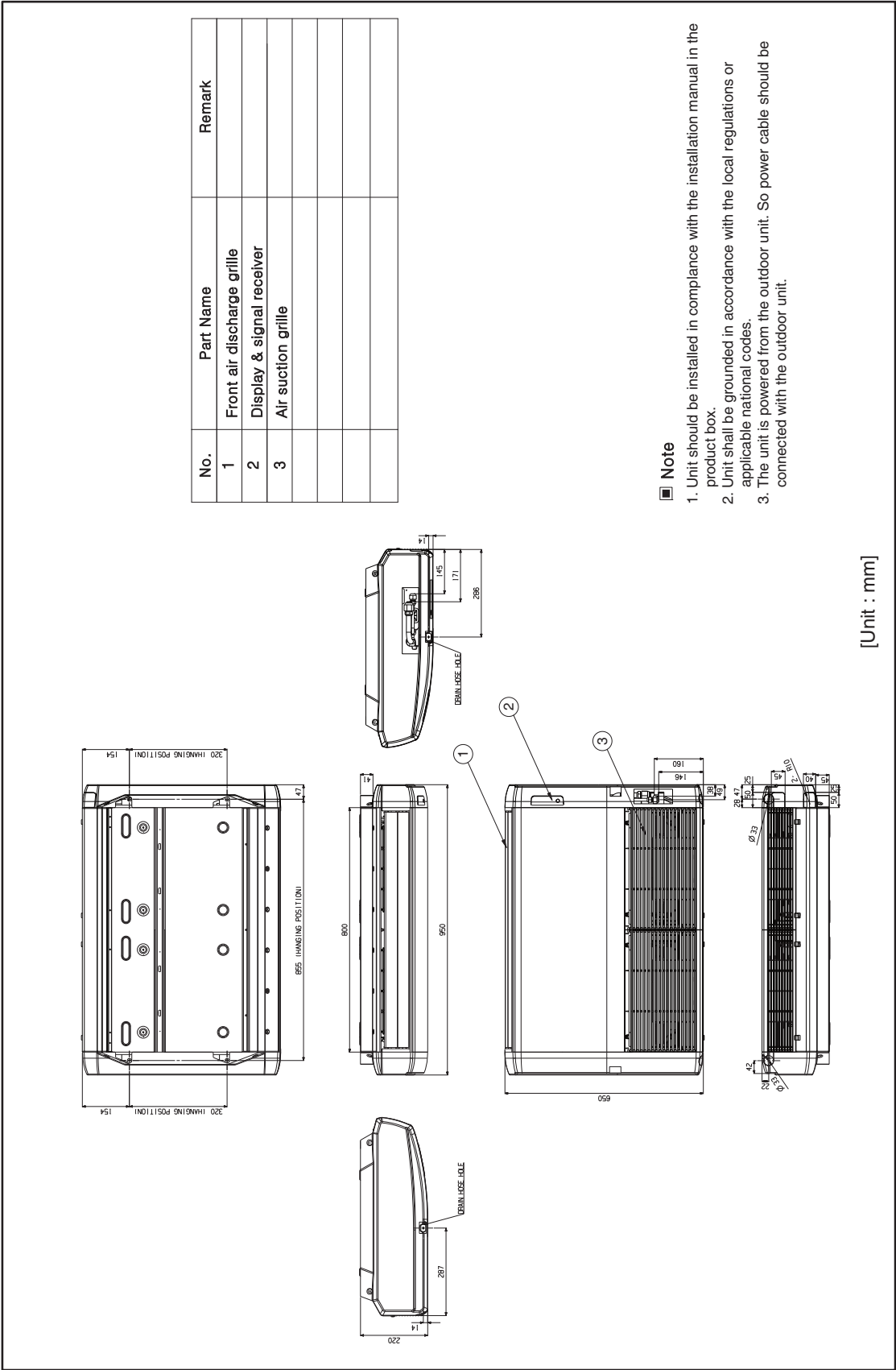
[Unit : mm]

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

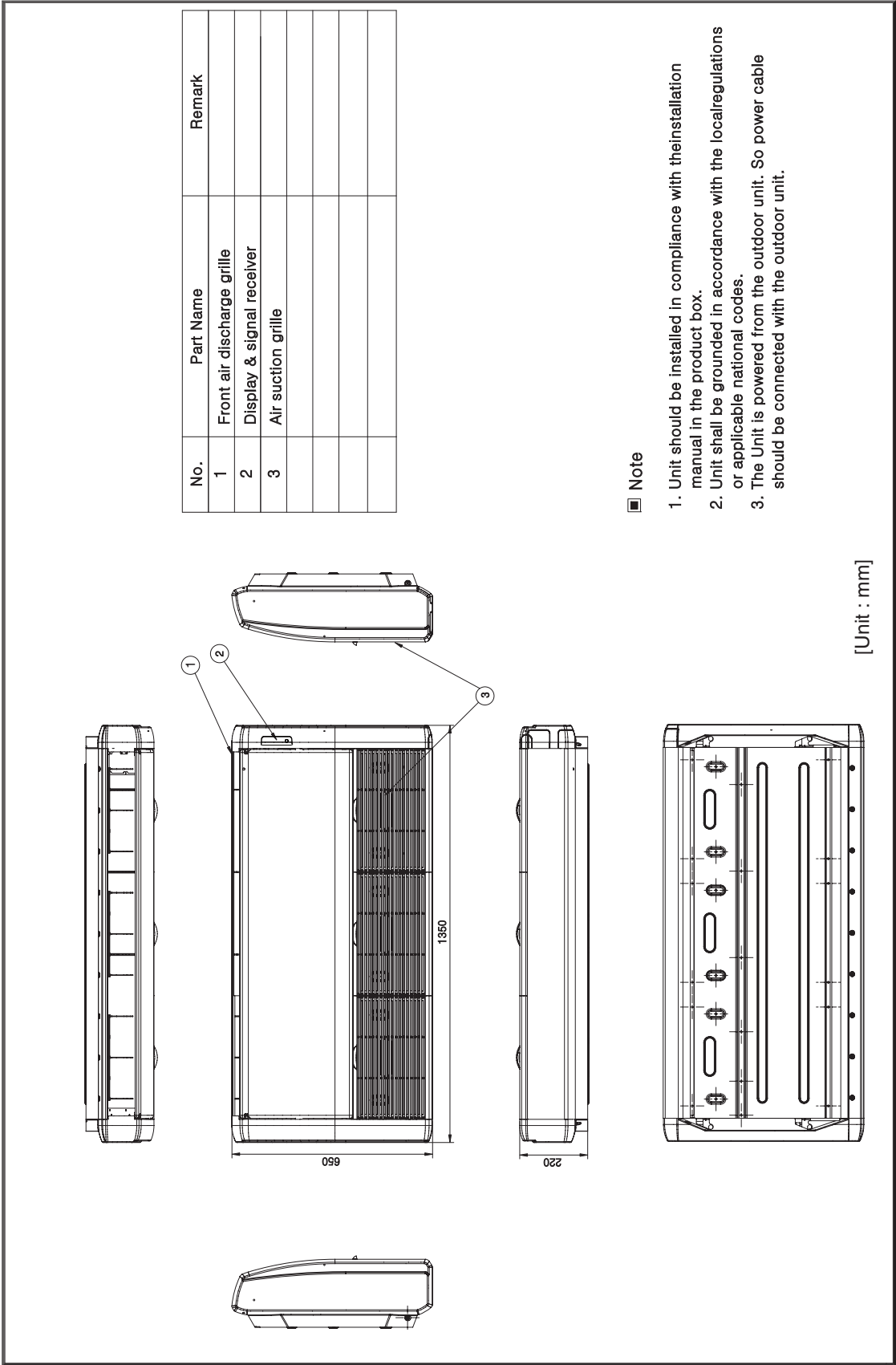
3. Dimensions

UVNH18GJLA2 [CV18 NJ2] / UVNH24GJLA2 [CV24 NJ2] / UVNH30GJLA2 [UV30 NJ2]



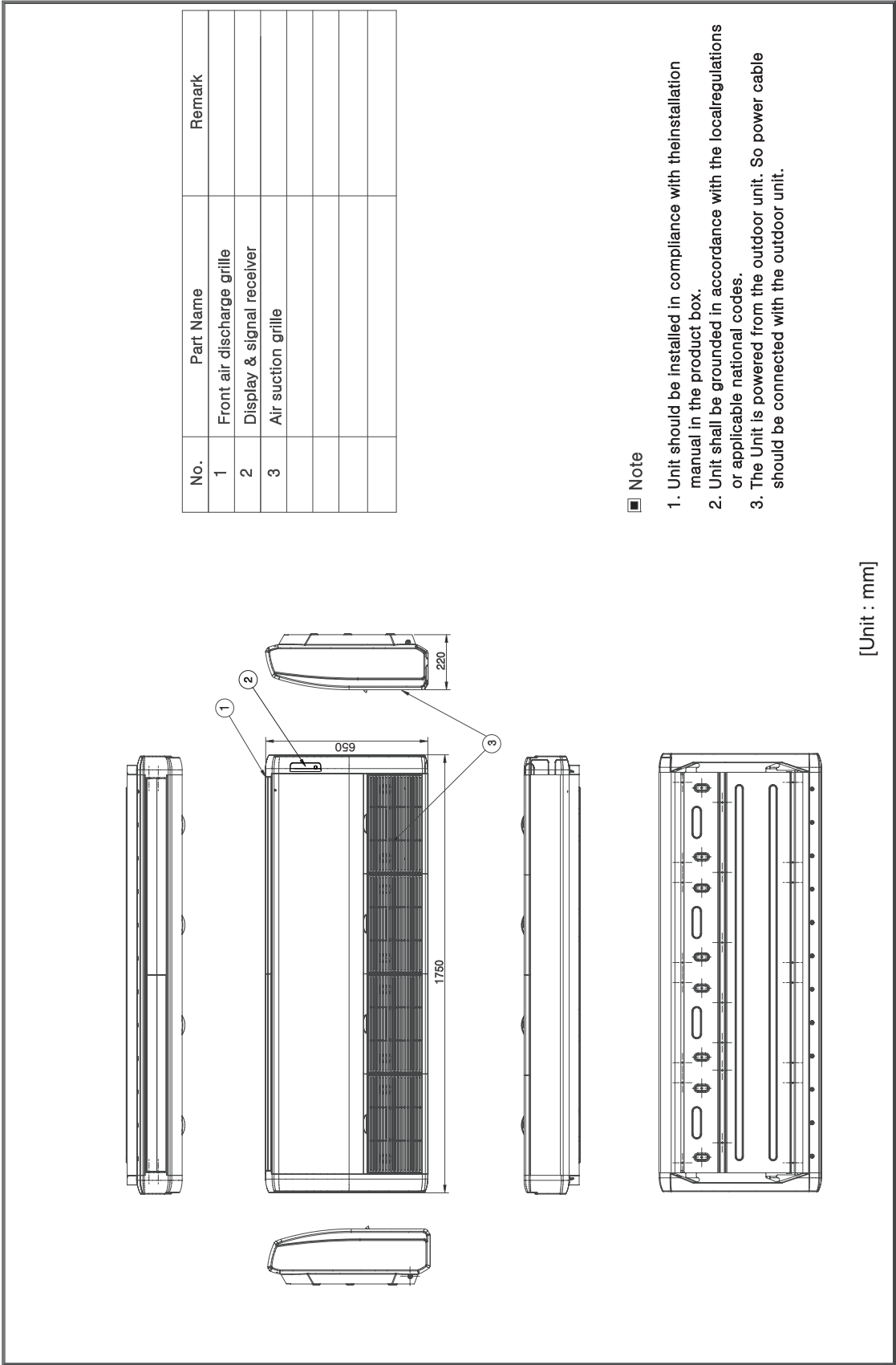
3. Dimensions

UVNH36GKLA2 [UV36 NK2]



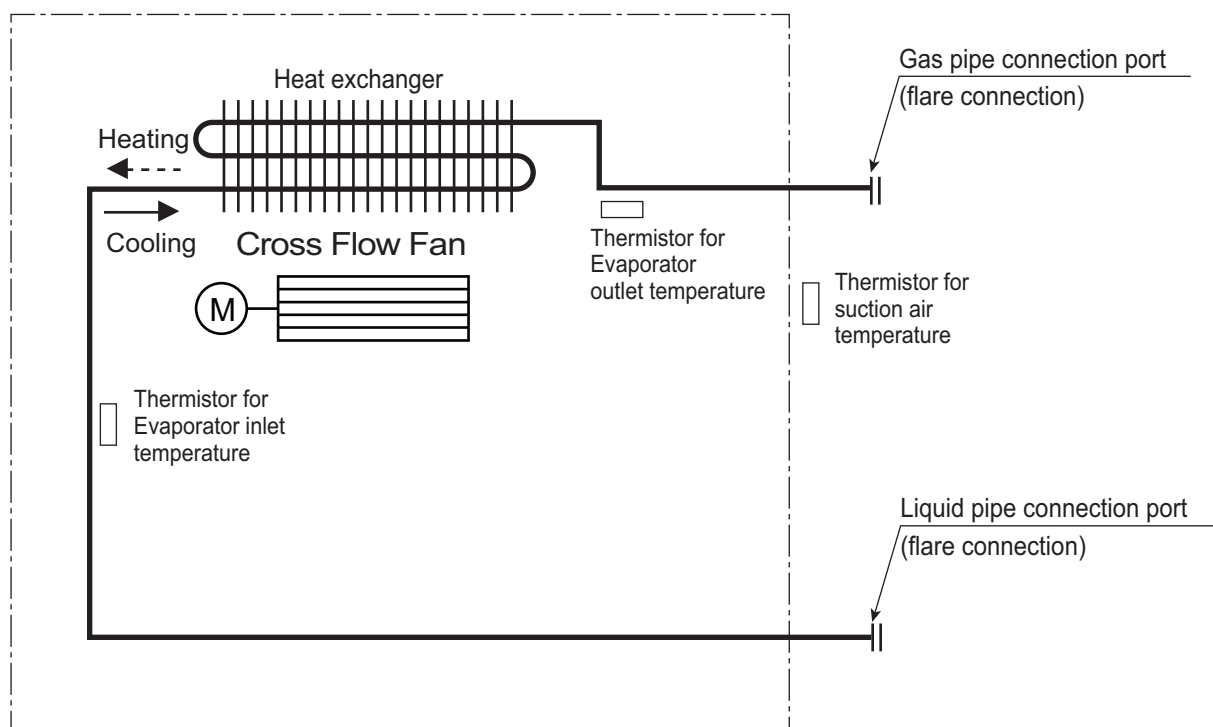
3. Dimensions

UVNH42GLLA2 [UV42 NL2] / UVNH48GLLA2 [UV48 NL2] / UVNH60GLLA2 [UV60 NL2]



4. Piping diagrams

■ Models : AVNH-EL [CV- NE2]



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

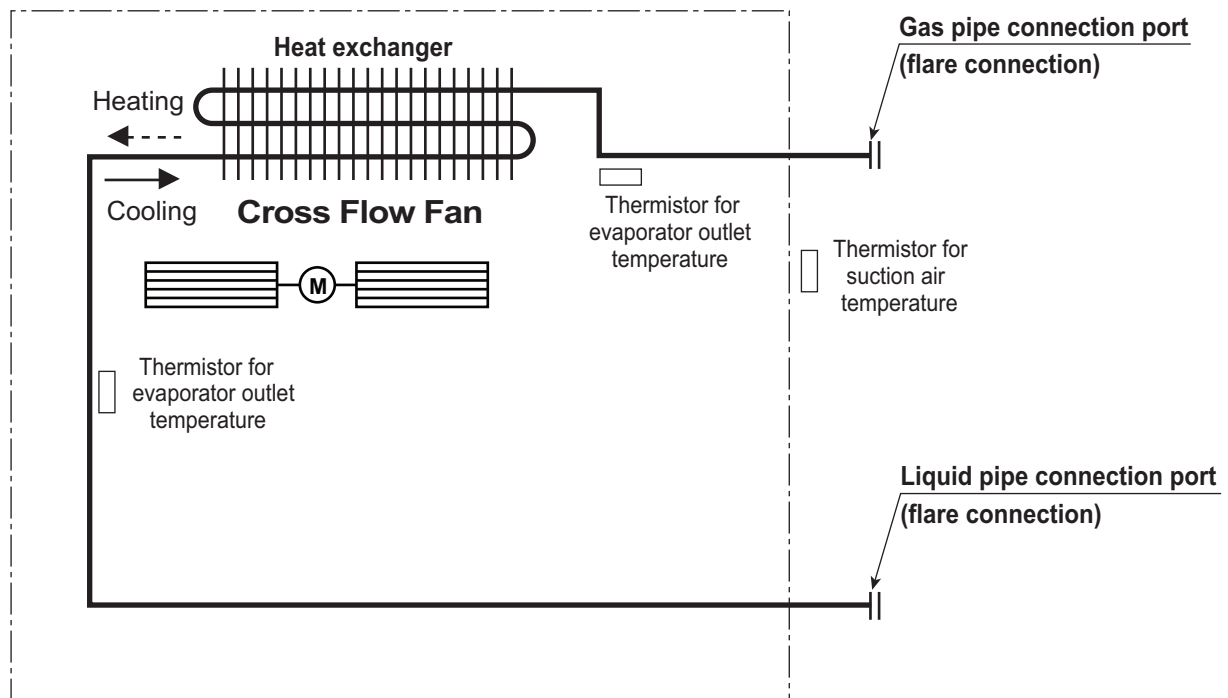
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
AVNH09GELA2 [CV09 NE2] AVNH12GELA2 [CV12 NE2]	Ø9.52	Ø6.35

4. Piping diagrams

■ Models : UVNH-JL [CV- NJ2] / UVNH-JL [UV- NJ2]



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

◆ Refrigerant pipe connection port diameters

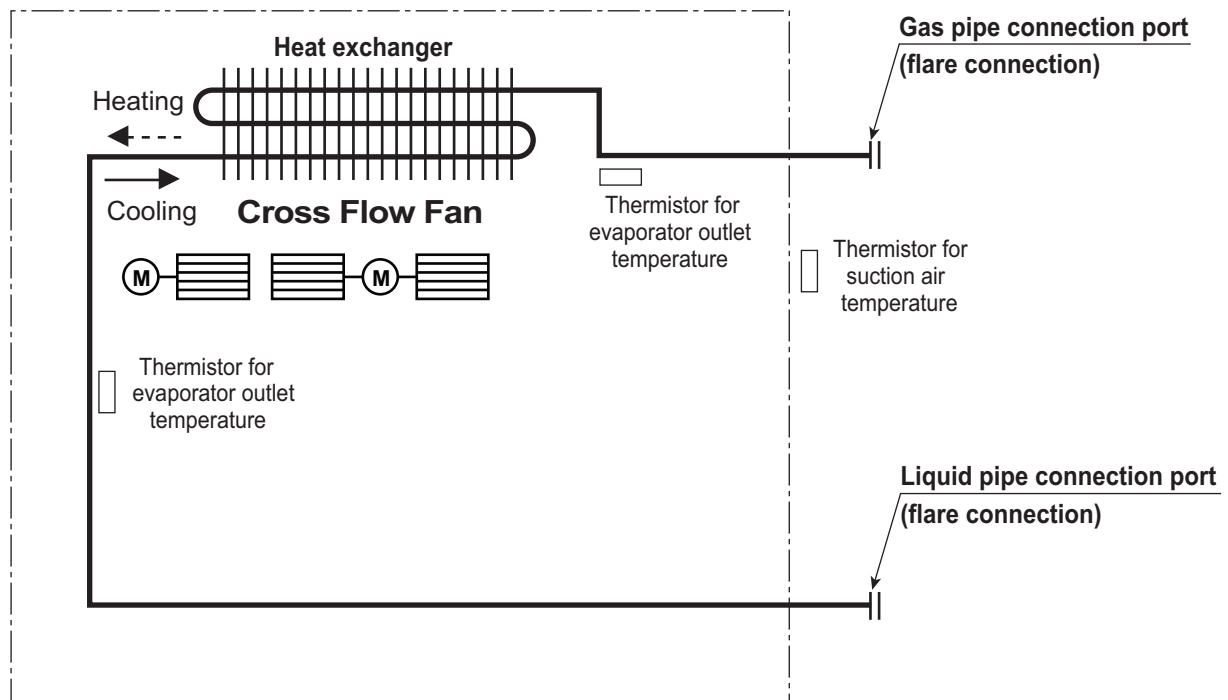
[Unit : mm]

Model	Gas	Liquid
UVNH18GJLA2 [CV18 NJ2]	Ø12.7	Ø6.35
UVNH24GJLA2 [CV24 NJ2]	Ø15.88	Ø9.52
	* Ø12.7	* Ø6.35
UVNH30GJLA2 [UV30 NJ2]	Ø9.52	Ø9.52

* : For combined with Multi F/FDX system, socket provided with indoor units should be connected.

4. Piping diagrams

■ Models : UVNH-KL [UV- NK2]



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

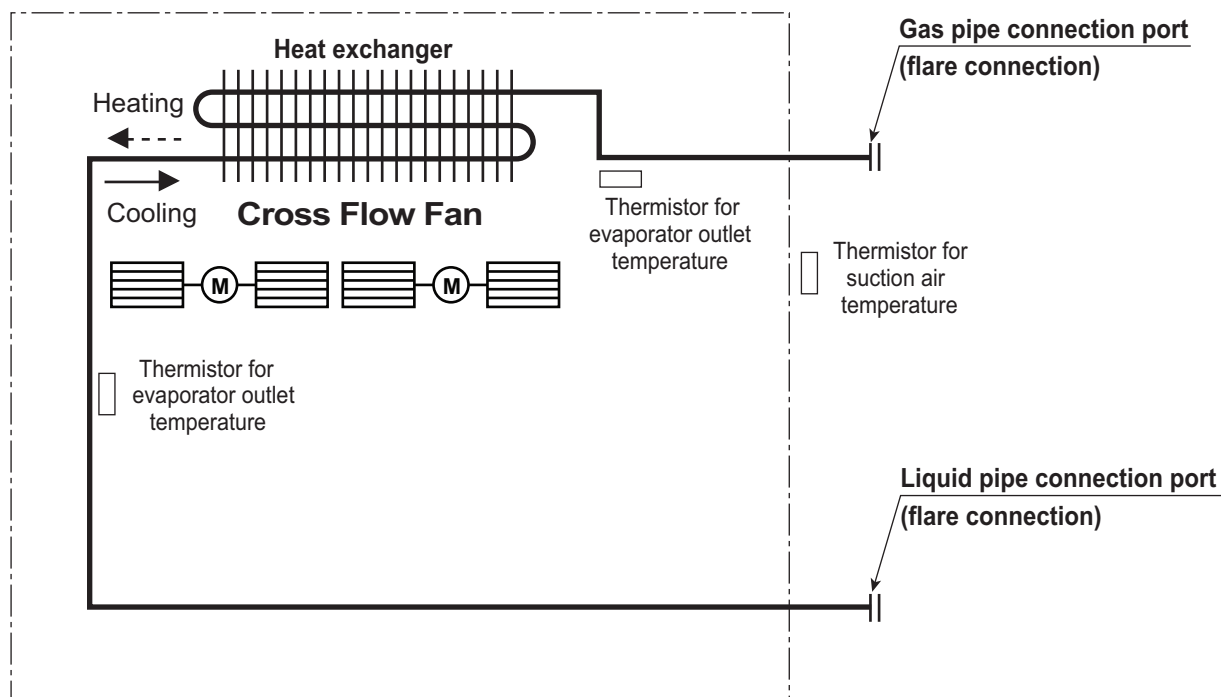
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
UVNH36GKLA2 [UV36 NK2]	Ø15.88	Ø9.52

4. Piping diagrams

■ Models : UVNH-LL [UV- NL2]



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

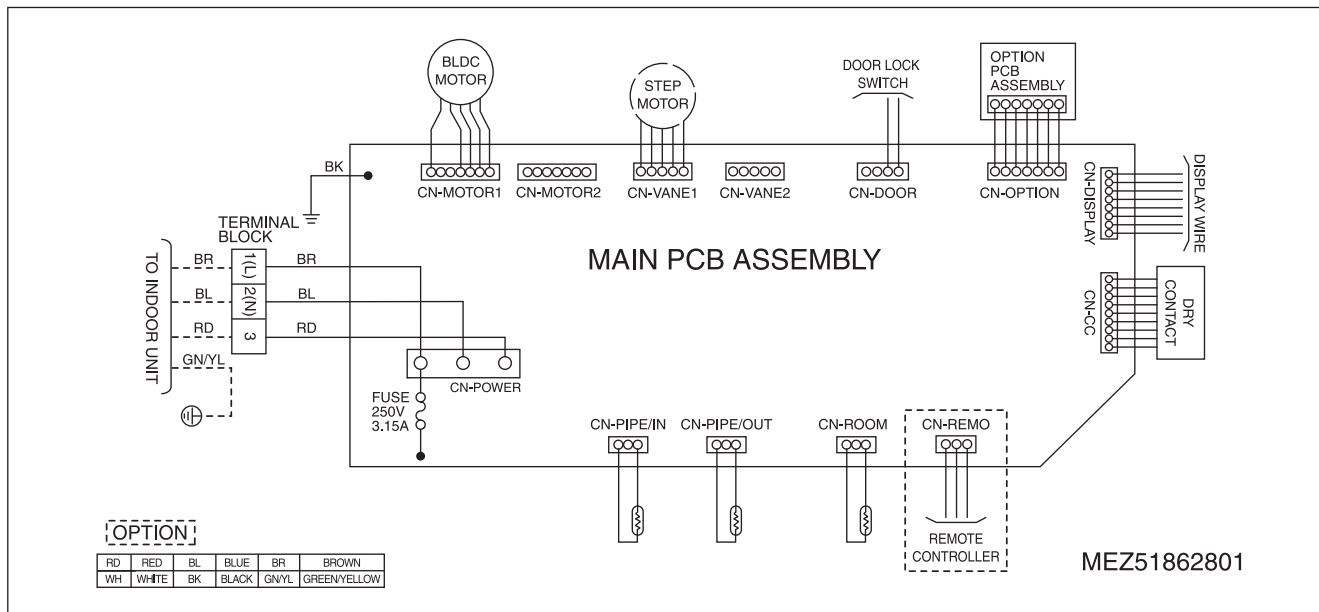
◆ Refrigerant pipe connection port diameters

[Unit : mm]

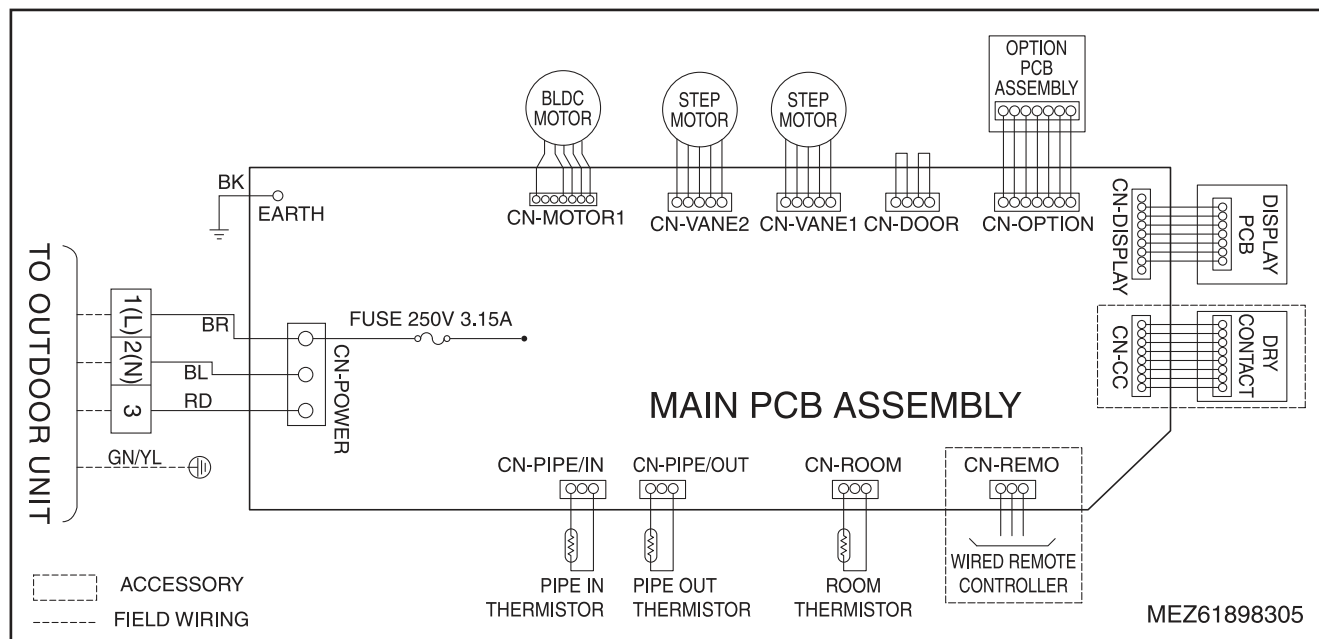
Model	Gas	Liquid
UVNH42GLLA2 [UV42 NL2] UVNH48GLLA2 [UV48 NL2] UVNH60GLLA2 [UV60 NL2]	Ø15.88	Ø9.52

5. Wiring Diagrams

Models : AVNH-EL [CV- NE2]

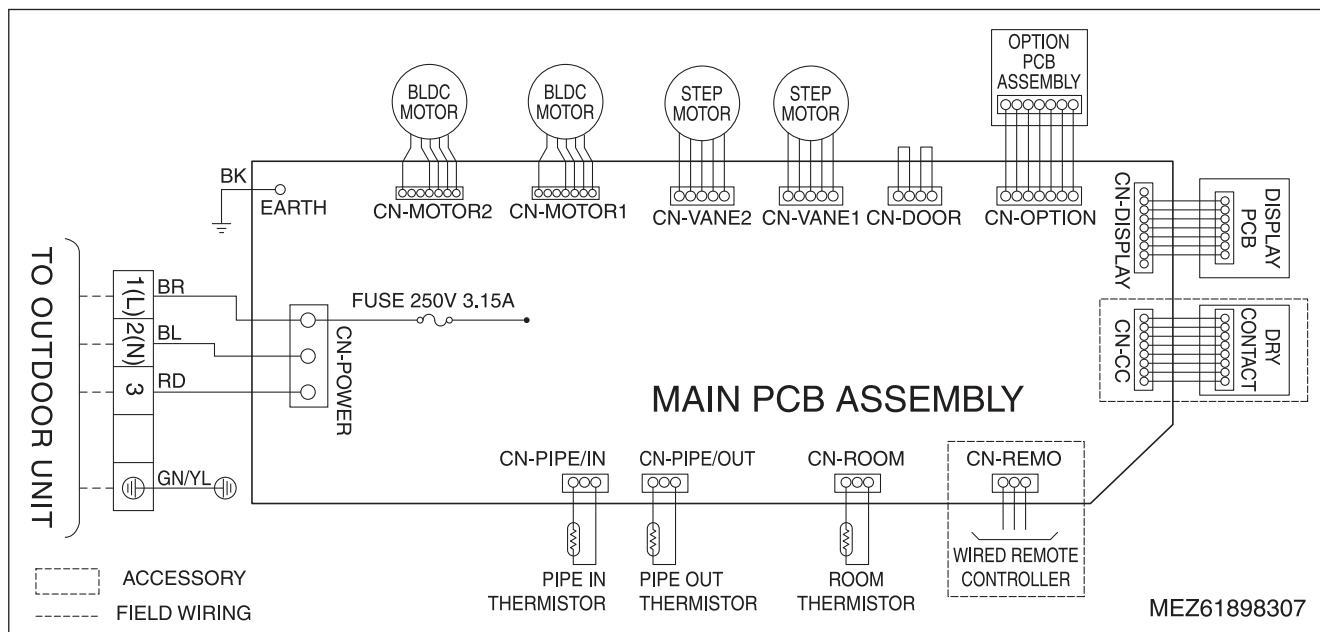


Models : UVNH-JL [CV- NJ2] / UVNH-JL [UV- NJ2]

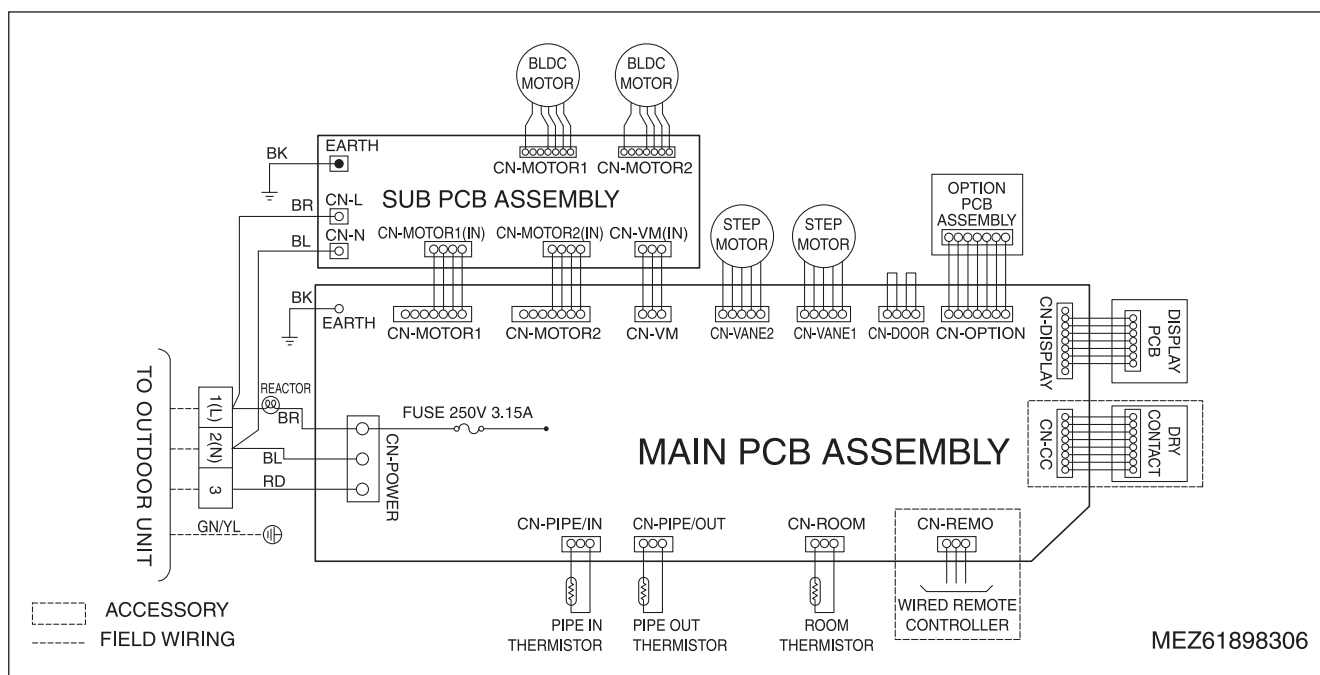


5. Wiring Diagrams

Models : UVNH-KL [UV- NK2]



Models : UVNH-LL [UV- NL2]



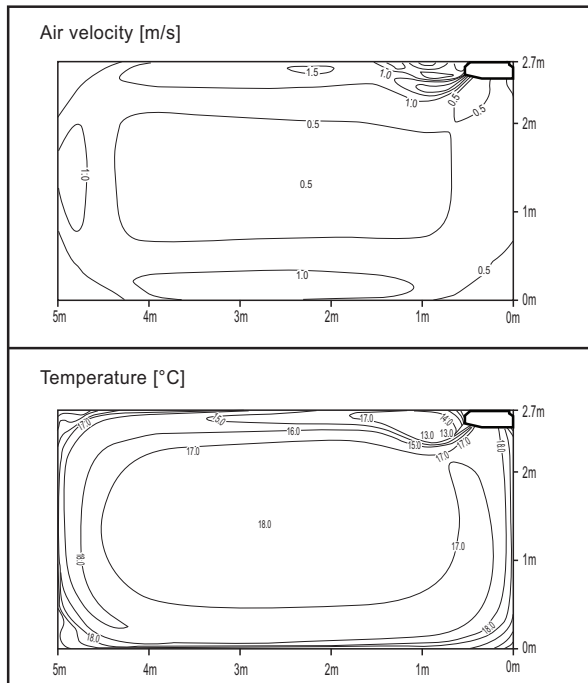
6. Air flow and temperature distributions (reference data)

■ Model : AVNH09GELA2 [CV09 NE2]

◆ Ceiling

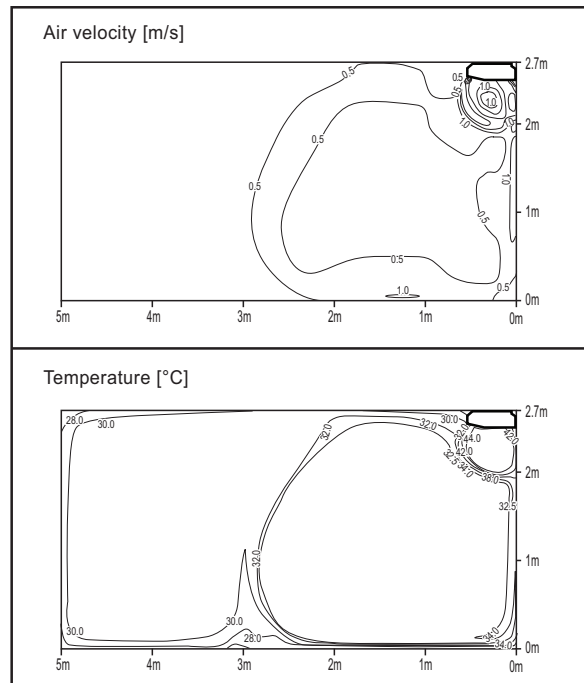
Cooling

Discharge angle:50°



Heating

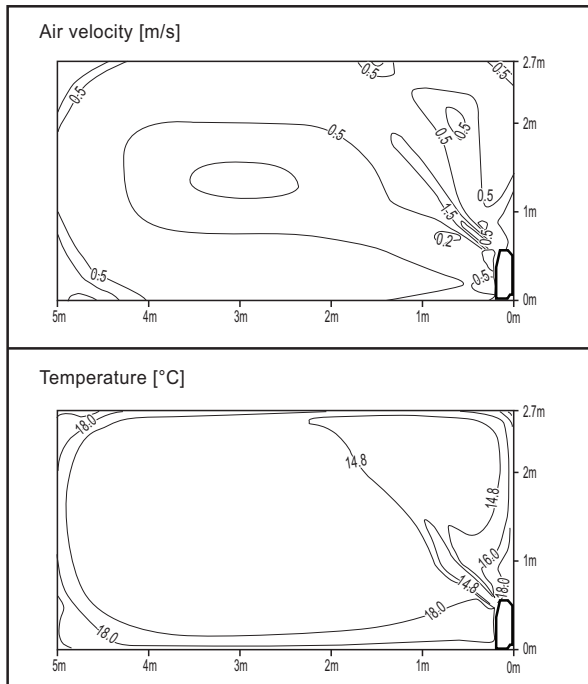
Discharge angle:60°



◆ Floor

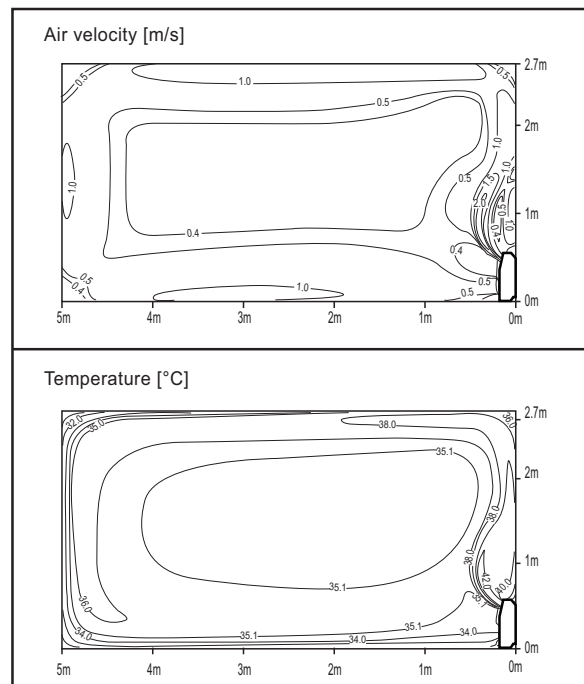
Cooling

Discharge angle:45°



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.

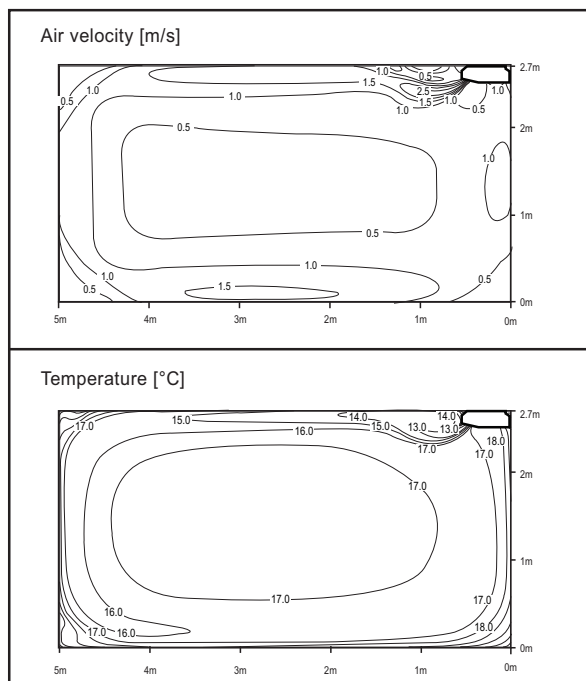
6. Air flow and temperature distributions (reference data)

■ Model : AVNH12GELA2 [CV12 NE2]

◆ Ceiling

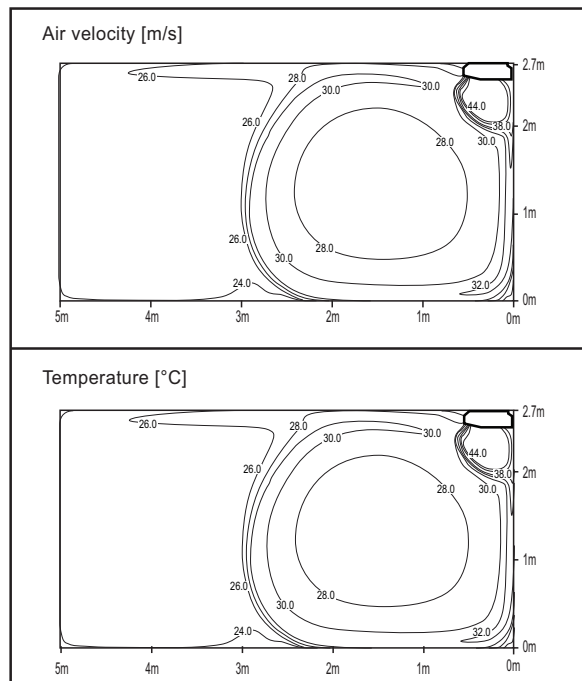
Cooling

Discharge angle:50°



Heating

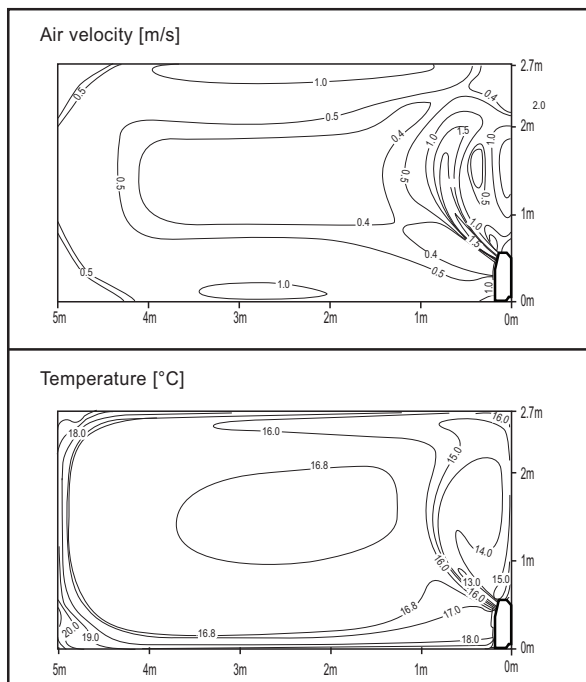
Discharge angle:60°



◆ Floor

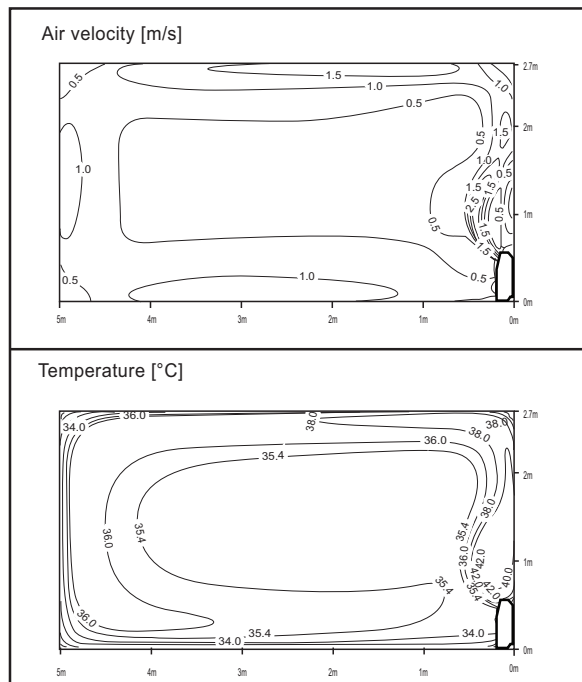
Cooling

Discharge angle:50°



Heating

Discharge angle:60°



Note

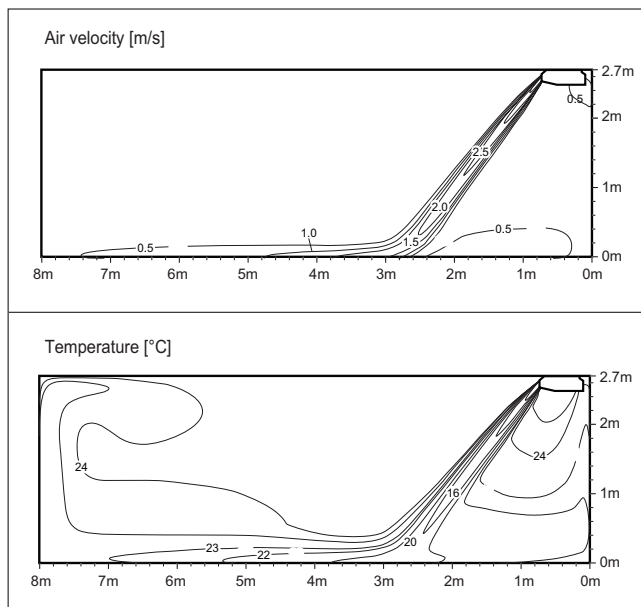
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

■ Model : UVNH18GJLA2 [CV18 NJ2]

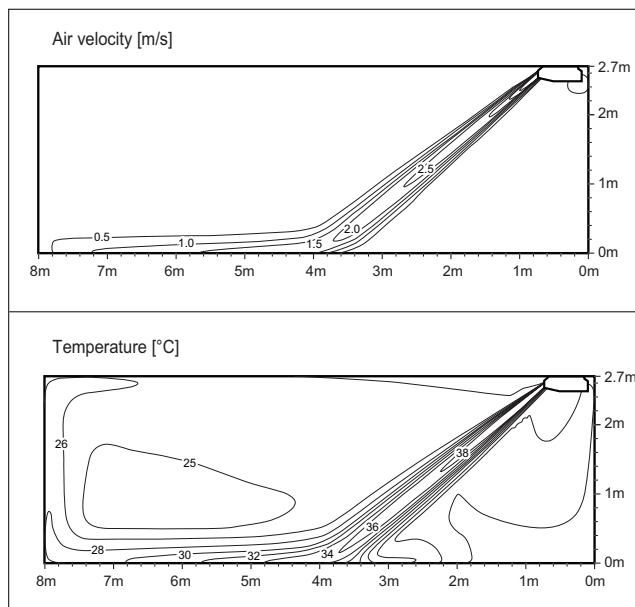
Cooling

Discharge angle:40°



Heating

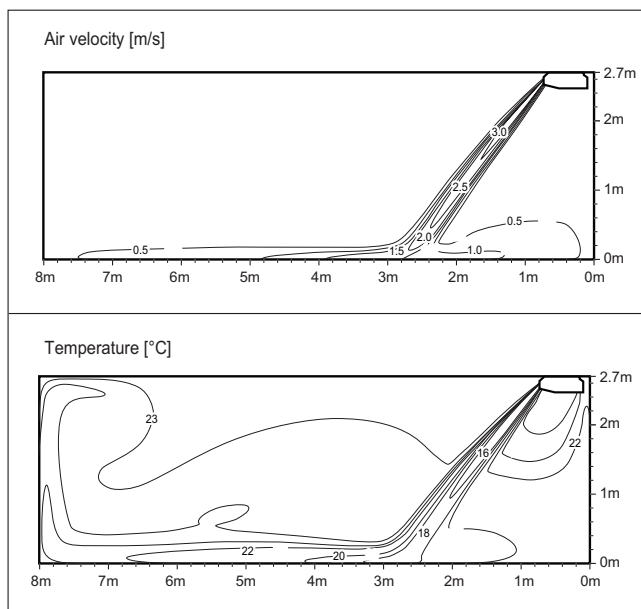
Discharge angle:50°



■ Model : UVNH24GJLA2 [CV24 NJ2] / UVNH30GJLA2 [UV30 NJ2]

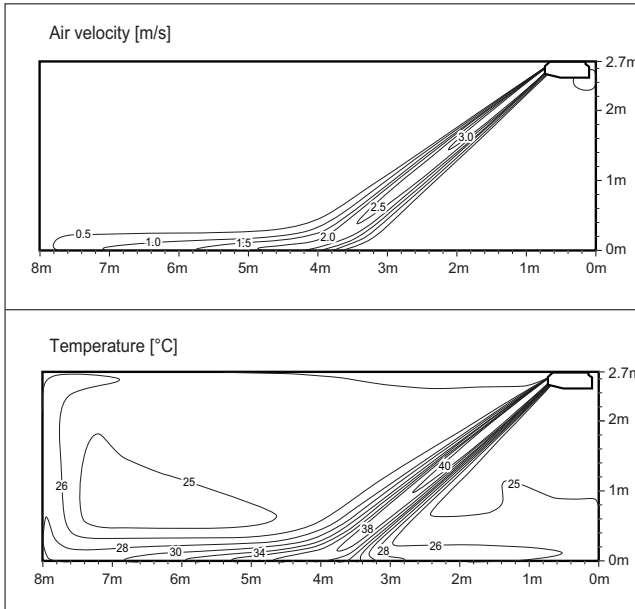
Cooling

Discharge angle:40°



Heating

Discharge angle:50°



Note

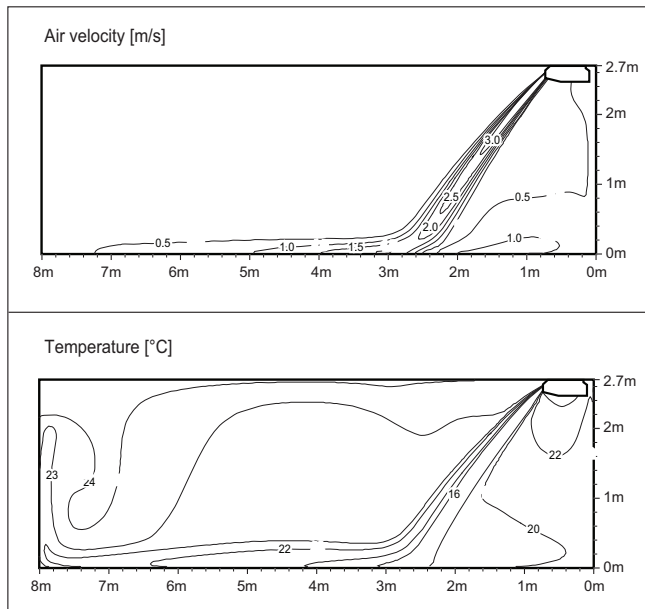
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

■ Model : UVNH36GKLA2 [UV36 NK2]

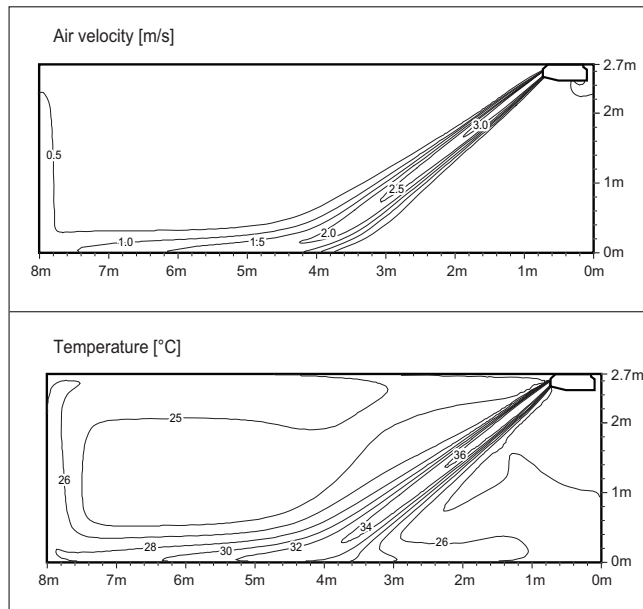
Cooling

Discharge angle:40°



Heating

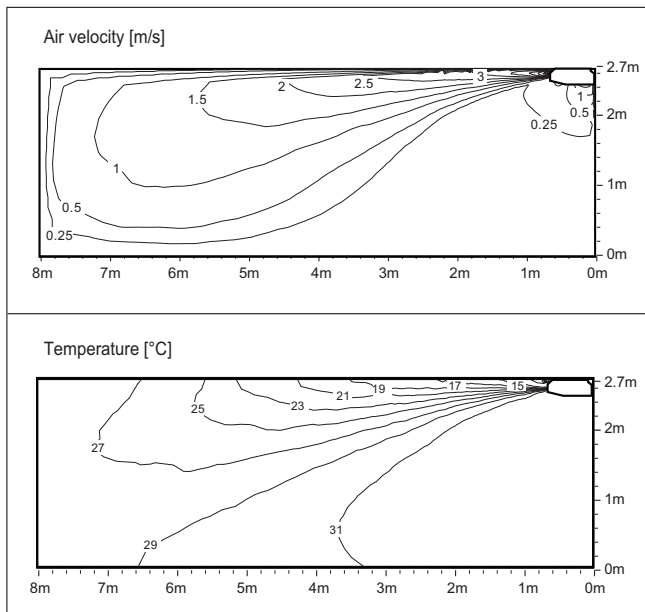
Discharge angle:50°



■ Model : UVNH42GLLA2 [UV42 NL2]

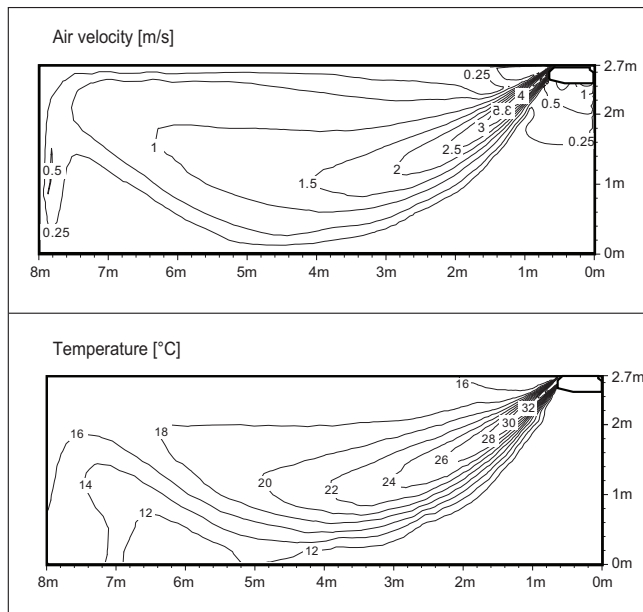
Cooling

Discharge angle:10°



Heating

Discharge angle:45°



Note

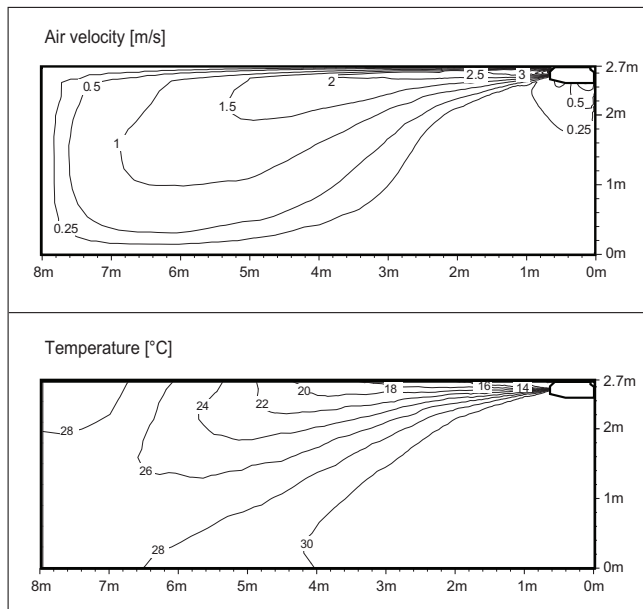
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

■ Model : UVNH48GLLA2 [UV48 NL2]

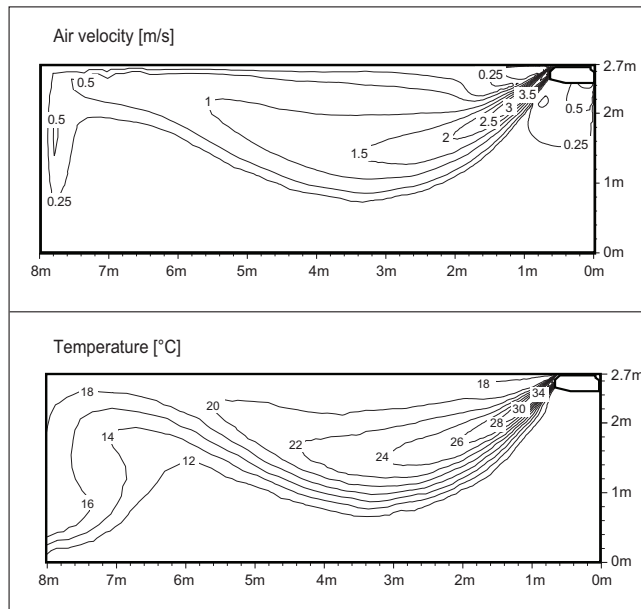
Cooling

Discharge angle:10°



Heating

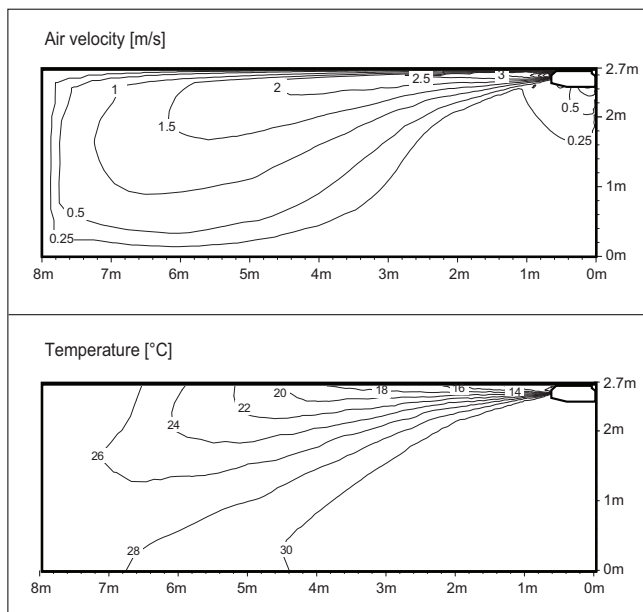
Discharge angle:45°



■ Model : UVNH60GLLA2 [UV60 NL2]

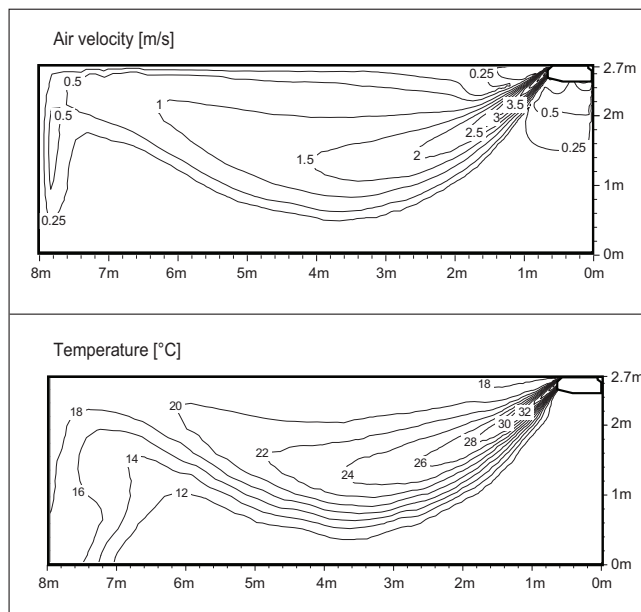
Cooling

Discharge angle:10°



Heating

Discharge angle:45°



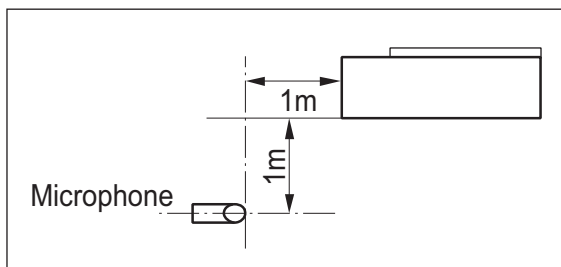
Note

- 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



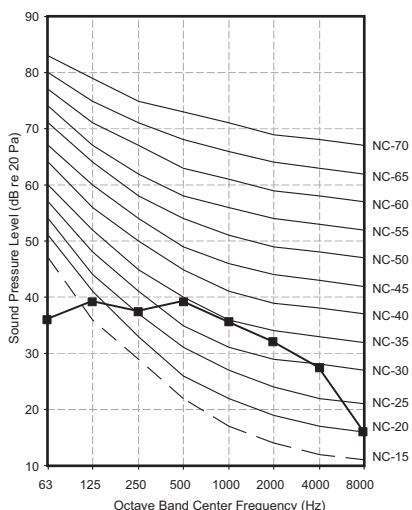
Note

- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20μPa.
- 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.
- The operating conditions are assumed to be standard.

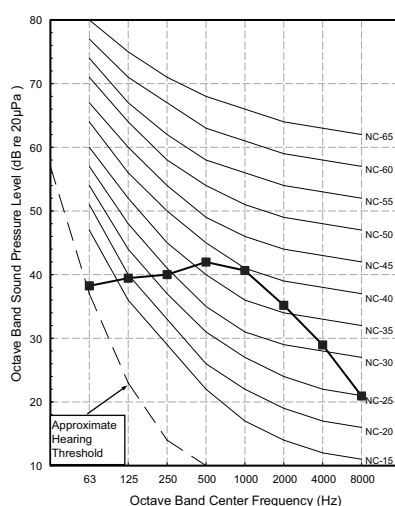
Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AVNH09GELA2 [CV09 NE2]	38	35	32
AVNH12GELA2 [CV12 NE2]	40	36	31
UVNH18GJLA2 [CV18 NJ2]	42	40	39
UVNH24GJLA2 [CV24 NJ2]	44	43	41
UVNH30GJLA2 [UV30 NJ2]	44	43	41

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
UVNH36GKLA2 [UV36 NK2]	45	44	41
UVNH42GLLA2 [UV42 NL2]	46	44	43
UVNH48GLLA2 [UV48 NL2]	47	46	44
UVNH60GLLA2 [UV60 NL2]	48	47	45

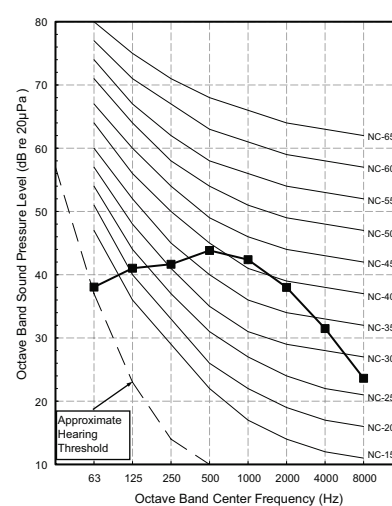
**AVNH09GELA2 [CV09 NE2]
AVNH12GELA2 [CV12 NE2]**



UVNH18GJLA2 [CV18 NJ2]

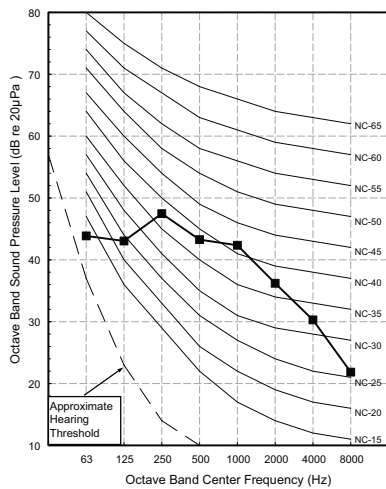


**UVNH24GJLA2 [CV24 NJ2]
UVNH30GJLA2 [CV30 NJ2]**

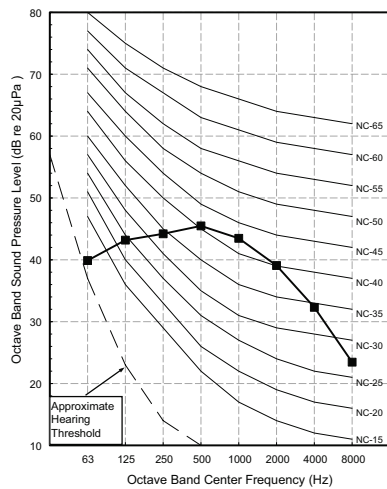


7. Sound levels

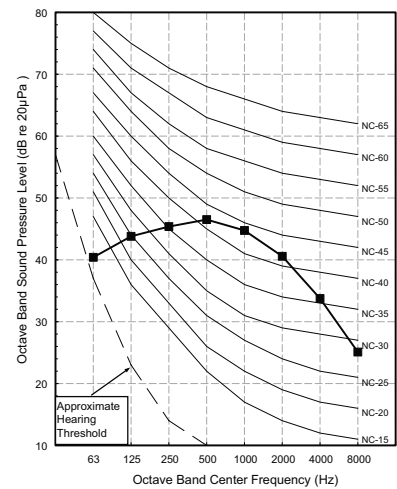
UVNH36GKLA2 [UV36 NK2]



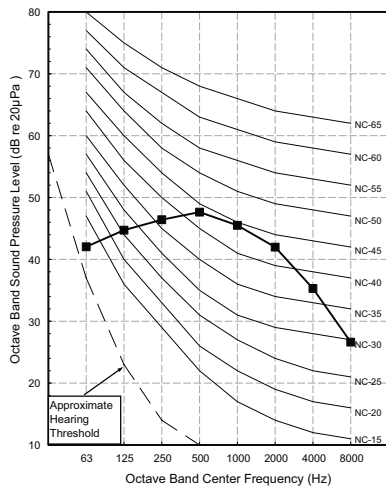
UVNH42GLLA2 [UV42 NL2]



UVNH48GLLA2 [UV48 NL2]



UVNH60GLLA2 [UV60 NL2]



7. Sound levels

7.2 Sound power level

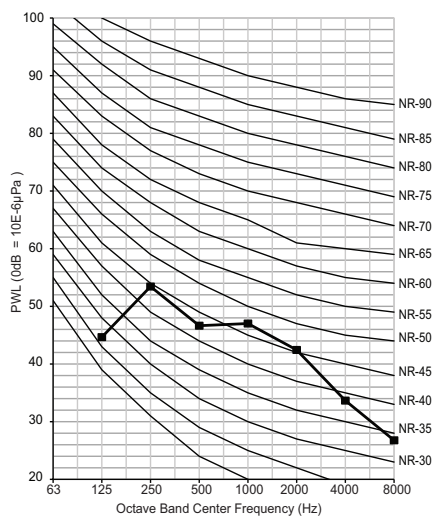
Note

1. Reference acoustic intensity $0\text{dB} = 10\text{E-}6\mu\text{W/m}^2$
2. 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.

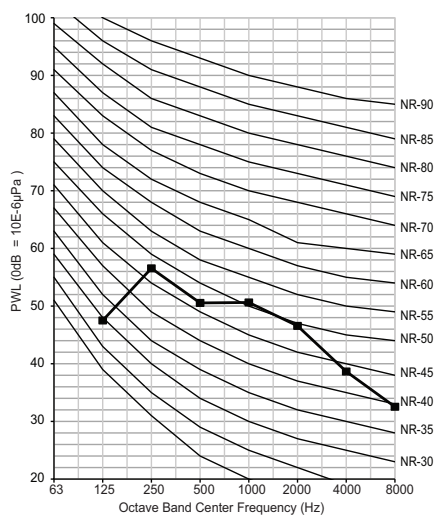
Model	Sound power level [dB(A)]
	H
AVNH09GELA2 [CV09 NE2]	52
AVNH12GELA2 [CV12 NE2]	56
UVNH18GJLA2 [CV18 NJ2]	57
UVNH24GJLA2 [CV24 NJ2]	61
UVNH30GJLA2 [UV30 NJ2]	62

Model	Sound power level [dB(A)]
	H
UVNH36GKLA2 [UV36 NK2]	63
UVNH42GLLA2 [UV42 NL2]	63
UVNH48GLLA2 [UV48 NL2]	63
UVNH60GLLA2 [UV60 NL2]	63

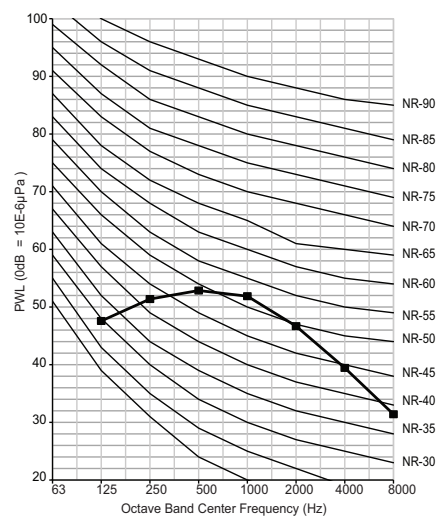
AVNH09GELA2 [CV09 NE2]



AVNH12GELA2 [CV12 NE2]

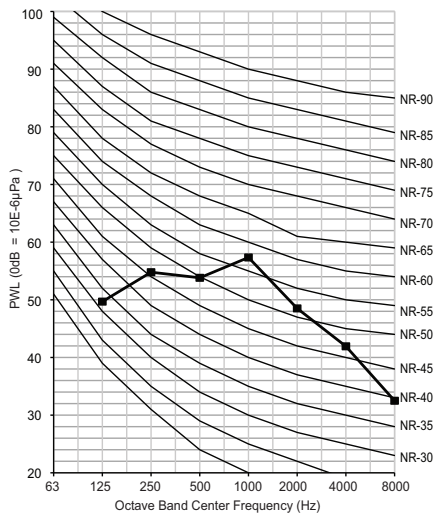


UVNH18GJLA2 [CV18 NJ2]

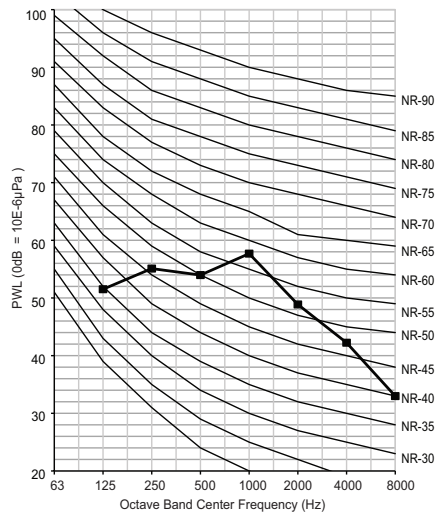


7. Sound levels

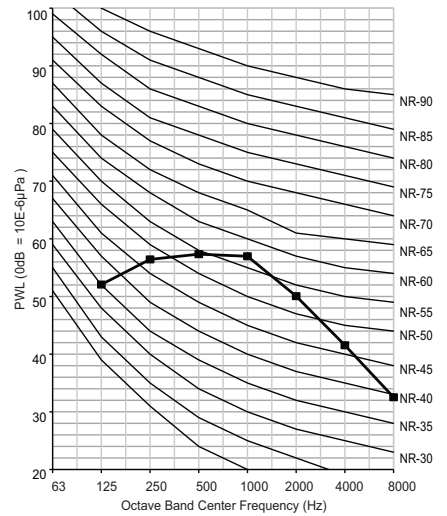
UVNH24GJLA2 [CV24 NJ2]



UVNH30GJLA2 [UV30 NJ2]



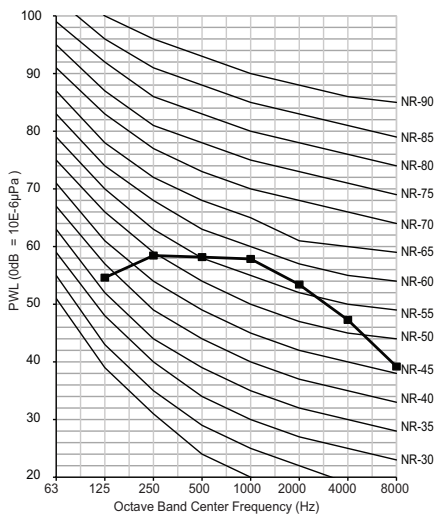
UVNH36GKLA2 [UV36 NK2]



UVNH42GJLA2 [UV42 NL2]

UVNH48GJLA2 [UV48 NL2]

UVNH60GJLA2 [UV60 NL2]



8. Installation

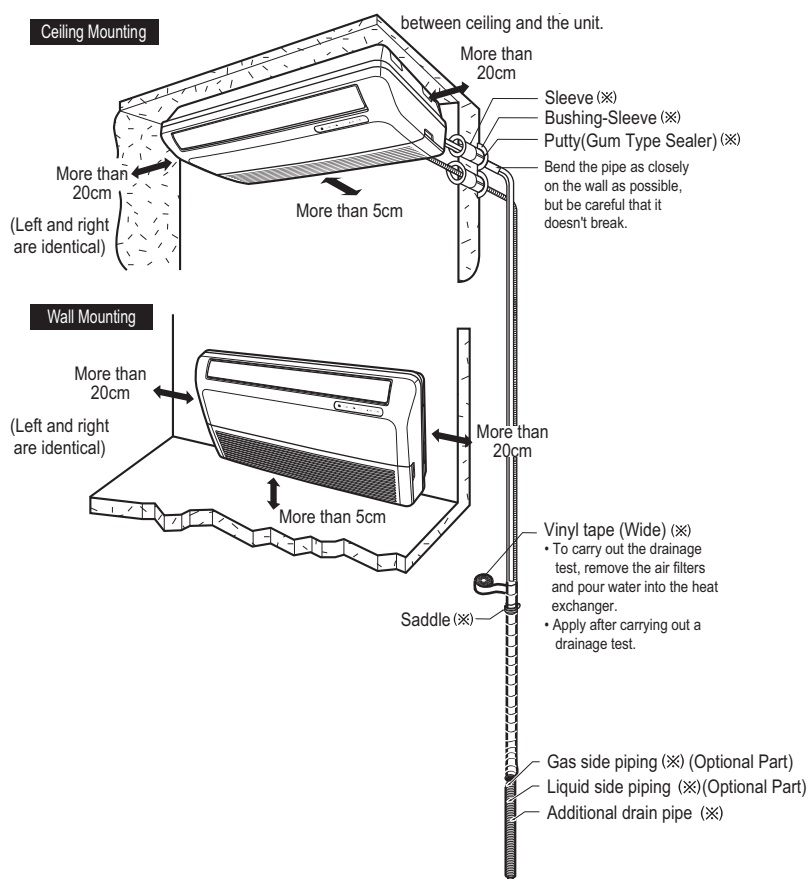
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

1) Installation parts provided

- Installation Plate (VE, 1pcs)
- Washer Bolt (M8×L25, 4pcs, type "A")
- Floor Mount Bracket (1pcs)
- Drain Hose, Insulated
- Drain Hose Hanger and screw

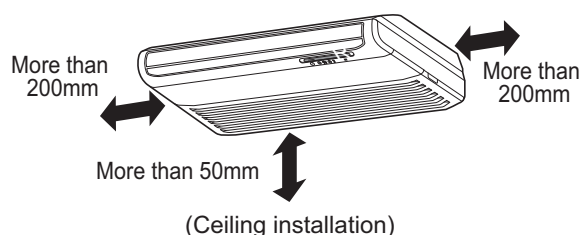
2) The other installation parts needed

- Suspension Bolt
- Bolts for Mount Bracket
- Connecting Tube(mm)
 - Gas side : Ø9.52, Ø12.7
 - Liquid side : Ø6.35
- Connecting Cable
- Drain Hose Extended

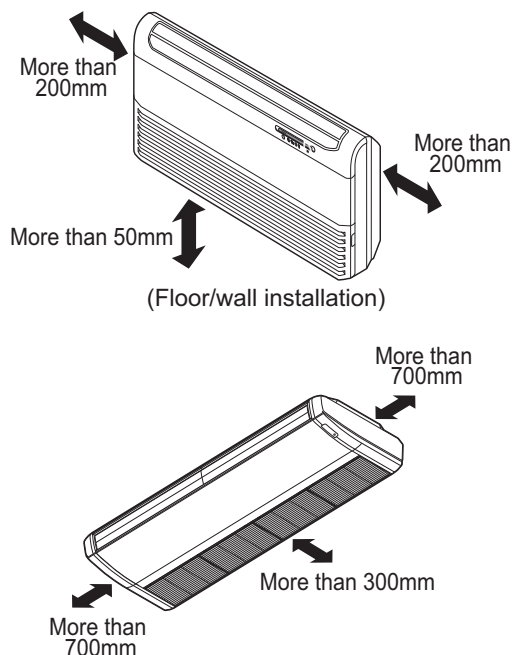


8.1 Selection of the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to the air circulation.
- There should be provision of easy condensate drain.
- Taking into accounting the noise prevention criteria, spot the installation location.
- Do not install the unit near the door way.
- Keep proper distances, of the unit, from ceiling, fence, floor, walls and other obstacles as shown in figure.
- The indoor unit must have the maintenance space.
- The mounting ceiling or wall should be strong and solid enough to protect it from the vibration.



8. Installation

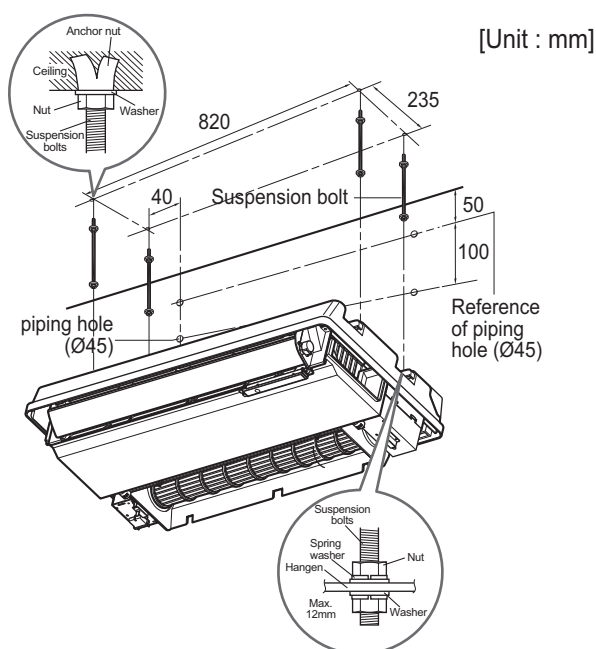


8.2 Installation

■ VE Chassis

1. Installation on the ceiling

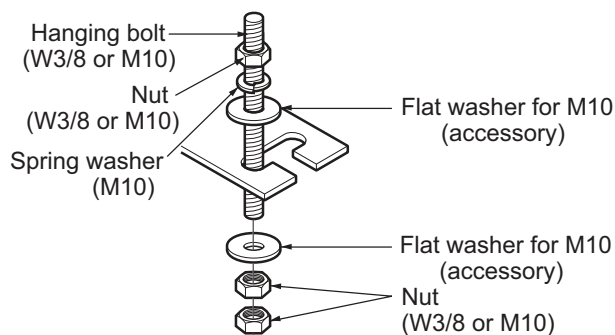
- 1) Prepare 4 suspension bolts (Each bolts length should be same.)
- 2) Measure and mark the position for the suspension bolts and the piping hole.
- 3) Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- 4) Mount the suspension bolts to the anchor-nuts firmly.
- 5) Secure the hangers onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.
- 6) Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.
- 7) Adjust a level on the direction of top-bottom by adjusting suspension bolts. Then the unit will be declined to the bottomside so as to drain well.



8. Installation

⚠ CAUTION

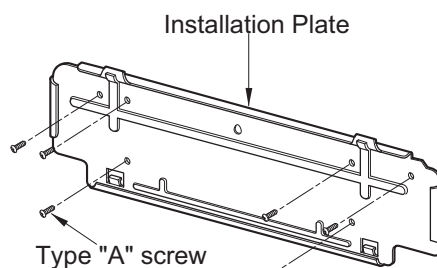
- Tighten the nut and bolt to prevent unit from falling.



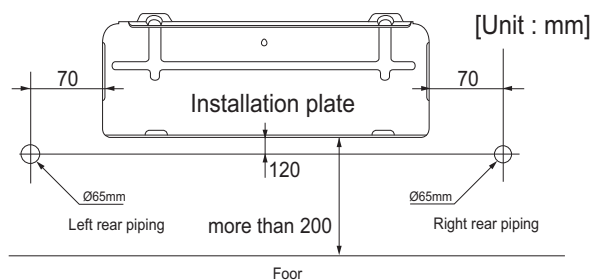
2. Installation on the wall

The wall you select should be strong and so cover enough to prevent vibration.

- 1) Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
- 2) Mount the installation plate horizontally by aligning the centerline using a level.



- 3) 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.



■ VJ/K/L Chassis

1. Open the cover

The wall you select should

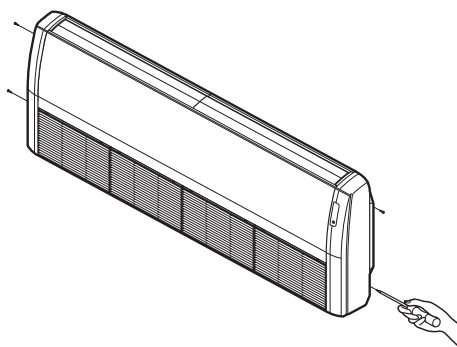
- 1) Remove four screws from side-cover.
- 2) Unlock side-cover from side panel slightly (Tap the sidecover with your palm on the backside)
- 3) Knock out the pipe hole from the left sidecover with nipper/plier.

⚠ CAUTION

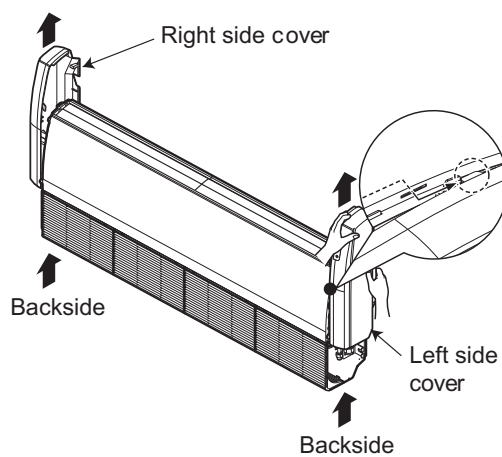
- Hold the side-cover with other hand while tapping to prevent it from falling down.

8. Installation

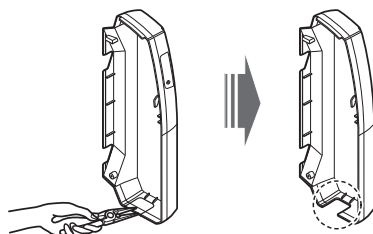
◆ Step 1



◆ Step 2



◆ Step 3



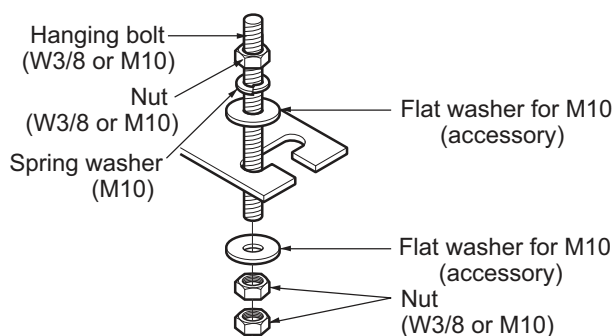
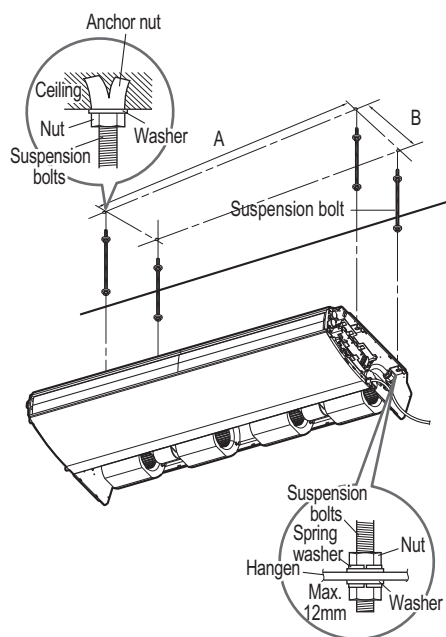
8. Installation

2. Mounting the anchor nut and bolt

- 1) Prepare 4 suspension bolts. (Each bolts length should be same.)
- 2) Measure and mark the position for the Suspension bolts and the piping hole.
- 3) Drill the hole for anchor nut on the ceiling.
- 4) Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- 5) Mount the suspension bolts to the anchor-nuts firmly.
- 6) Secure the hangers onto the Suspension bolts (adjust level roughly.) using nuts, washers and spring washers.
- 7) Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.
- 8) Adjust a level on the direction of top-bottom by adjusting suspension bolts. Then the unit will be declined to the bottomside so as to drain well.

[Unit : mm]

MODEL	DIMENSION	
	A	B
VL	1655	320
VK	1255	320
VJ	855	320



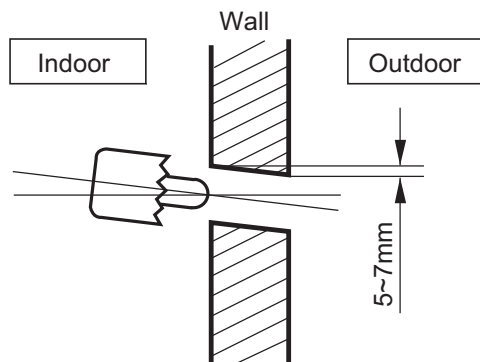
- The following parts is option.
- 1. Hanging Bolt - W 3/8 or M10
- 2. Nut - W 3/8 or M10
- 3. Spring Washer - M10
- 4. Plate Washer - M10

CAUTION

Tighten the nut and bolt to prevent unit falling.

- Drill the piping hole on the wall slightly tilted to the outdoor side using a $\varnothing 70$ hole-core drill.

8. Installation



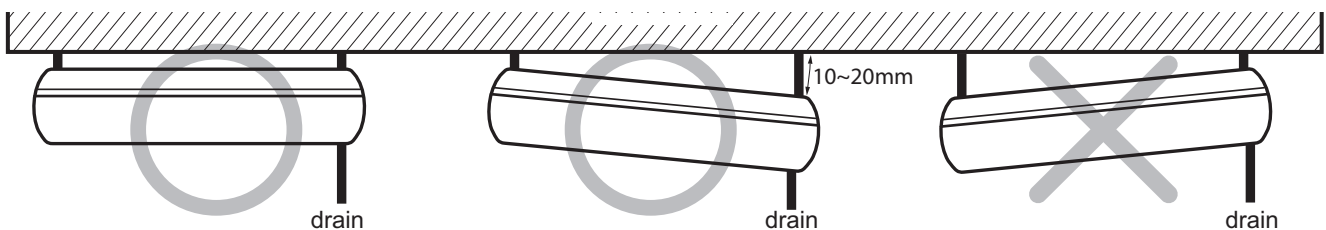
⚠ CAUTION

Installation Information For Declination

- Install declination of the indoor unit is very important for the drain of the convertible type 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.

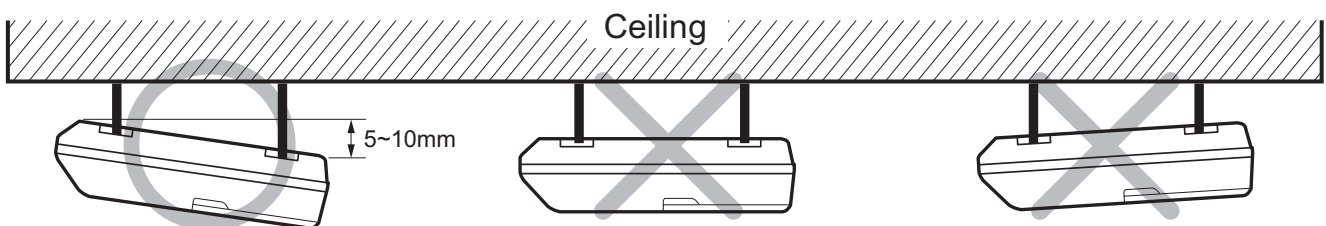
■ Front of view

- The unit must be horizontal or inclined at angle.
- The inclination should be less than or equal to 1° 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 Piping and drainage

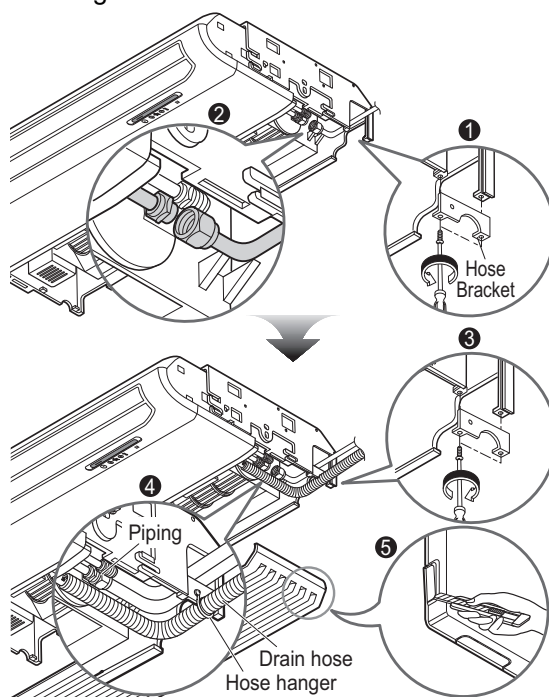
1) Installation on the ceiling

■ Connecting the pipes to the indoor unit

The pipe can be connected to right side, bottom or back of the unit.

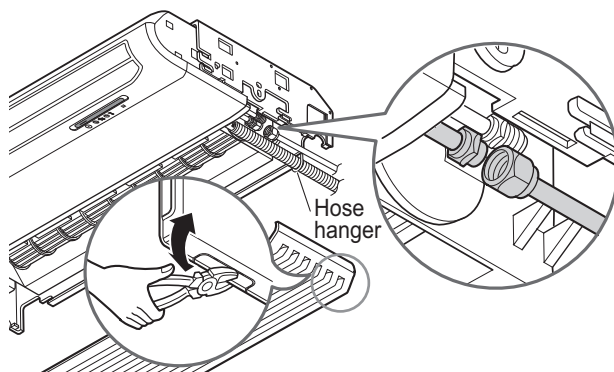
◆ For the right side piping

1. After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.
2. Finally, tighten the flare nut with torque wrench until the wrench clicks.
3. Connect the drain hose insulated to the drain outlet. Drain hose should go under the hose bracket as shown in figure 4).
4. Hang the drain hose on the hose hanger and fix it to the hole of the hose bracket with a screw.



◆ For the bottom side piping

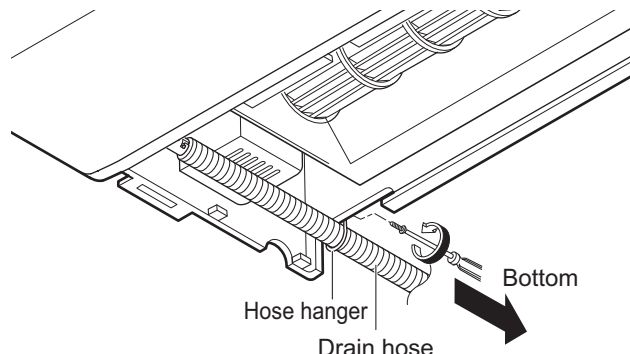
1. Remove the knock-out from the bottomside of inlet grille
2. Align the center of the pipings and sufficiently tighten the flare nut with fingers.
3. Finally, tighten the flare nut with torque wrench until the wrench clicks.
4. Connect the drain hose insulated to the drain outlet.
5. Hang the drain hose on the hose hanger and fix it to the hole of cabinet bottom with a screw.



8. Installation

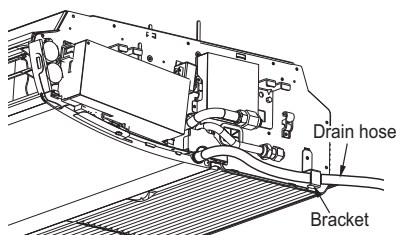
■ Connecting the drain hose

1. The drain hose can be connected to not only the right side but also left side of the unit.
2. If the drain hose is connected to the left side, it should go through the cabinet bottom.
3. Hang the drain hose on the hose hanger and fix it to the hole of cabinet bottom with a screw.



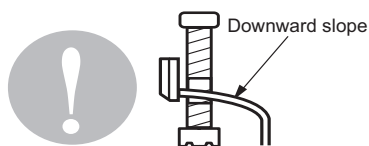
■ Indoor Unit Drain Piping

- 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 extra force on the drain port on the indoor unit.
- Remove the rubber stopple before connecting drain hose.
- Hook on the bracket after connecting the drain hose as below.

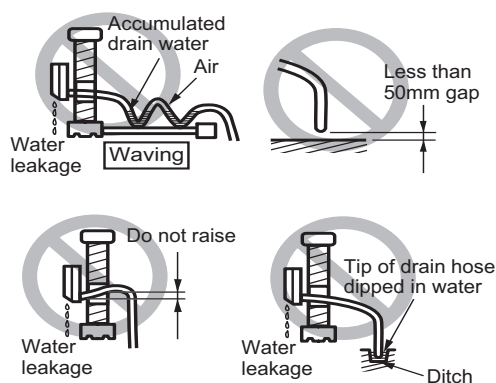


■ Drain piping

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



- Do not make drain piping like the following.



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

8. Installation

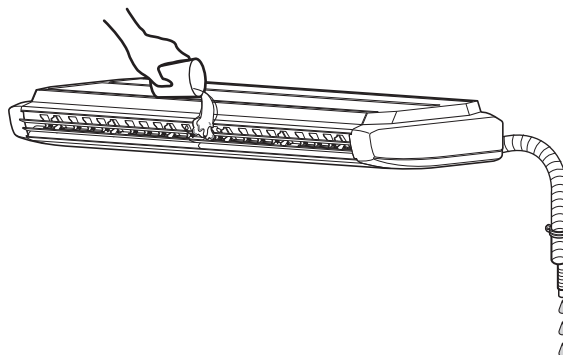
- Be sure to execute heat insulation on the drain piping.

Note

Heat insulation material: Polyethylene foam with thickness more than 8 mm.

■ Drain test

- Use the following procedure to test the drain pump operation:



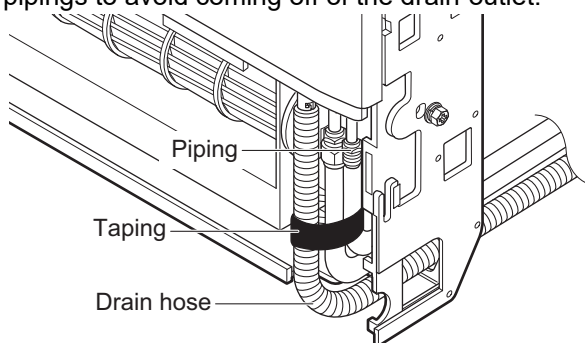
- Set the air direction louvers up-and-down to the position(horizontally) by hand.
- Pour a glass of water on the evaporator using a kettle.
- Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

2) Installation on the wall or floor

■ Connecting the pipes to the indoor unit

◆ For the right rear piping

1. Remove the knock-out from the back side of the cabinet.
2. After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.
3. Finally, tighten the flare nut with torque wrench until the wrench clicks.
4. Connect the drain hose to the drain outlet.
5. Tape the drain hose to the pipings to avoid coming off of the drain-outlet.

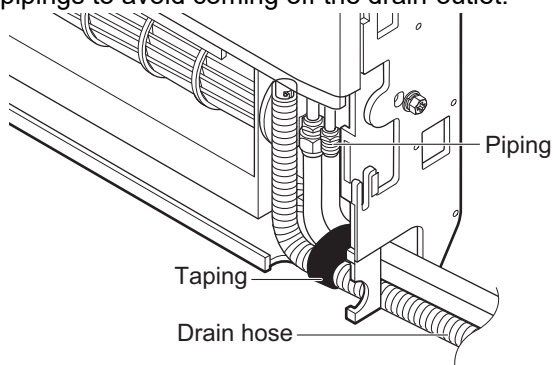


◆ For the right side piping

1. After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.
2. Finally, tighten the flare nut with torque wrench until the wrench clicks.
3. Connect the drain hose to the drain outlet.

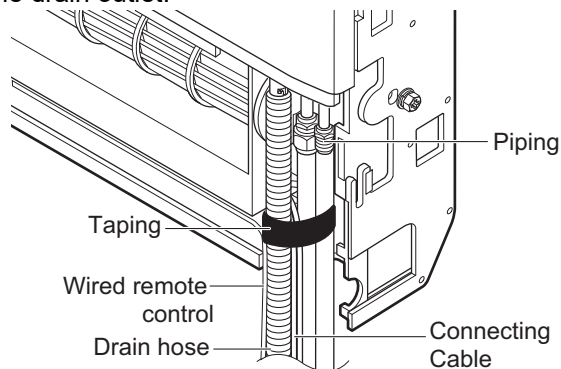
8. Installation

4. Tape the drain hose to the pipings to avoid coming off the drain-outlet.



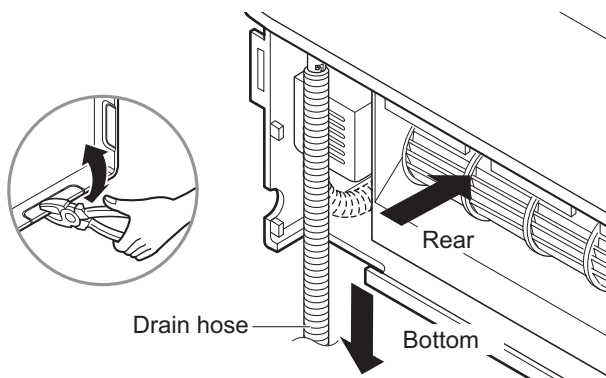
◆ For the right bottom piping

1. Align the center of the pipings and sufficiently tighten the flare nut with fingers.
2. Finally, tighten the flare nut with torque wrench until the wrench clicks.
3. Connect the drain hose to the drain outlet.



■ Connecting the drain hose

1. The drain hose can be connected to not only right side but also left side of the unit.

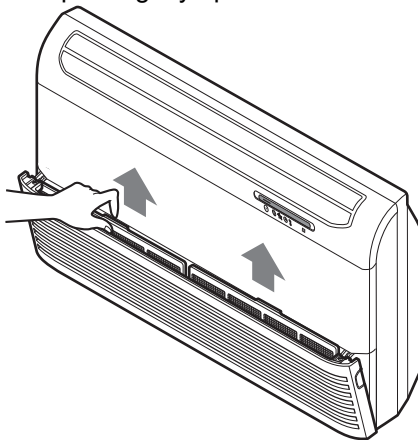


8. Installation

3) Checking the drainage

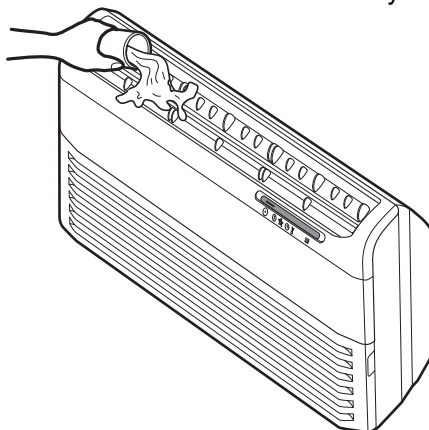
◆ Remove the air filter.

1. To remove air filter, take hold of tab and pull slightly upwards.



◆ Check the drainage.

1. Spray one or two glasses of water upon the evaporator.
2. Ensure that water flows through drain hose of indoor unit without any leakage.



8.4 Electric wiring work

1. General instructions

- 1) All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.
- 2) Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.
- 3) All wiring must be performed by an authorized electrician.
- 4) This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and indoor unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.
- 5) A circuit breaker capable of shutting down the power supply to the entire system must be installed.

8. Installation

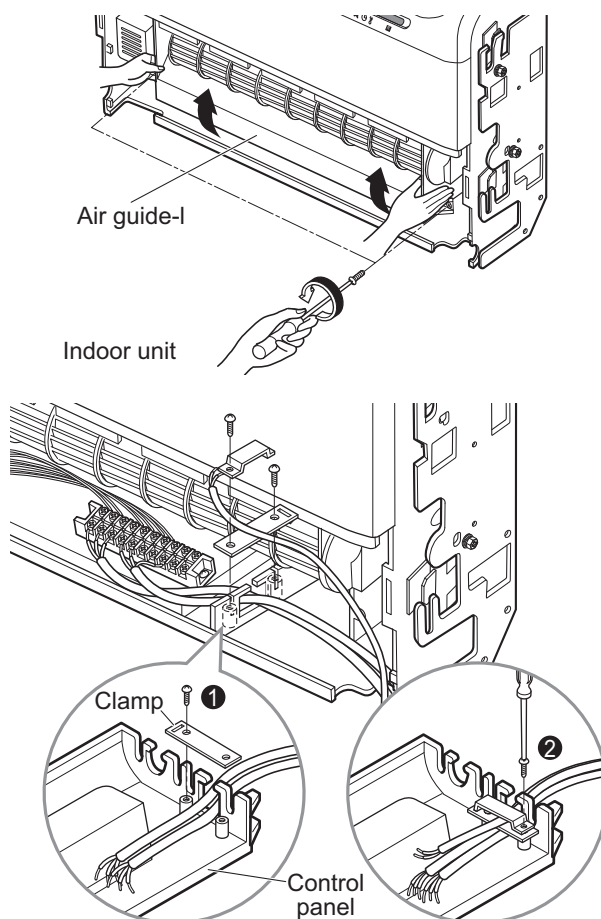
2. Wiring connection

◆ Connecting cables to the indoor unit

- 1) Remove the air guide - L by loosening 2 screws after removing the inlet grille from the Indoor unit.
- 2) 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

◆ Wiring Connection

- 1) Connect the wires to the terminals on the control board individually according to the outdoor unit connection.



⚠ CAUTION

- Make sure that the screws of the terminal are fixed tightly.

⚠ CAUTION

- Make sure to attach the sealing material (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 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 mistaken operation or breakage.

MULTI/SINGLE

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	AQNH09GALA0 [CQ09 NA0] AQNH12GALA0 [CQ12 NA0] AQNH18GALA0 [CQ18 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)	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	X
	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	X
	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.
- In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.
- In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.
- * : These functions need to connect the wired remote controller.
- ** : It is included by default when the product is manufactured.

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	AQNH09GALA0 [CQ09 NA0] AQNH12GALA0 [CQ12 NA0] AQNH18GALA0 [CQ18 NA0]
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
		PREMTB001	Standard II (White)	O
	Standard	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	-	X
	CO ₂ 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	-	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. 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				AQNH09GALA0 [CQ09 NA0]	AQNH12GALA0 [CQ12 NA0]
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
				220, 1, 60	220, 1, 60
Power Input	Min / Max		W	10 / 20	10 / 30
Running Current			A	0.6	0.6
Casing Color			-	Morning Fog	Morning Fog
Dimensions	Body	W x H x D	mm	700 × 600 × 210	700 × 600 × 210
		W x H x D	inch	27-9/16 x 23-5/8 x 8-9/32	27-9/16 x 23-5/8 x 8-9/32
Net Weight	Body		kg (lbs)	14.0 (30.9)	14.0 (30.9)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 19 x 19) x 1	(2 x 19 x 19) x 1
	Face Area		m ² (ft ²)	0.20 (2.15)	0.20 (2.15)
Fan	Type		-	Turbo Fan	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	8.5 / 6.7 / 5.0	9.0 / 6.9 / 5.2
		H / M / L	ft ³ /min	300 / 237 / 177	318 / 244 / 184
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	48 x 1	48 x 1
Sound Pressure Level		H / M / L	dB(A)	38 / 32 / 27	39 / 32 / 27
Sound Power Level		Max.	dB(A)	53	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	
Power and Communication Cable (included Earth)			No. x mm ² (AWG)	4C x 0.75 (18)	4C x 0.75 (18)

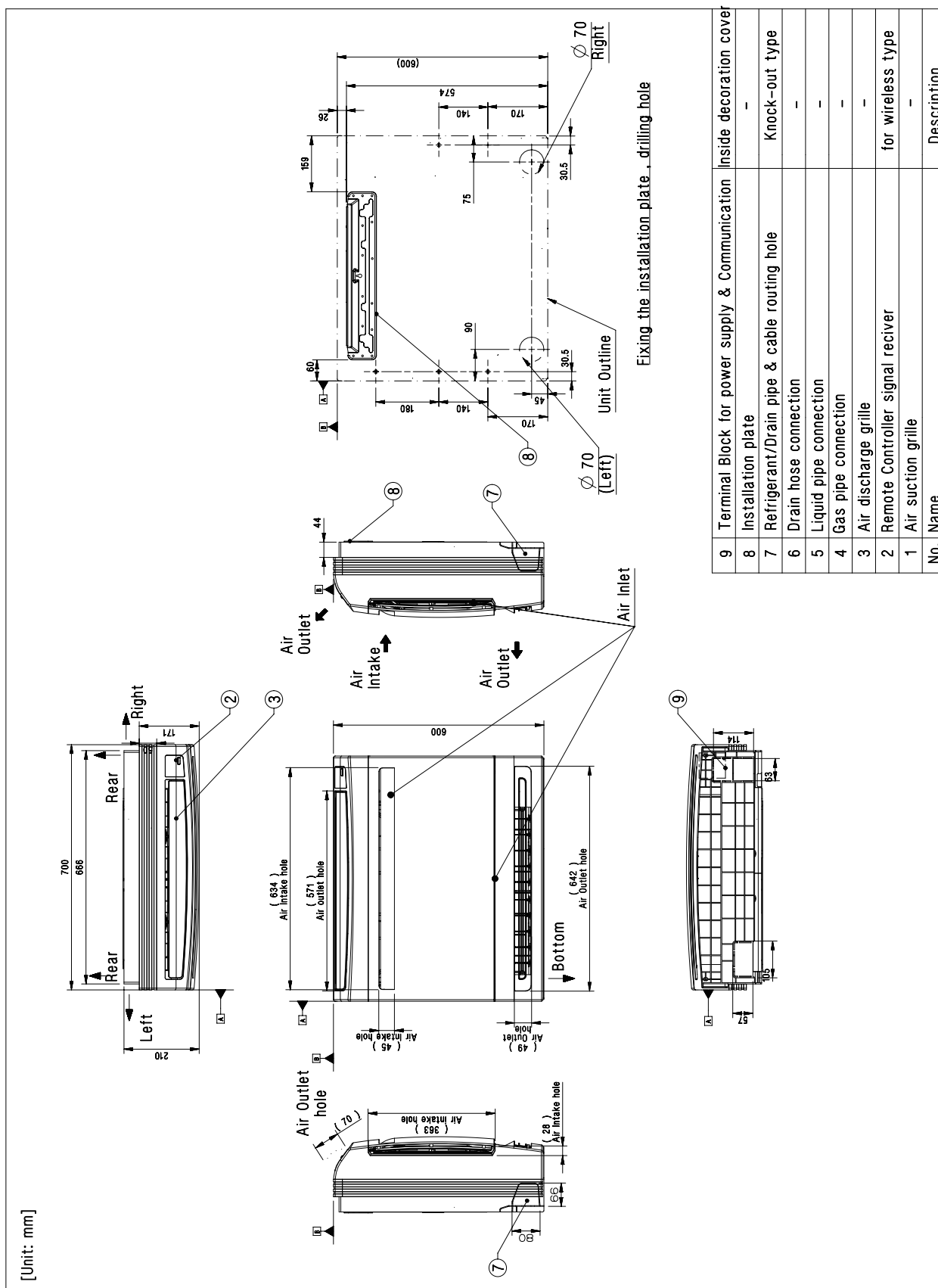
Note

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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoot 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 Zero.

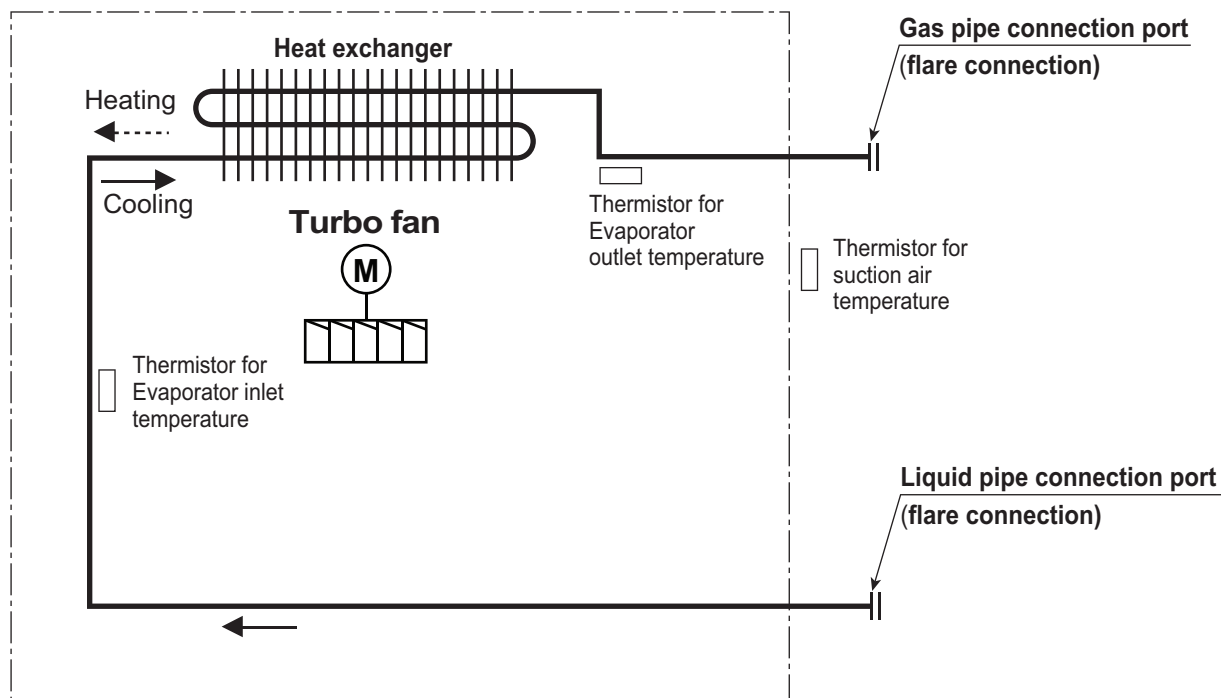
2. Specifications

Model Name				AQNH18GALA0 [CQ18 NA0]
Power Supply			V, Ø, Hz	220-240, 1, 50
				220, 1, 60
Power Input	Min / Max		W	20 / 40
Running Current			A	0.7
Casing Color			-	Morning Fog
Dimensions	Body	W x H x D	mm	700 × 600 × 210
		W x H x D	inch	27-9/16 x 23-5/8 x 8-9/32
Net Weight	Body		kg (lbs)	14.0 (30.9)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(2 x 19 x 19) x 1
	Face Area		m ² (ft ²)	0.20 (2.15)
Fan	Type		-	Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	10.1 / 8.6 / 7.2
		H / M / L	ft ³ /min	357 / 304 / 254
Fan Motor	Type		-	BLDC
	Output		W x No.	48 x 1
Sound Pressure Level		H / M / L	dB(A)	44 / 39 / 35
Sound Power Level		Max.	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
Power and Communication Cable (included Earth)			No. x mm ² (AWG)	4C x 0.75 (18)
Note				
1. Wiring cable size must comply with the applicable local and national code.				
2. Due to our policy of innovation some specifications may be changed without notification.				
3. Sound Level Values are measured at Anechoic chamber.				
Therefore, these values can be increased owing to ambient conditions during operation.				

AQNH09GALA0 [CQ09 NA0] / AQNH12GALA0 [CQ12 NA0] / AQNH18GALA0 [CQ18 NA0]



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

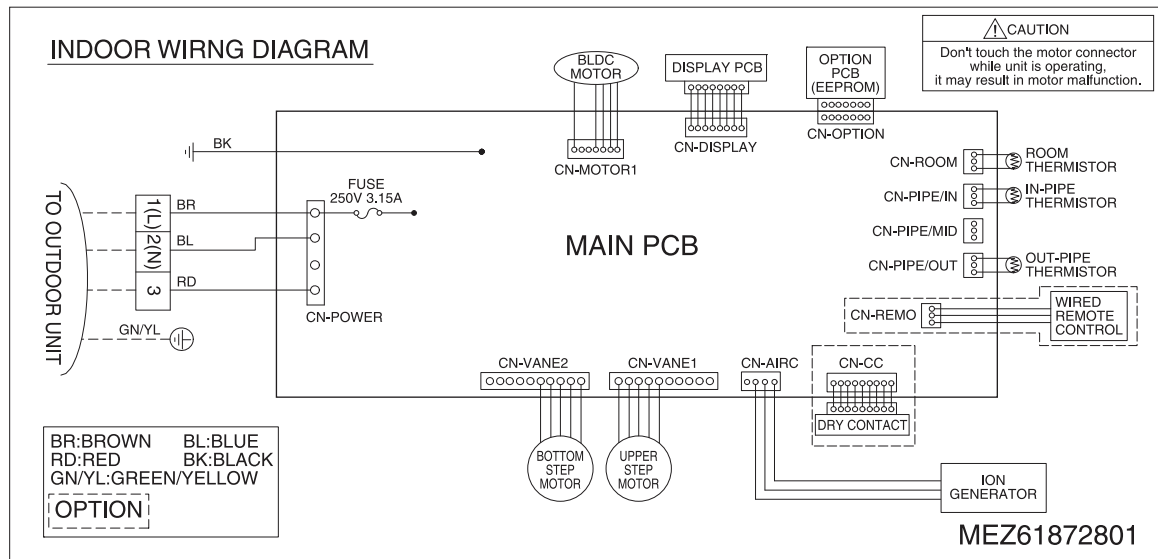
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
AQNH09GALA0 [CQ09 NA0]	Ø9.52	Ø6.35
AQNH12GALA0 [CQ12 NA0]		
AQNH18GALA0 [CQ18 NA0]	Ø12.7	Ø6.35

5. Wiring Diagrams

■ Models : AQNH-AL [CQ- NA0]

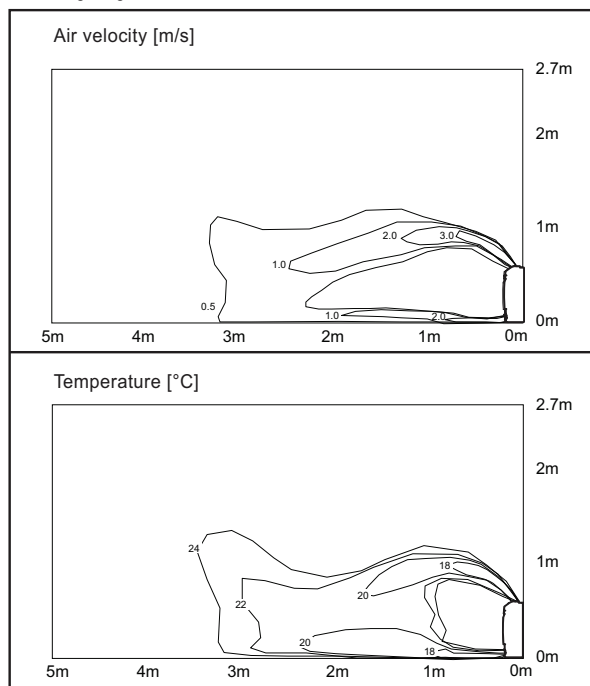


6. Air flow and temperature distributions (reference data)

■ Model : AQNH09GALA0 [CQ09 NA0], AQNH12GALA0 [CQ12 NA0]

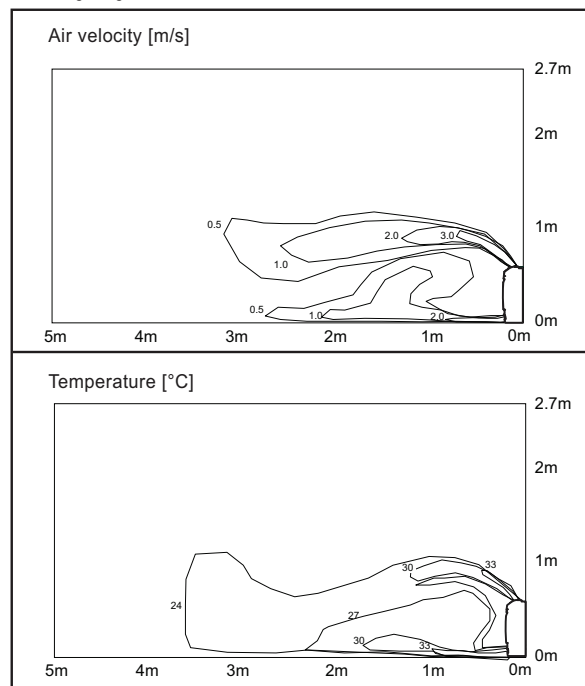
Cooling

Discharge angle: 40°



Heating

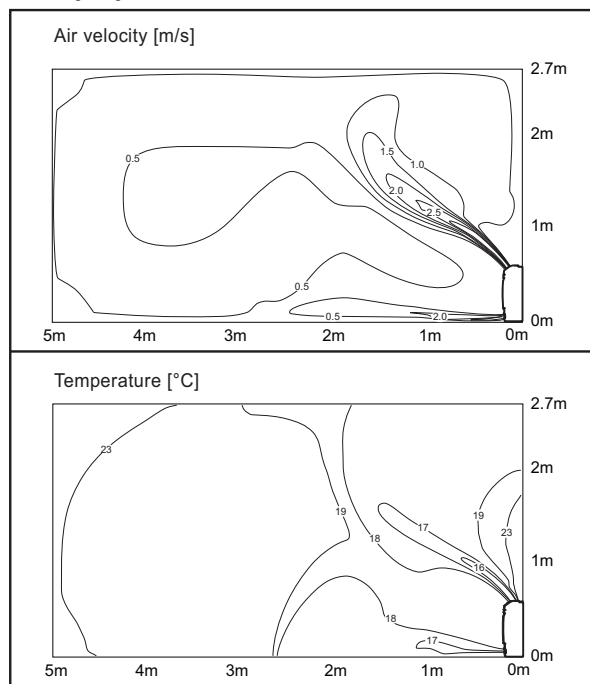
Discharge angle: 50°



■ Models : AQNH18GALA0 [CQ18 NA0]

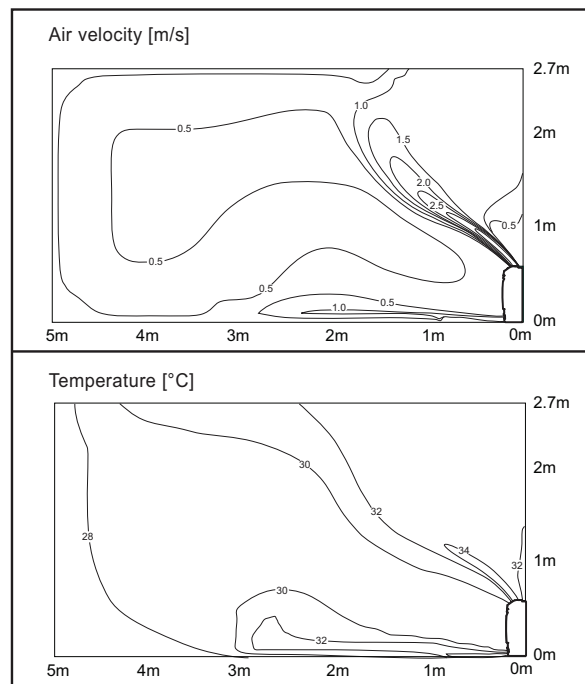
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



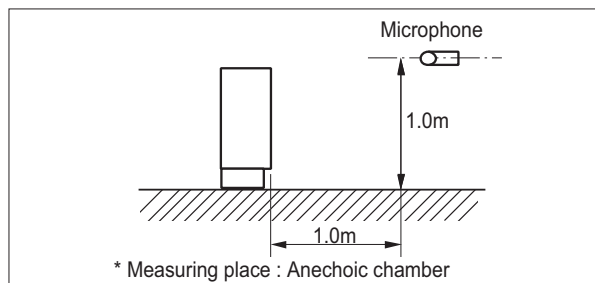
Note

- 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

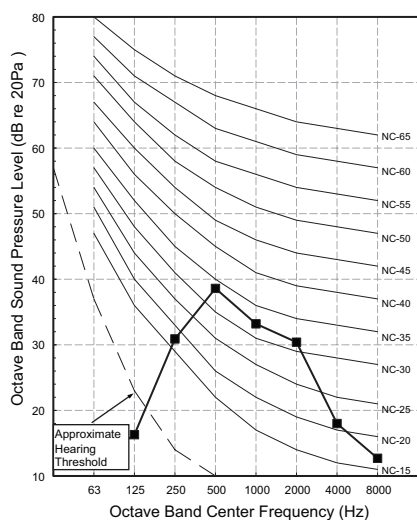


Note

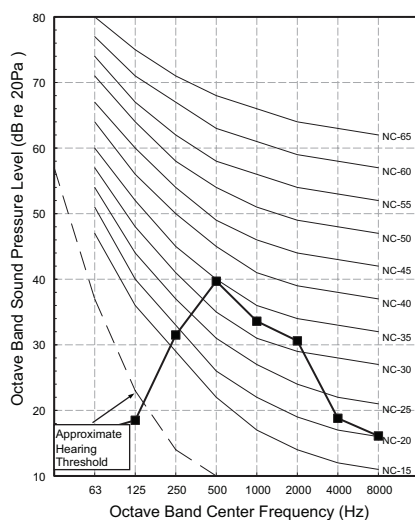
- Data is valid at free field condition.
- Reference acoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AQNH09GALA0 [CQ09 NA0]	38	32	27
AQNH12GALA0 [CQ12 NA0]	39	32	27
AQNH18GALA0 [CQ18 NA0]	44	39	35

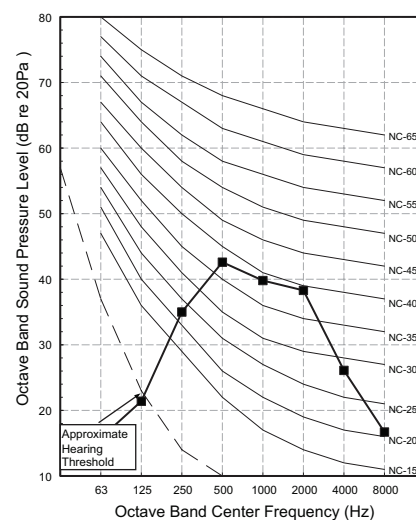
AQNH09GALA0 [CQ09 NA0]



AQNH12GALA0 [CQ12 NA0]



AQNH18GALA0 [CQ18 NA0]



7. Sound levels

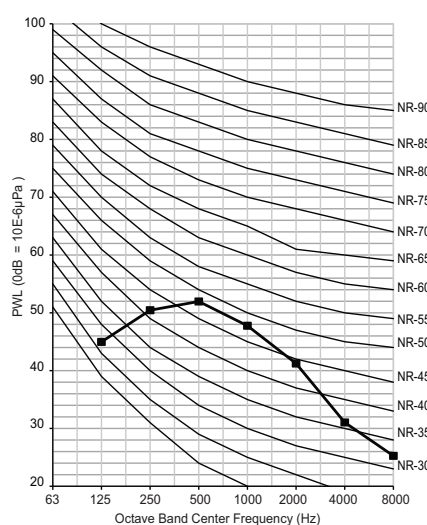
7.2 Sound power level

Note

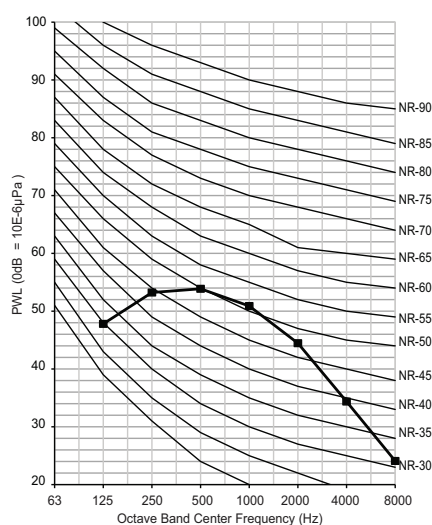
1. Reference acoustic intensity 0dB = $10E-6\mu W/m^2$
2. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound power level [dB(A)]
	H
AQNH09GALA0 [CQ09 NA0]	53
AQNH12GALA0 [CQ12 NA0]	56
AQNH18GALA0 [CQ18 NA0]	60

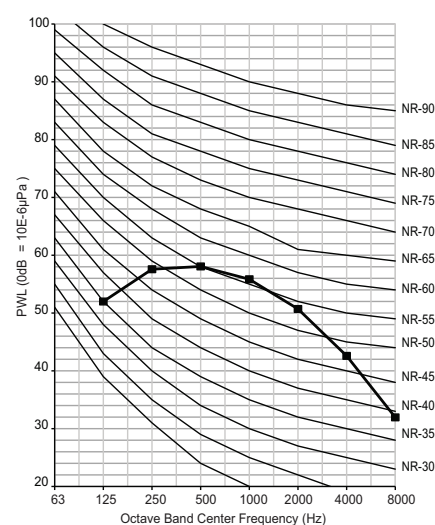
AQNH09GALA0 [CQ09 NA0]



AQNH12GALA0 [CQ12 NA0]



AQNH18GALA0 [CQ18 NA0]

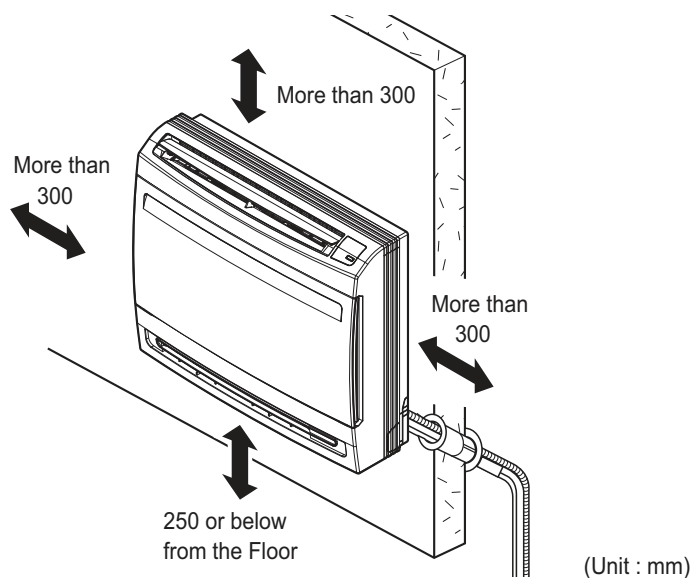


8. Installation

- 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

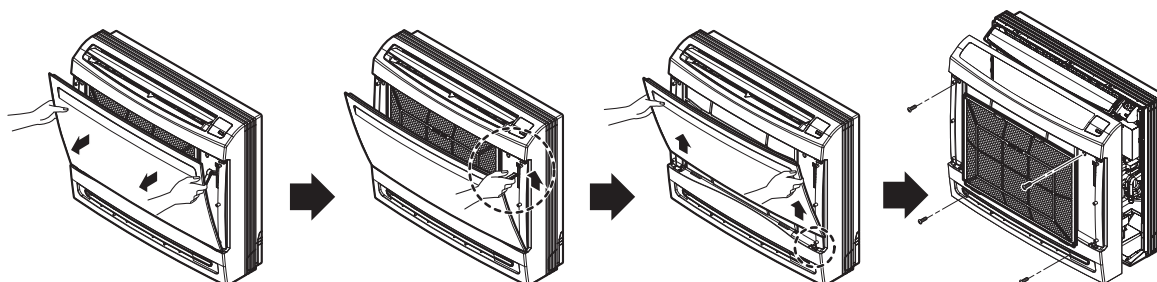
In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

8. Installation

8.2 Indoor unit installation

1. Preparation / Removing front panel

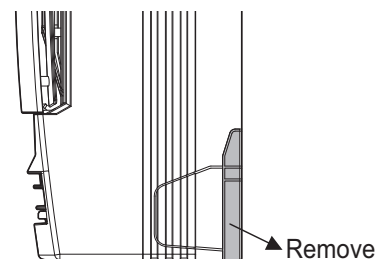
- 1) Open the front grille by pulling forward
- 2) Then pull out the link of grille from groove in front panel.
- 3) Then pull out 2 hinges of grille from grooves in front panel.
- 4) Then remove 4 screws, dismount the front panel while pulling it forward.



2. Preparation / For Moldings , Side Piping, and Concealed Installation

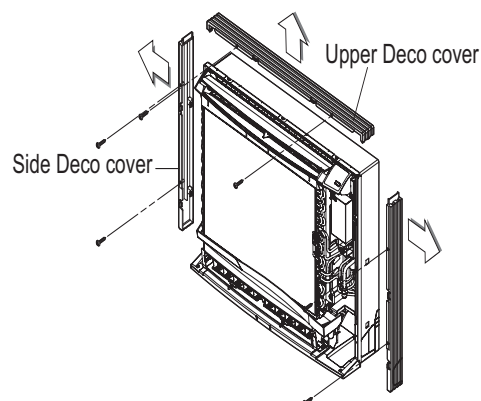
2-1 For Molding

1. Remove the slit portions on the Rear Panel.



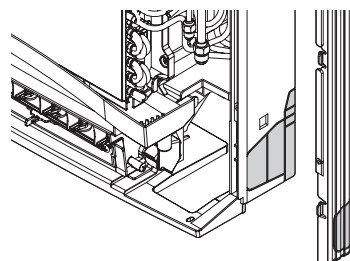
2-2. For Concealed Installation

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.



3. Refrigerant Piping

-
- Figure 1: Typical piping layout for a wall. The figure shows three views: front, back, and side. The front view shows a horizontal wall with two circular piping components. The left component is labeled "Left bottom piping" and has a vertical offset of 45 mm from the wall and a horizontal offset of 90 mm. The right component is labeled "Right bottom piping" and has a vertical offset of 60 mm from the wall and a horizontal offset of 75 mm. The back view shows the same components from behind, with the left component labeled "Left back piping" and the right component labeled "Right back piping". The side view shows the components from the side, with the left component labeled "Left/right piping" and the right component labeled "Right back piping". The side view shows a vertical offset of 50 mm for the left component and a horizontal offset of 40 mm for the right component. The unit is mm.

- The suggested shortest pipe length is 5m, in order to avoid noise from the outdoor unit and vibration.

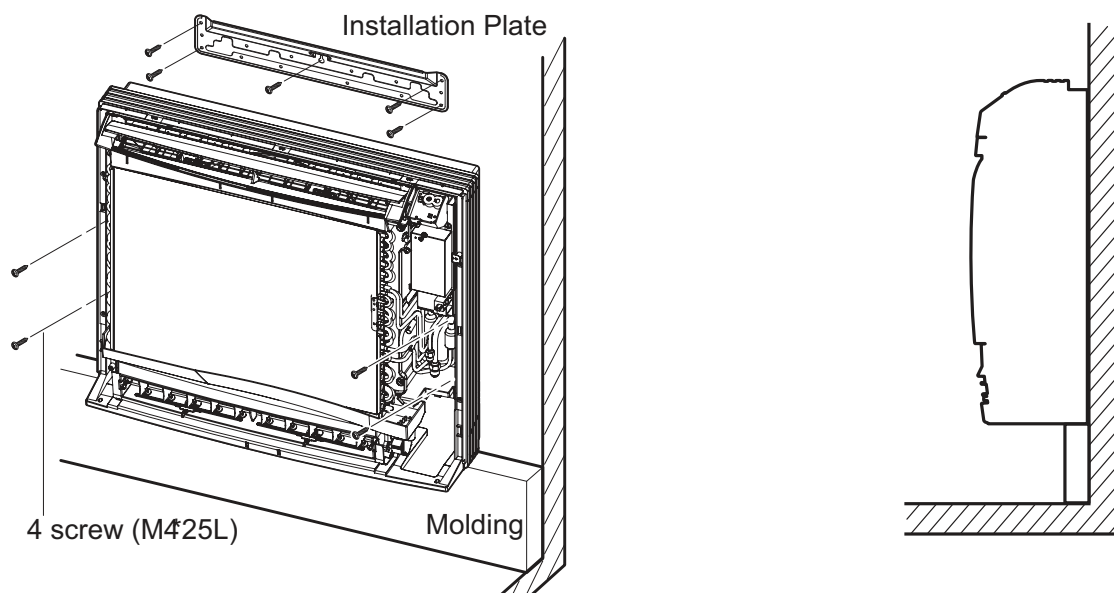
1) Installation on the Floor.

-
- 6 screw (M4*25L)



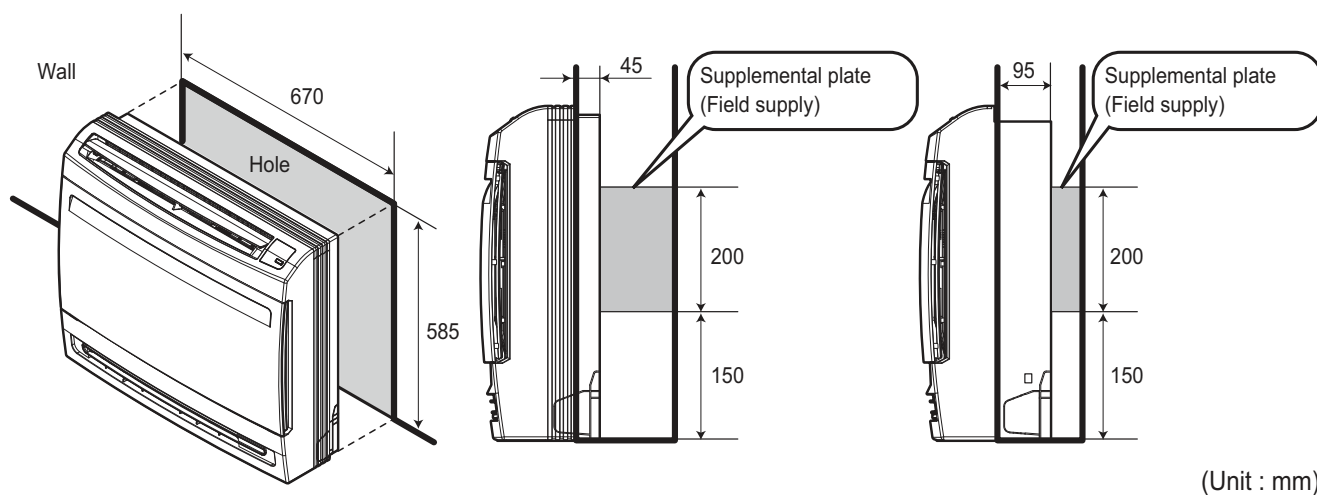
- 14

8. Installation



3) Half concealed installation.

1. Make a wall hole of the size shown Fig-1.



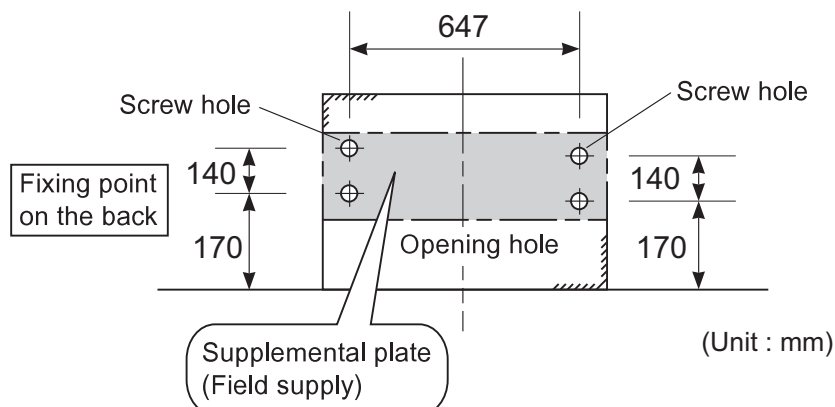
< Fig-1.>

1) Normal concealed

2) Deep concealed

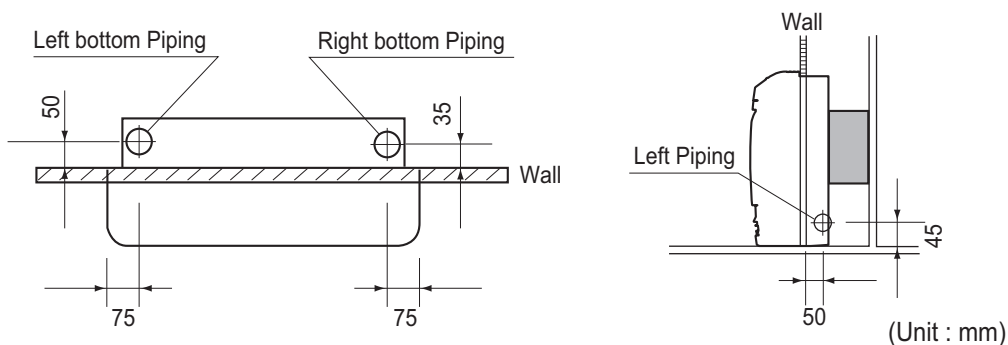
2. Installation of supplemental plate for attaching main unit

- 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.



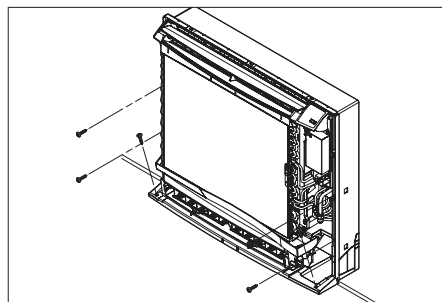
8. Installation

3. Piping Hole



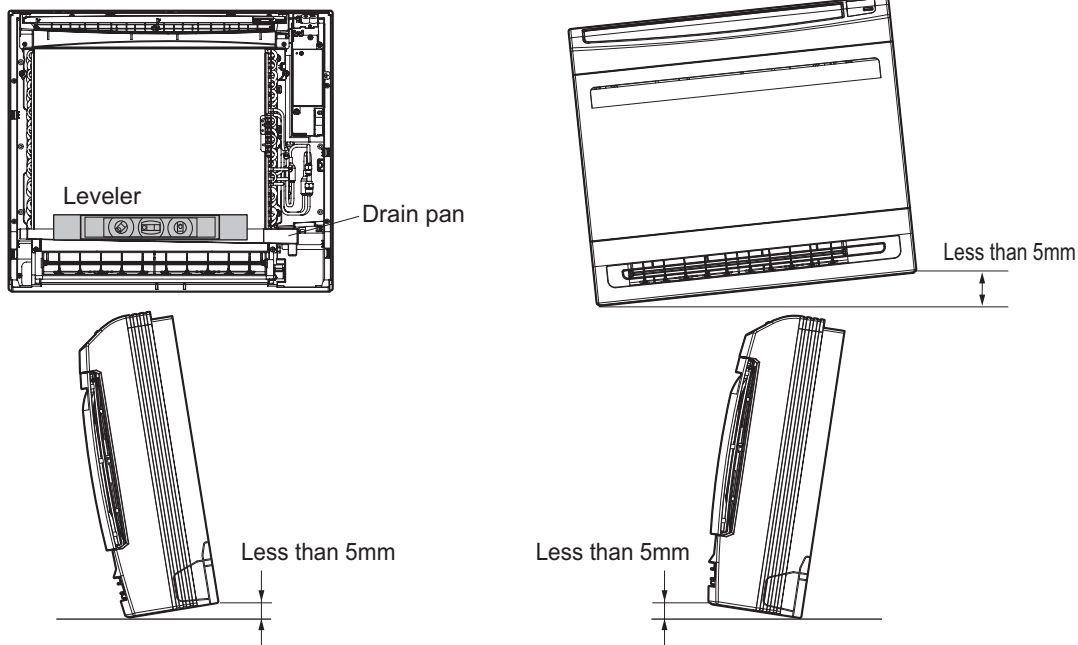
4. Remove the Deco Covers and Fixing Indoor Unit

- Remove the Deco Covers.
- Insert the Indoor Unit to the Wall hole.
- 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.

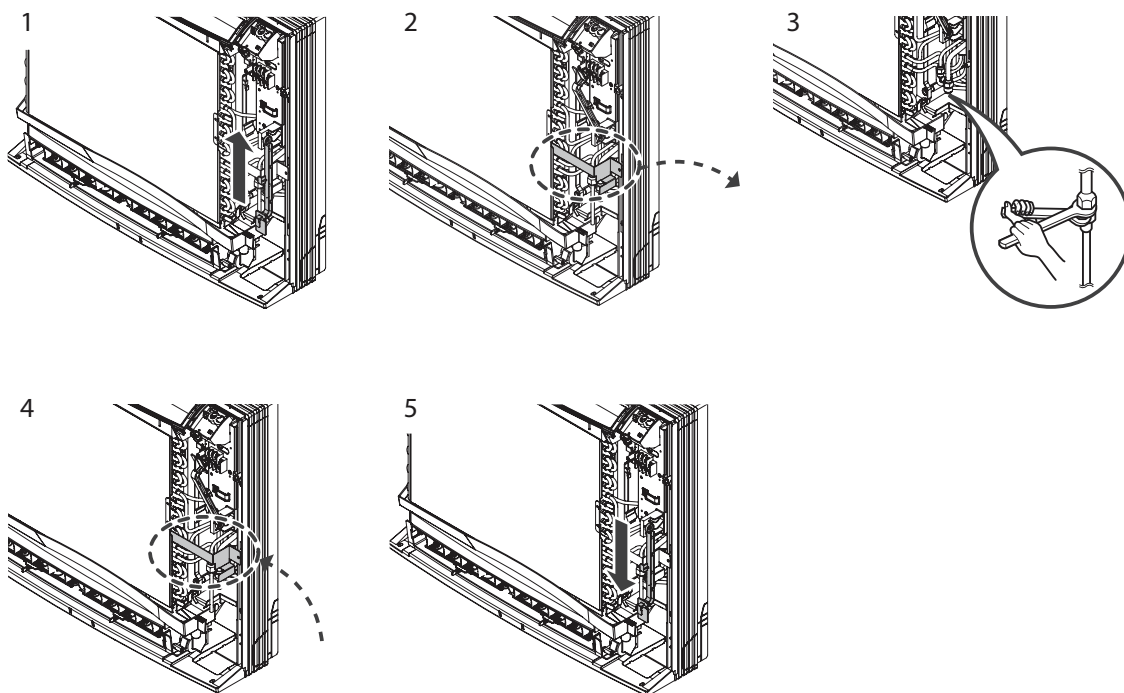


8. Installation

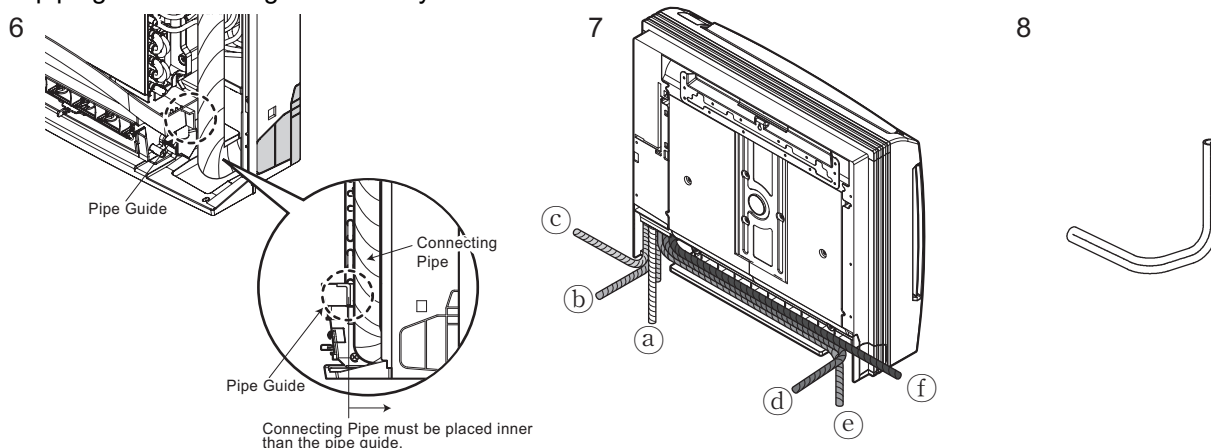
8.3 Connecting the Piping

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

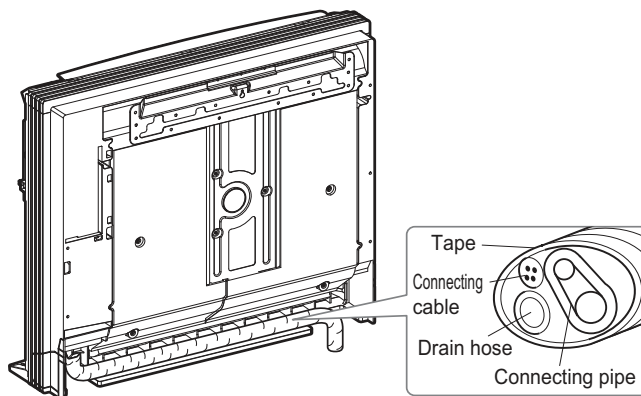
In case of © - (f), The pipe bending can be used in hand-operated bending machine. Make a pipe of the shape shown pic 8.

⚠ CAUTION

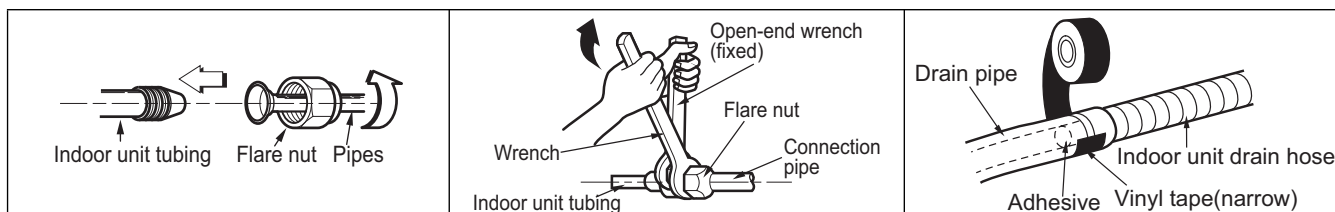
If the drain hose is routed inside the room insulate the hose with an insulation material* sothat dripping from sweating (condensation) willnot damage furniture or floors.

8. Installation

- Foamed polyethylene or equivalent is recommended.



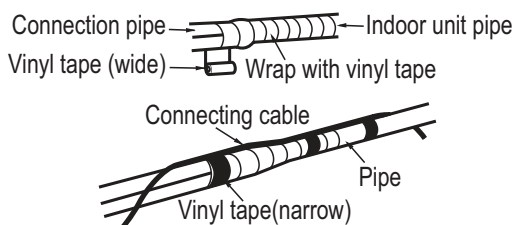
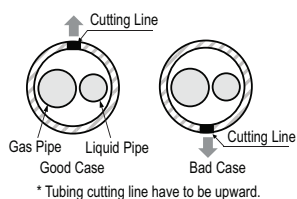
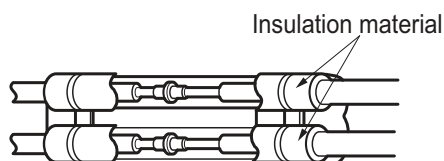
■ Connecting the installation pipe and drain hose



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.

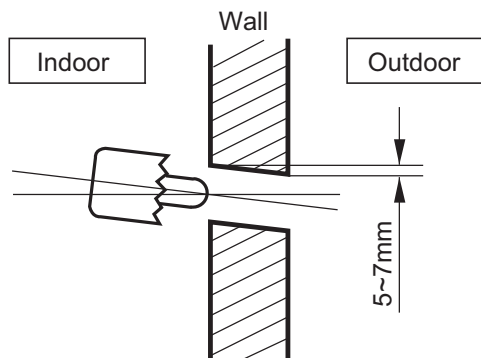
* Foamed polyethylene or equivalent is recommended.

8. Installation

8.4 Drain piping connection

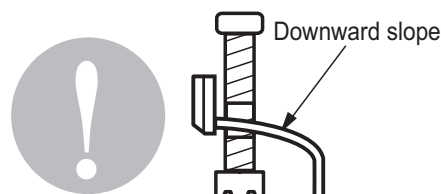
◆ Drill a Hole in the wall

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.

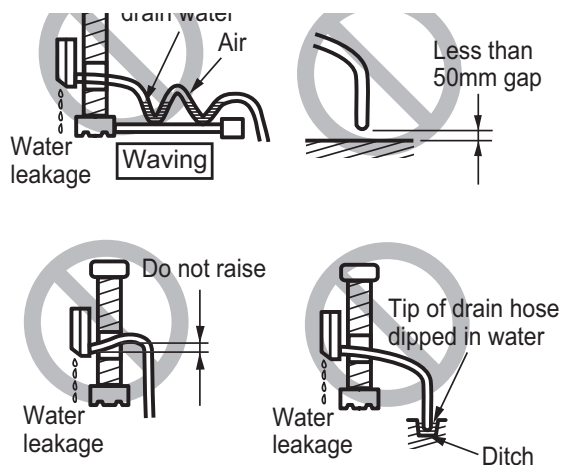


◆ Drain Piping

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.

⚠ CAUTION

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

8. Installation

- 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 and visually 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 0.75mm² 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

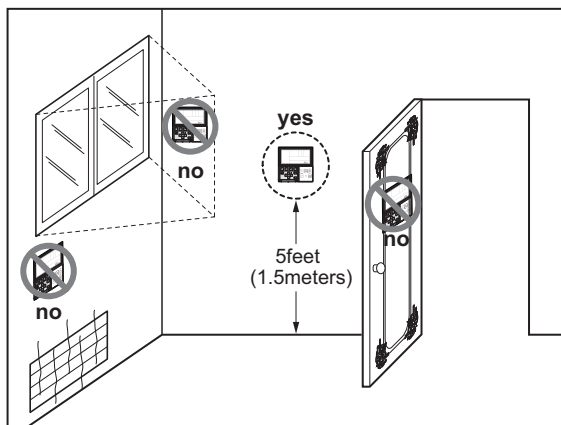
8.5.4 Wired Remote Controller Installation (Optional)

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.)

MULTI/SINGLE

Indoor unit

Floor Standing 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	APNH48GTLA0 [UP48 NT2]
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 / 4 / 4
	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
	Auto cleaning	X
	Auto operation(artificial intelligence)	X
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	X
	Sleep mode	X
	Timer(on/off)	O
	Timer(weekly)*	X
	Two thermistor control*	X
	Auto Elevation Grille	X
Special Functions	Wi-Fi	X
	Humidity Control	X
Wireless Remote Controller		O**
Wired Remote Controller		X
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. In case of ducted type indoor units using the wireless remote controller, it needs to connect the wired remote controller for received the signal of that.

4. In case of cassette type indoor units, Plasma kit and Auto Elevation Grille functions are not applicable at the same time.

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

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	APNH48GTLA0 [UP48 NT2]
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	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 ₂ 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

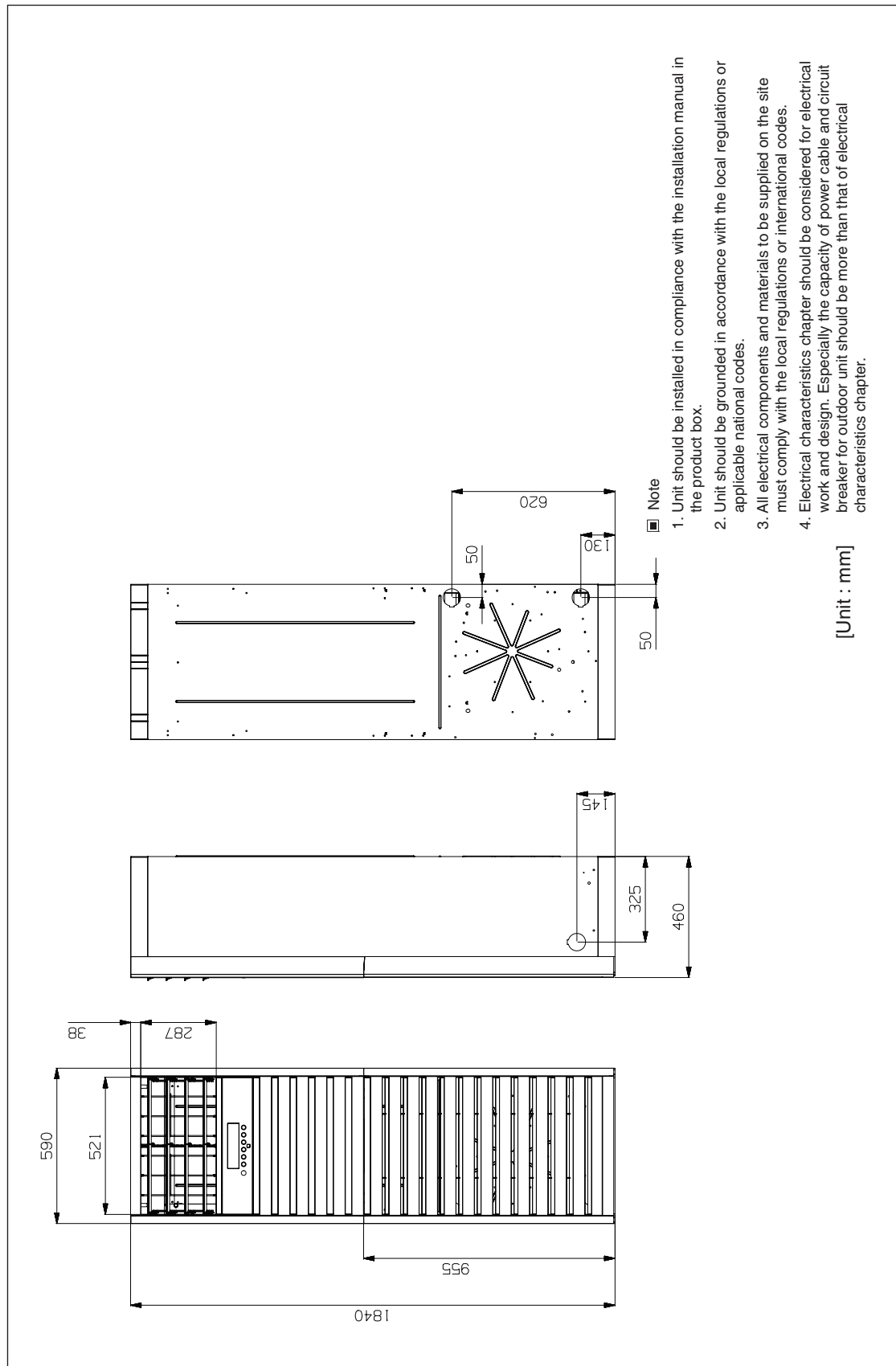
1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.
2. * : Some advanced functions controlled by individual controller cannot be operated.
3. ** : It could not be operated some functions.
4. If you need more detail, please refer to the **BECON** PDB or the manual of product.
(<http://partner.lge.com/global> : Home > Doc.Library > Product > Control(BECON))

2. Specifications

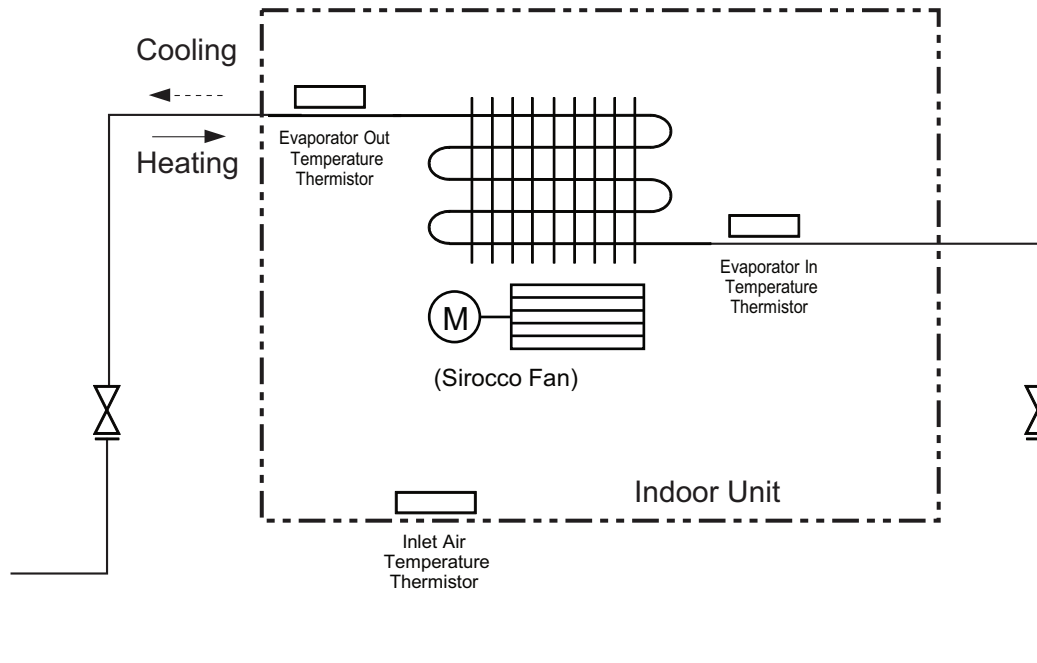
Model Name			APNH48GTLA0 [UP48 NT2]	
Power Supply			V, Ø, Hz	220-240, 1, 50
				220, 1, 60
Power Input			W x No.	150 × 1
Running Current			A	0.90
Electric Heater	Power Supply		V, Ø, Hz	-
	Power Cable		No. x mm2 (AWG)	-
	Capacity		kW	-
			Btu/h	-
	Power Input		W	-
	Running Current		A	-
Casing Color			-	-
Dimensions	Body	W x H x D	mm	590 × 1,840 × 460
		W x H x D	inch	23-7/32 x 72-7/16 x 18-1/8
Net Weight	Body		kg (lbs)	50.0 (110.2)
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 38 x 19) x 1
	Face Area		m ² (ft ²)	0.39 (4.17)
Fan	Type		-	Sirocco
	Air Flow Rate	SH / H / M / L	m ³ /min	36.0 / 31.0 / 27.0 / 23.0
		SH / H / M / L	ft ³ /min	1,271 / 1,095 / 954 / 812
Fan Motor	Type		-	BLDC
	Output		W x No.	224 x 1
Dehumidification Rate			// h (pts/h)	5.0 (10.6)
Sound Pressure Level		SH / H / M / L	dB(A)	55 / 52 / 49 / 45
Sound Power Level		Max.	dB(A)	59
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)
	Drain (O.D. / I.D.)		mm(inch)	Ø 32.0(1-1/4) / 25.0(31/32)
Safety Devices			-	Fuse
			-	-
Power and Communication Cable (included Earth)			No. x mm ² (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 Anechoic chamber. Therefore, these values depend on the ambient conditions and values are normally higher in actual operation.				
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.				
• Cooling : Indoot Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB				
• Heating : Indoot 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 Zero.				

3. Dimensions

APNH48GTLA0 [UP48 NT2]



4. Piping diagrams



Description	PCB Connector
Inlet Air Temperature Thermistor	CN-ROOM
Evaporator In Temperature Thermistor	CN-PIPE / IN
Evaporator Out Temperature Thermistor	CN-PIPE / OUT

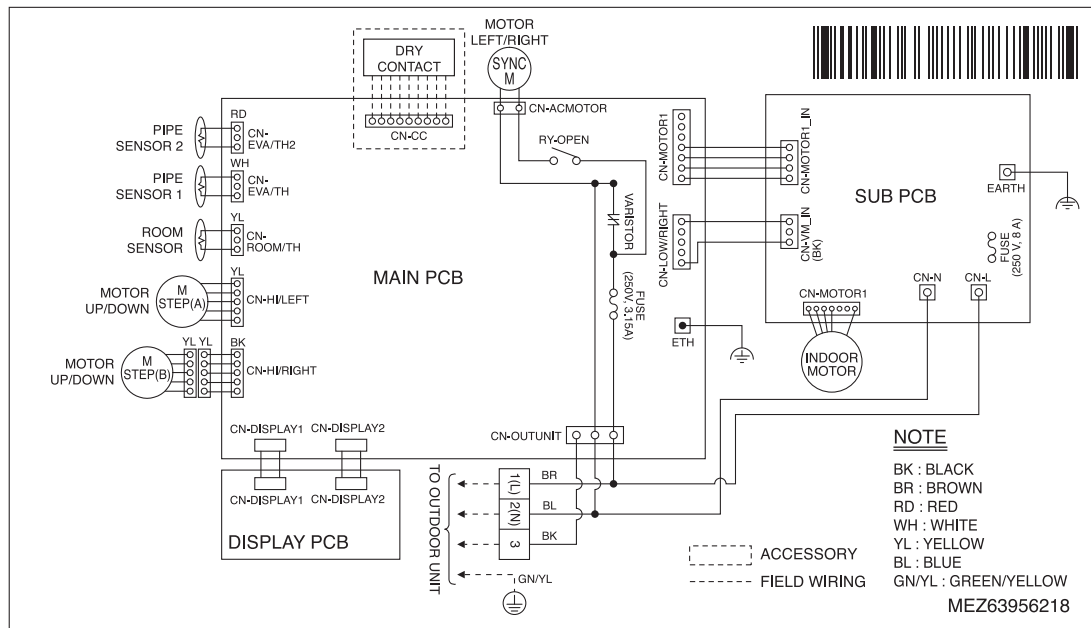
◆ Refrigerant pipe connection port diameters

[Unit : mm]

Model	Gas	Liquid
APNH48GTLA0 [UP48 NT2]	Ø15.88	Ø9.52

5. Wiring Diagrams

Models : APNH48GTLA0 [UP48 NT2]

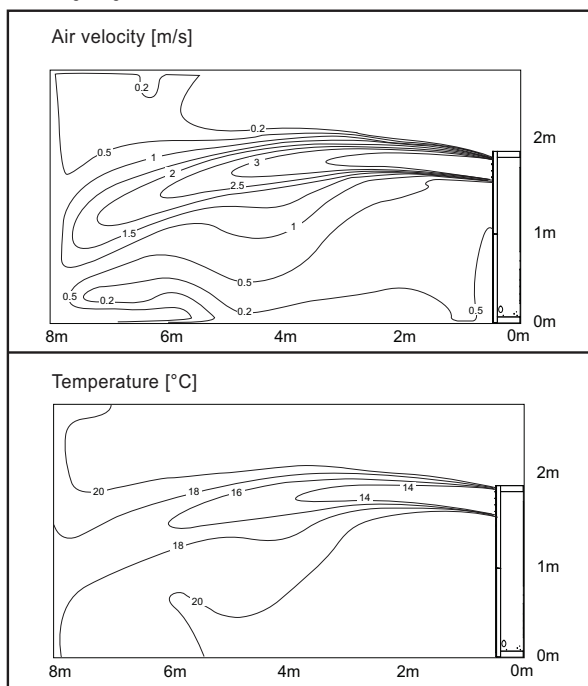


6. Air flow and temperature distributions (reference data)

■ Model : APNH48GTLA0 [UP48 NT2]

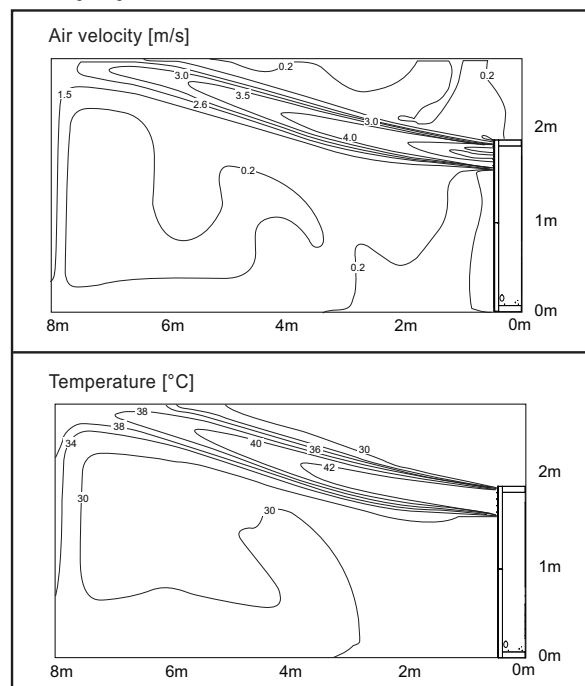
Cooling

Discharge angle: 90°



Heating

Discharge angle: 90°



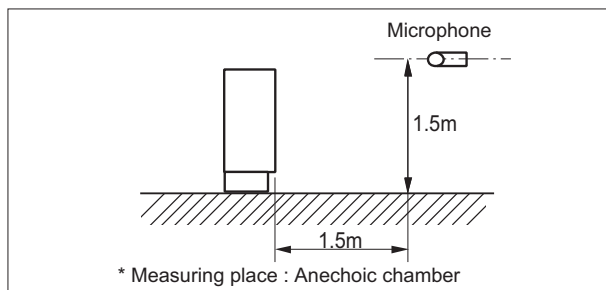
Note

- 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

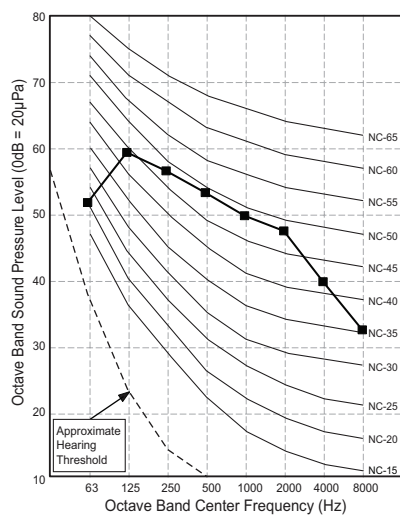


Note

- Data is valid at free field condition.
- Reference acoustic pressure $0\text{dB}=20\mu\text{Pa}$.
- 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.
- The operating conditions are assumed to be standard.

Model	Sound Levels dB(A)			
	SH	H	M	L
APNH48GTLA0 [UP48 NT2]	55	52	49	45

APNH48GTLA0 [UP48 NT2]



7. Sound levels

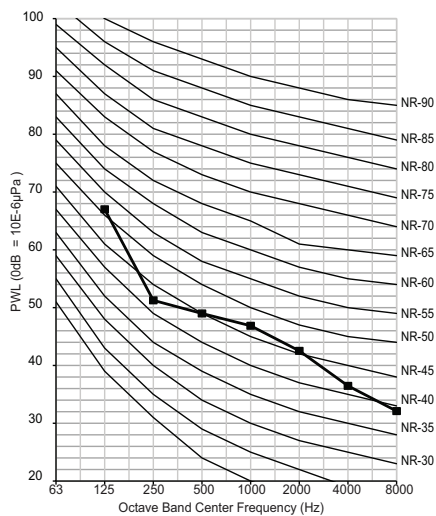
7.2 Sound power level

Note

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

Model	Sound power level [dB(A)]
	H
APNH48GTLA0 [UP48 NT2]	59

APNH48GTLA0 [UP48 NT2]

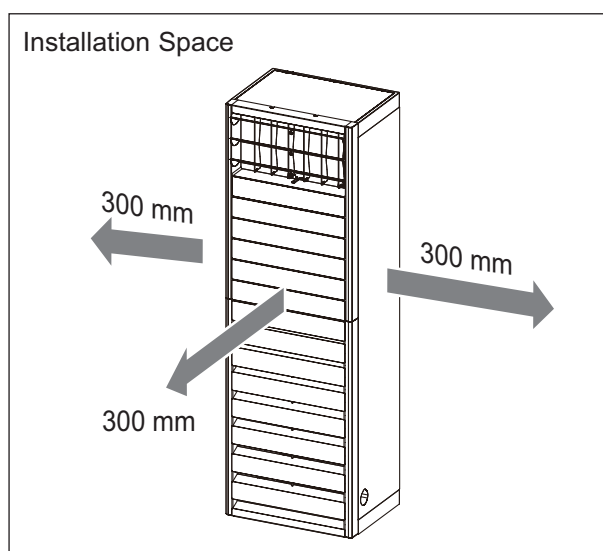


8. Installation

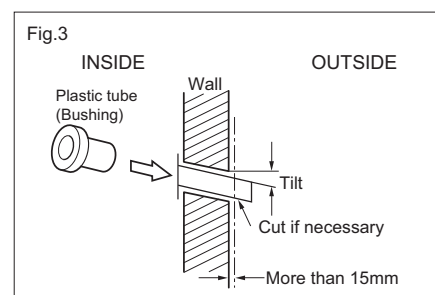
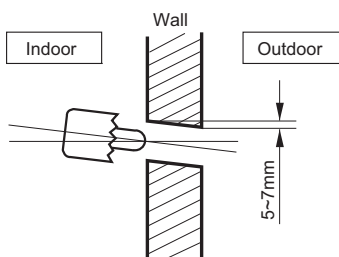
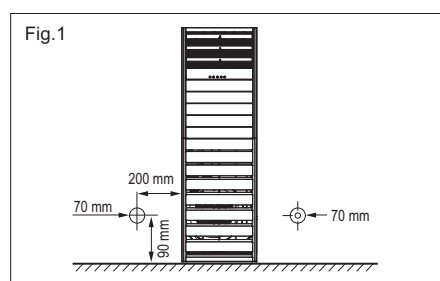
- Please read this instruction sheet completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

8.1 Select the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to prevent the air circulation.
- A place where air circulation in the room will be good.
- A place where drainage can be easily obtained.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, or other obstacles.
- The indoor unit must keep the maintenance space.



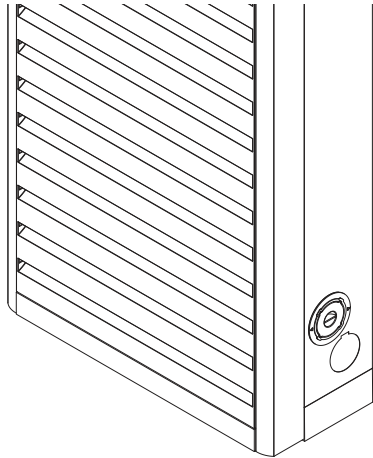
8.2 The Indoor Unit Installation



1. The mounting floor should be strong and solid enough to prevent it from vibration.
2. Drill the piping hole with 70mm diameter hole-core drill at either the right or the left of indoor unit. (Fig.1)
The hole should be slant slightly to the outdoor side. (Fig.2)
3. Insert the plastic tube through the hole. (Fig.3)
4. Cut the extruded outside part of the plastic tube, if necessary.

8. Installation

- When using knock-out hole to route the piping, insert the plastic cover in knock-out hole in order to prevent the piping from damaged by sharp edge of the hole.



8.3 Electric wiring work

* The indoor and outdoor unit connecting cable can be connected after opening the inlet grille.

1. Open the inlet grille manually.
2. Open the control cover with Driver(\oplus)
3. Connect the cables to the terminal block in the control box.
And fix the cable to cord clamp.
4. Secure the control cover to the original position with the screw.
5. Close the inlet grille.



Air Solution

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The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.
The specifications, designs, and information in this brochure are subject to change without notice.