

LG

SINGLE

Heat pump
R410A, 50Hz

0CSL0-05A (Replaces 00CSL0-04A)

TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK

SINGLE

Heat pump

General information

Product data

Indoor units

Ceiling Mounted Cassette 4-way

Ceiling Concealed Duct - High static pressure

Ceiling Suspended Unit

Ceiling Mounted Cassette Round

Outdoor units

Installation of Outdoor Units

SINGLE

Heat pump

General information





- 1. Model Line up**
- 2. Nomenclature**

1. Model line up




1.1 Indoor Units

Category	Type	Chassis	Capacity class, kBtu/h						
			18	24	30	36	48	54	60
Ceiling Mounted Cassette	4way	TP	O	O	O				
		TN				O			
		TM					O	O	
	Round	TY				O	O		
Ceiling Concealed Duct	High static pressure	M1	O	O	O				
		M3				O	O	O	O
Ceiling Suspended Unit		VM1	O	O	O				
		VM2				O	O	O	

◆ External appearance

• Ceiling Mounted Cassette 4-way ATNW18GPLT1 ATNW24GPLT1 ATNW30GPLT1 ATNW36GNLT1 ATNW48GMLT1 ATNW54GMLT1 	• Ceiling Concealed Duct – High static pressure ABNW18GM1T1 ABNW24GM1T1 ABNW30GM1T1 ABNW36GM3T1 ABNW48GM3T1 ABNW54GM3T1 ABNW60GM3T1 
• Ceiling Suspended Unit AVNW18GM1T1 AVNW24GM1T1 AVNW30GM1T1 AVNW36GM2T1 AVNW48GM2T1 AVNW54GM2T1 	• Ceiling Mounted Cassette Round ATNW36GYLT1 ATNW48GYLT1 

◆ External appearance (for Algeria)

• Ceiling Mounted Cassette 4-way ATNW24GPLT1 [ATNW27GPLT1] ATNW30GPLT1 [ATNW34GPLT1] ATNW36GNLT1 [ATNW38GNLT1] ATNW48GMLT1 [ATNW53GMLT1] 	• Ceiling Concealed Duct – High static pressure ABNW24GM1T1 [ABNW27GM1T1] ABNW36GM3T1 [ABNW38GM3T] ABNW48GM3T1 [ABNW53GM3T1] ABNW54GM3T1 [ABNW57GM3T1] 
• Ceiling Mounted Cassette Round ATNW36GYLT1 [ATNW38GYLT1] ATNW48GYLT1 [ATNW53GYLT1] 	



Note


All product data are based on Factory model name.


1. Model line up

1.2 Outdoor Units

◆ External appearance

Model Name	ATUW18GPLT1 ABUW18GM1T1 AVUW18GM1T1	ATUW24GPLT1 ABUW24GM1T1 AVUW24GM1T1
Connectable indoor unit model name	ATNW18GPLT1 ABNW18GM1T1 AVNW18GM1T1	ATNW24GPLT1 ABNW24GM1T1 AVNW24GM1T1
Power supply	220-240V, 1Ø, 50 Hz	
External Appearance		

Model Name	ATUW30GPLT1 ABUW30GM1T1 AVUW30GM1T1	ATUW36GNLT1 ABUW36GM3T1 AVUW36GM2T1 ATUW36GYLT1
Connectable indoor unit model name	ATNW30GPLT1 ABNW30GM1T1 AVNW30GM1T1	ATNW36GNLT1 ABNW36GM3T1 AVNW36GM2T1 ATNW36GYLT1
Power supply	220-240V, 1Ø, 50 Hz	
External Appearance		


Model Name	ATUW48GMLT1 ABUW48GM3T1 AVUW48GM2T1 ATUW48GYLT1	ATUW54GMLT1 ABUW54GM3T1 AVUW54GM2T1 ABUW60GM3T1
Connectable indoor unit model name	ATNW48GMLT1 ABNW48GM3T1 AVNW48GM2T1 ATNW48GYLT1	ATNW54GMLT1 ABNW54GM3T1 AVNW54GM2T1 ABNW60GM3T1
Power supply	220-240V, 1Ø, 50 Hz	
External Appearance		


Note

All product data are based on Factory model name.

1. Model line up

◆ External appearance (for Algeria)

Model Name	ATUW24GPLT1 [ATUW27GPLT1] ABUW24GM1T1 [UU27WGTX1]
Connectable indoor unit model name	ATNW24GPLT1 [ATNW27GPLT1] ABNW24GM1T1 [ABNW27GM1T1]
Power supply	
External Appearance	

Model Name	ATUW30GPLT1 [ATUW34GPLT1]	ATUW36GNLT1 [ATUW38GNLT1] ABUW36GM3T1 [UU38WGTX1] ATUW36GYLT1 [ATU38GYLT1]
Connectable indoor unit model name	ATNW30GPLT1 [ATNW34GPLT1]	ATNW36GNLT1 [ATNW38GNLT1] ABNW36GM3T1 [ABNW38GMT1] ATNW36GYLT1 [ATNW38GYLT1]
Power supply	220-240V, 1Ø, 50 Hz	
External Appearance		

Model Name	ATUW48GMLT1 [ATUW53GMLT1] ABUW48GM3T1 [UU53WGTX1] ATUW48GYLT1 [ATUW53GYLT1]	ABUW54GM3T1 [UU57WGTX1]
Connectable indoor unit model name	ATNW48GMLT1 [ATNW53GMLT1] ABNW48GM3T1 [ABNW53GM3T1] ATNW48GYLT1 [ATNW53GYLT1]	ABNW54GM3T1 [ABNW57GM3T1]
Power supply	220-240V, 1Ø, 50 Hz	
External Appearance		

Note

All product data are based on Factory model name.

2. Nomenclature

■ Factory Model Name

Model Name	A	T	N	W	18	G	P	L	T1
No.	1	2	3	4	5	6	7	8	9

No.	Signification
1	Refrigerant Type A : Using R410A
2	Product Type T : Ceiling Mounted Cassette B : Ceiling concealed duct V : Ceiling Suspended Unit
3	Unit Type N : Indoor Unit U : Outdoor Unit
4	Model type Q : Cooling Only W : Heat Pump
5	Nominal Capacity (Rated) Ex) 24,000 Btu/h Class → '24'
6	Electrical rating G: 1Ø, 220-240V, 50 Hz L : 3Ø, 380-415V, 50 Hz
7	Chassis Name of indoor unit
8	Ceiling Mounted Cassette L : Basic Ceiling concealed duct / Ceiling Suspended Unit 1, 2 : Chassis Name
9	Serial number

2. Nomenclature

■ Buyer Model Name

Model Name	A	T	N	W	27	G	P	L	T1
No.	1	2	3	4	5	6	7	8	9

No.	Signification
1	Refrigerant Type A : Using R410A
2	Product Type T : Ceiling Mounted Cassette B : Ceiling concealed duct V : Ceiling Suspended Unit
3	Unit Type N : Indoor Unit U : Outdoor Unit
4	Model type Q : Cooling Only W : Heat Pump
5	Nominal Capacity (Max) Ex) 27,000 Btu/h Class → '27'
6	Electrical rating G: 1Ø, 220-240V, 50 Hz L : 3Ø, 380-415V, 50 Hz
7	Chassis Name of indoor unit
8	Ceiling Mounted Cassette L : Basic Ceiling concealed duct / Ceiling Suspended Unit 1, 2 : Chassis Name
9	Serial number

Model Name	U	U	27	W	G	T	X	1
No.	1	2	3	4	5	6	7	8

No.	Signification
1	Product Type U : Universal
2	Unit Type N : Indoor Unit U : Outdoor Unit
3	Nominal Capacity (Max) Ex) 27,000 Btu/h Class → '27'
4	Model type Q : Cooling Only W : Heat Pump
5	Electrical rating G: 1Ø, 220-240V, 50/60 Hz L : 3Ø, 380-415V, 50 Hz
6	Regional specialization T : High Ambient S : Standard
7	Declared capacity type X : Maximum N : Rated
8	Serial number

SINGLE

Heat pump

Product data

Indoor units

Outdoor units

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Heat pump

Indoor units

- Ceiling Mounted Cassette 4-way**
- Ceiling Concealed Duct - High static pressure**
- Ceiling Suspended Unit**
- Ceiling Mounted Cassette Round**

SINGLE

Heat pump

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

◆ Basic functions of Indoor Unit

Category	Functions	ATNW18GPLT1 ATNW24GPLT1 ATNW30GPLT1 ATNW36GNLT1 ATNW48GMLT1 ATNW54GMLT1
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	X
	Plasma air purifier	PTPKM0
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	O
Reliability	Self diagnosis	O
	Hot start	O
Convenience	Auto cleaning	X
	Auto changeover	O
	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	PTEGM0
Special Functions	Wi-Fi	O (Accessory)
	Humidity Control	O
	Human Detecting Control	O (Accessory)
	VAV(Variable Air Volume) Control	X
Wireless remote controller Supply (included with product)		O**
Wired remote controller Supply (included with product)		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	ATNW18GPLT1 / ATNW24GPLT1 ATNW30GPLT1 / ATNW36GNLT1 ATNW48GMLT1 / ATNW54GMLT1
Wireless Remote Controller		PQWRHQ0FDB / PQWRCQ0FDB	Heat Pump / Cooling Only	O
		PWLSSB21H / PWLSSB21C	Heat Pump / Cooling Only	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
	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	Connected with the Indoor Units	X
		PSNFP14A0	Connected with the Indoor Units	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	Electronic thermostat	AQETC	-	X
	CTI (Communication transfer interface)	PKFC0	-	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	-	O

Note

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

2. Specifications

Model Name			Unit	ATNW18GPLT1	ATNW24GPLT1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	840 x 204 x 840	840 x 204 x 840
	Shipping	W × H × D	mm	922 x 276 x 917	922 x 276 x 917
Weight	Net		kg	19.6	20.5
	Shipping		kg	24.2	25.0
Heat Exchanger	Rows × Columns × FPI		-	2 × 8 × 21	3 × 8 × 21
	Face Area		m²	0.33	0.33
Fan Type			-	3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	17.0 / 15.0 / 13.0	17.0 / 15.0 / 13.0
		H / M / L	ft³/min	600 / 530 / 459	600 / 530 / 459
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	50.3 × 1	50.3 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	0.6	0.6
Dehumidification Rate			ℓ/h	2.1	2.1
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	6.35(1/4)	9.52 (3/8)
	Gas Side		mm (inch)	12.7(1/2)	15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	36 / 34 / 32	38 / 36 / 34
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75
Decoration Panel	Model Name		-	PT-MCHW0	PT-MCHW0
	Color		-	Morning Fog	Morning Fog
	Dimensions	W × H × D	mm	950 × 35 × 950	950 × 35 × 950
	Net Weight		kg	6.3	6.3
	Shipping Weight		kg	8.3	8.3

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.
4. Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
 - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

2. Specifications

Model Name			Unit	ATNW30GPLT1	ATNW36GNLT1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	840 x 204 x 840	840 x 246 x 840
	Shipping	W × H × D	mm	922 x 276 x 917	922 x 318 x 917
Weight	Net		kg	20.5	23.3
	Shipping		kg	25.0	28.2
Heat Exchanger	Rows × Columns × FPI		-	3 x 8 x 21	3 x 10 x 21
	Face Area		m²	0.33	0.41
Fan Type			-	3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m³/min	19.0 / 17.0 / 15.0	23.0 / 21.0 / 19.0
		H / M / L	ft³/min	671 / 600 / 530	812 / 742 / 671
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	50.3 × 1	145.7 x 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	0.6	0.72
Dehumidification Rate			ℓ/h	2.7	2.7
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52(3/8)	9.52(3/8)
	Gas Side		mm (inch)	15.88(5/8)	15.88(5/8)
	Drain Pipe	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	41 / 38 / 36	42 / 40 / 38
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75
Decoration Panel	Model Name		-	PT-MCHW0	PT-MCHW0
	Color		-	Morning Fog	Morning Fog
	Dimensions	W × H × D	mm	950 × 35 × 950	950 × 35 × 950
	Net Weight		kg	6.3	6.3
	Shipping Weight		kg	8.3	8.3

Note

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

2. Specifications

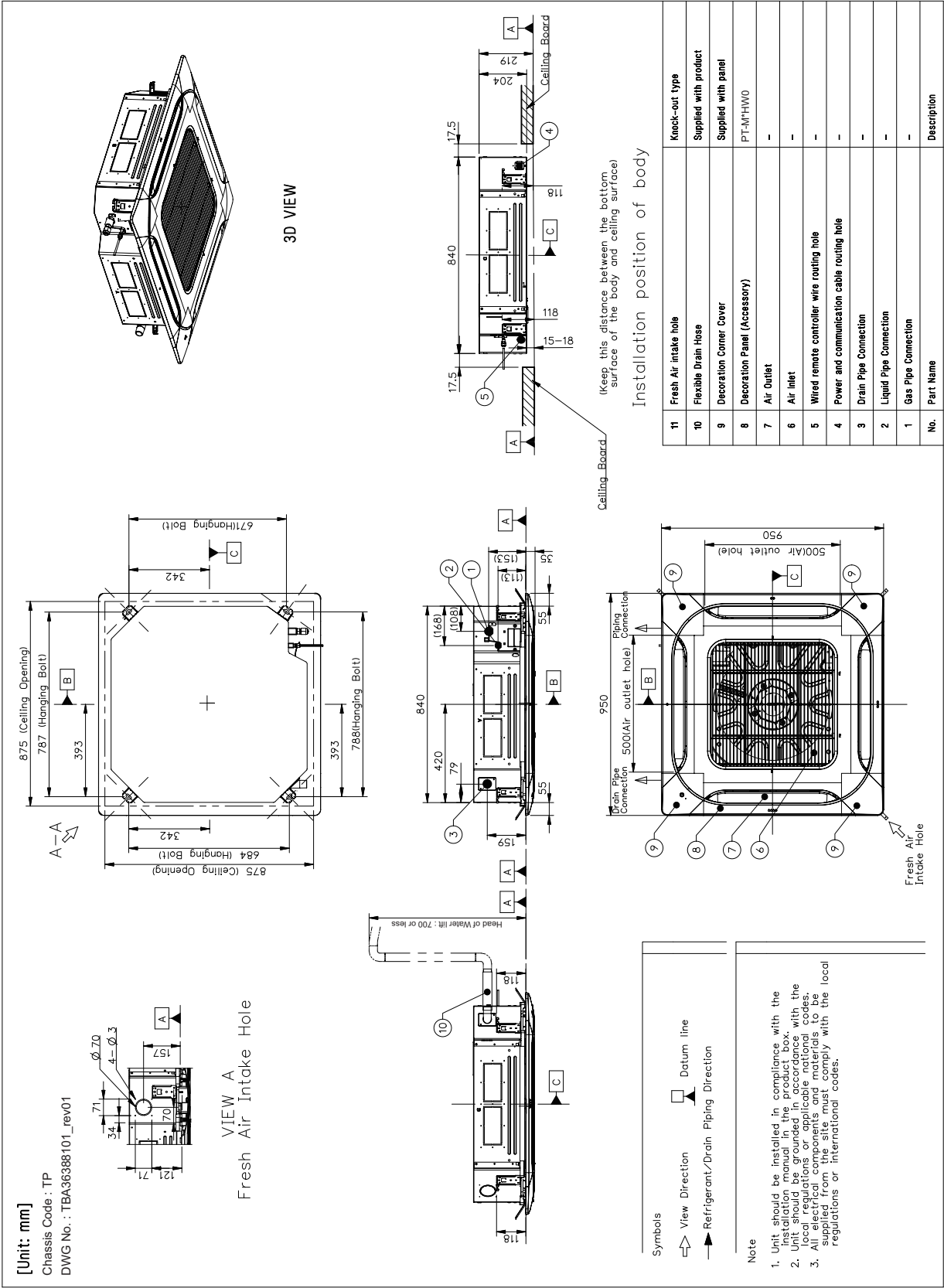
Model Name			Unit	ATNW48GMLT1	ATNW54GMLT1
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	840 × 288 × 840	840 × 288 × 840
	Shipping	W × H × D	mm	922 × 360 × 917	922 × 360 × 917
Weight	Net		kg	25.5	25.5
	Shipping		kg	30.3	30.3
Heat Exchanger	Rows × Columns × FPI		-	3 × 12 × 21	3 × 12 × 21
	Face Area		m ²	0.49	0.49
Fan Type			-	3D Turbo Fan	3D Turbo Fan
Air Flow Rate		H / M / L	m ³ /min	32.0 / 30.0 / 28.0	32.0 / 30.0 / 28.0
		H / M / L	ft ³ /min	1,130 / 1,060 / 989	1,130 / 1,060 / 989
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	135.8 × 1	135.8 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.28	1.28
Dehumidification Rate			ℓ/h	3.6	3.6
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52 (3/8)	9.52 (3/8)
	Gas Side		mm (inch)	19.05 (3/4)	19.05 (3/4)
	Drain Pipe	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	44 / 42 / 40	44 / 42 / 40
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm ²	4 × 0.75	4 × 0.75
Decoration Panel	Model Name		-	PT-MCHW0	PT-MCHW0
	Color		-	Morning Fog	Morning Fog
	Dimensions	W × H × D	mm	950 × 35 × 950	950 × 35 × 950
	Net Weight		kg	6.3	6.3
	Shipping Weight		kg	8.3	8.3

Note

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

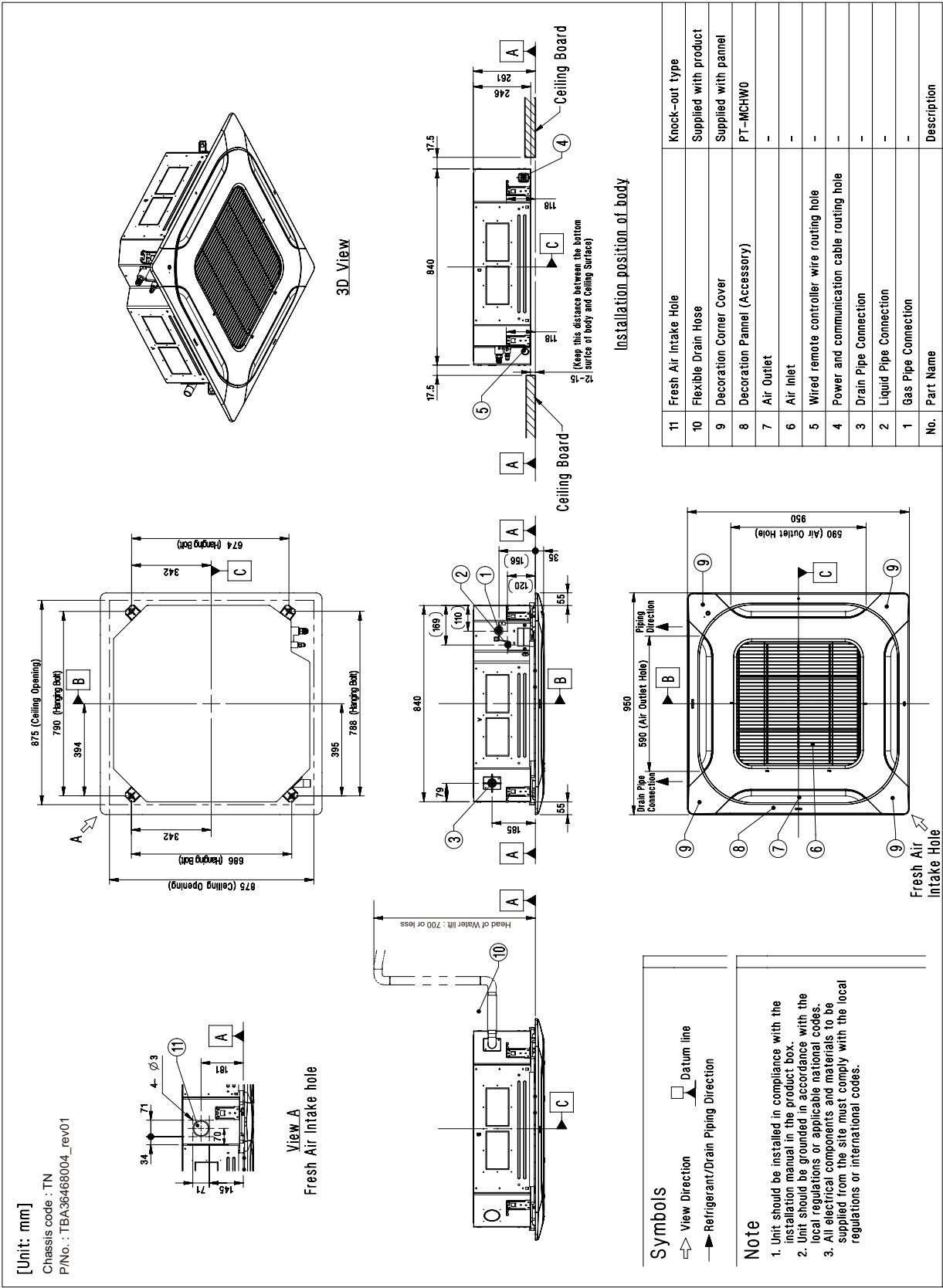
3. Dimensions

[TP Chassis] ATNW18GPLT1, ATNW24GPLT1, ATNW30GPLT



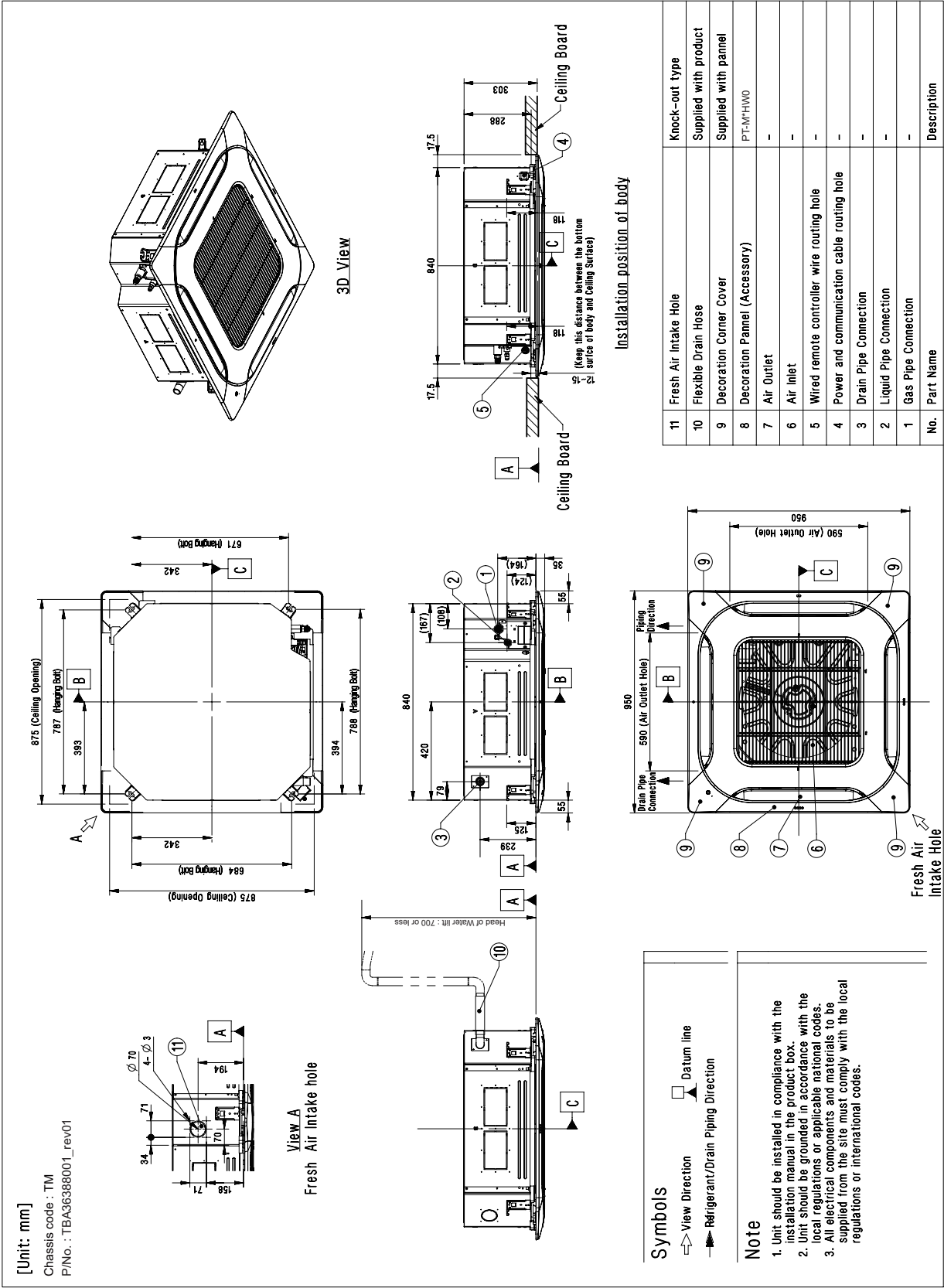
3. Dimensions

[TN Chassis] ATNW36GNLT1

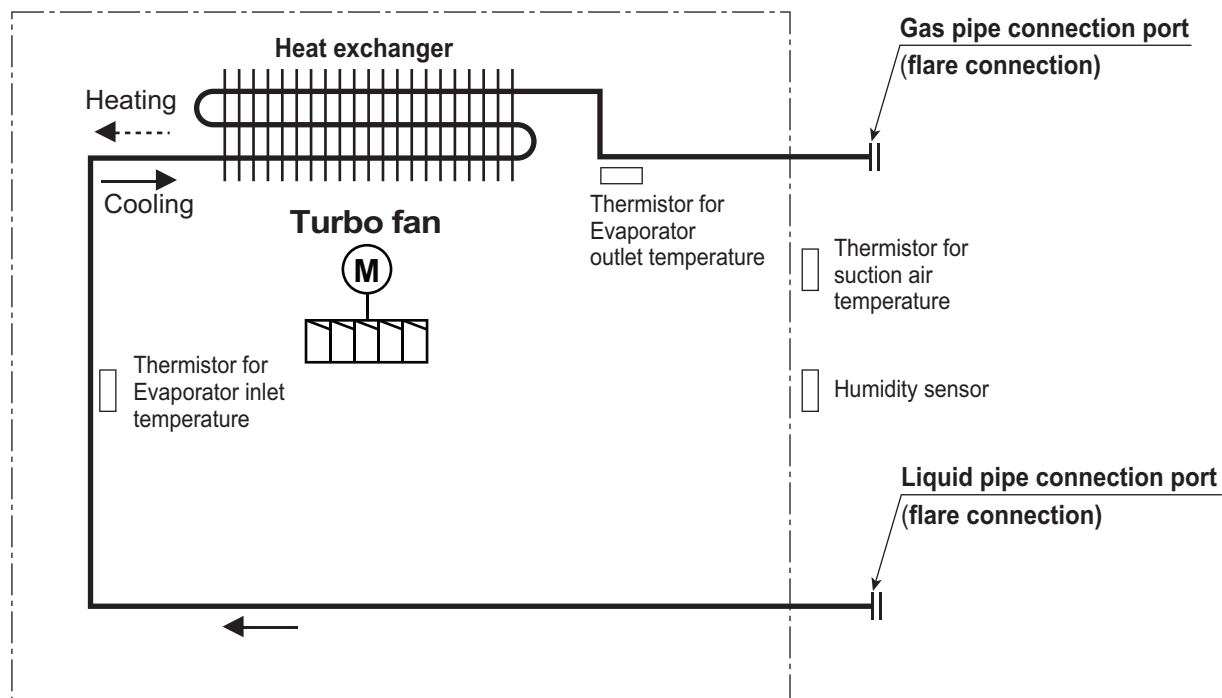


3. Dimensions

[TM Chassis] ATNW48GMLT1, ATNW54GMLT1



4. Piping diagrams



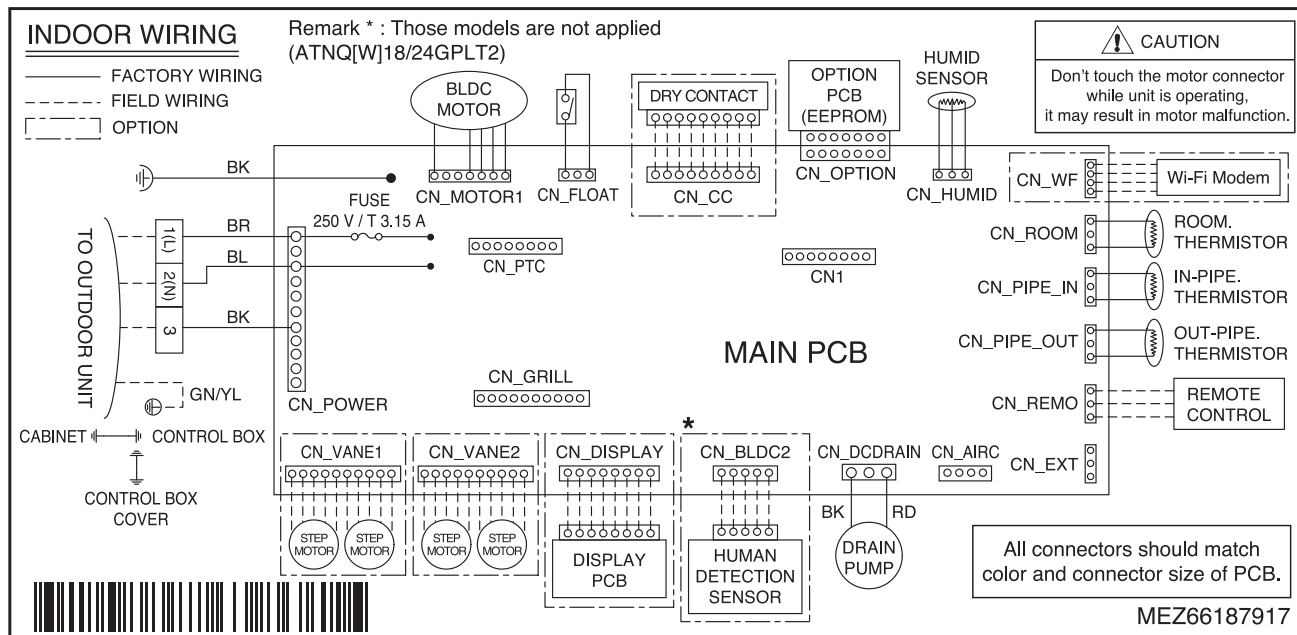
Description	PCB Connector
Thermistor for suction air temperature	CN_ROOM
Thermistor for evaporator inlet temperature	CN_PIPE_IN
Thermistor for evaporator outlet temperature	CN_PIPE_OUT
Humidity sensor	CN_HUMID

◆ Refrigerant pipe connection port diameters

Model	Gas [mm(inch)]	Liquid [mm(inch)]
ATNW18GPLT1	Ø12.7 (1/2)	Ø 6.35 (1/4)
ATNW24GPLT1 ATNW30GPLT1 ATNW36GNLT1	Ø15.88 (5/8)	Ø 9.52 (3/8)
ATNW48GMLT1 ATNW54GMLT1	Ø19.05 (3/4)	

5. Wiring Diagrams

■ Models : ATNW18GPLT1, ATNW24GPLT1, ATNW30GPLT1, ATNW36GNLT1
ATNW48GMLT1, ATNW54GMLT1

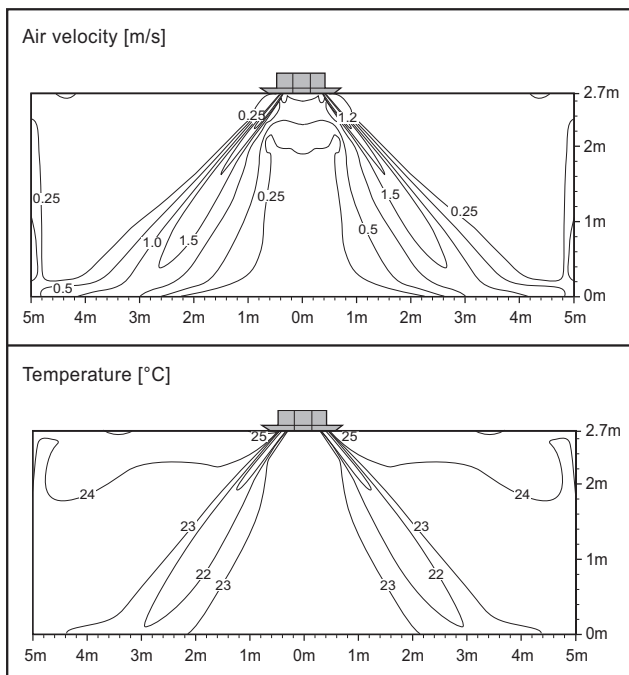


6. Air flow and temperature distributions

Model : ATNW18GPLT1

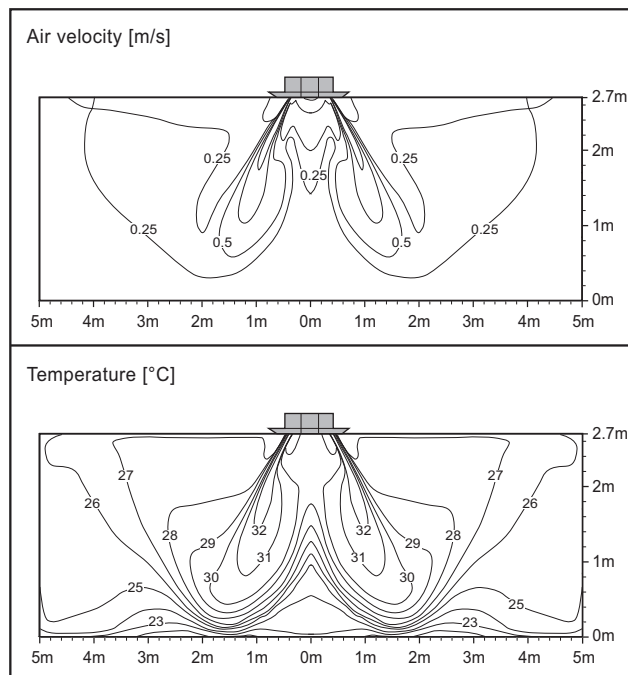
Cooling

Discharge angle: 40°



Heating

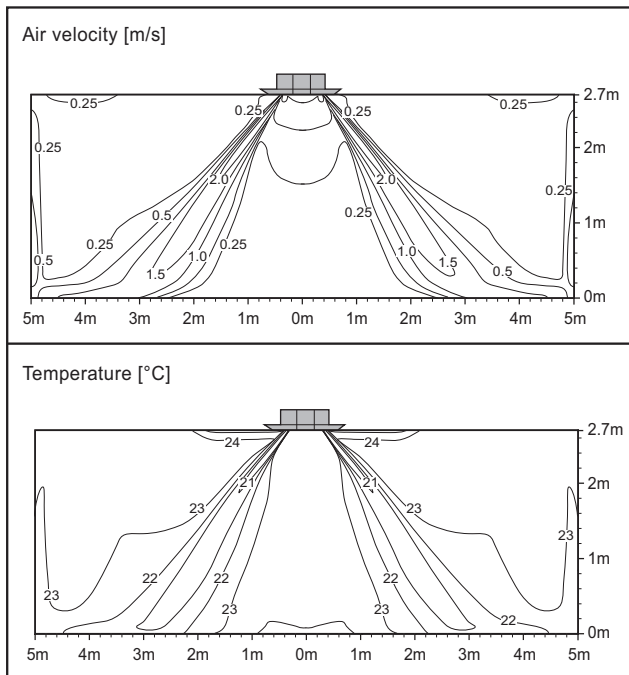
Discharge angle: 50°



Model : ATNW24GPLT1

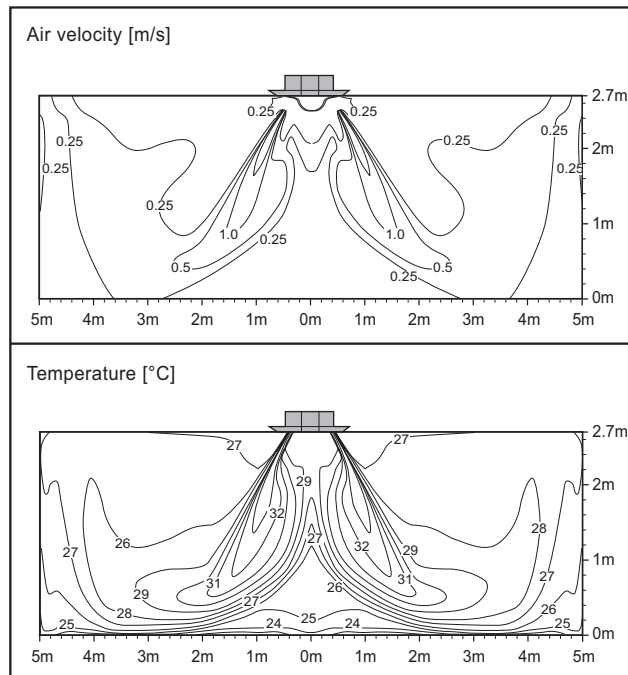
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



Note

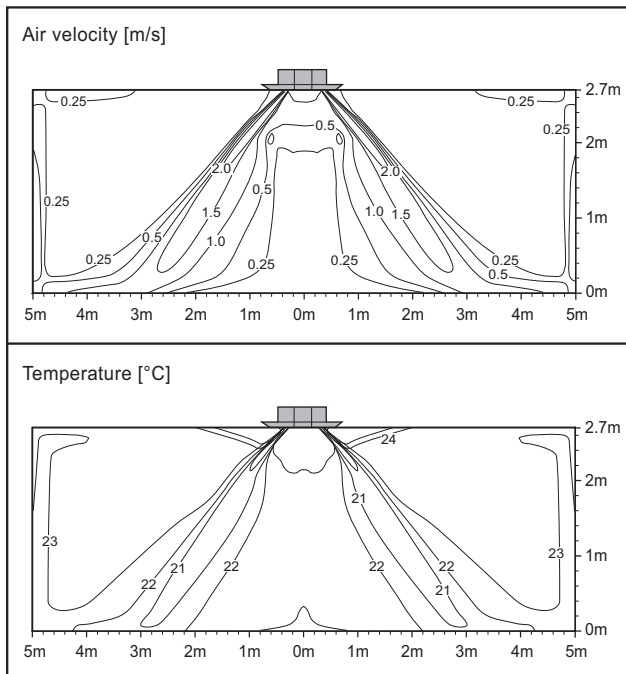
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions

Model : ATNW30GPLT1

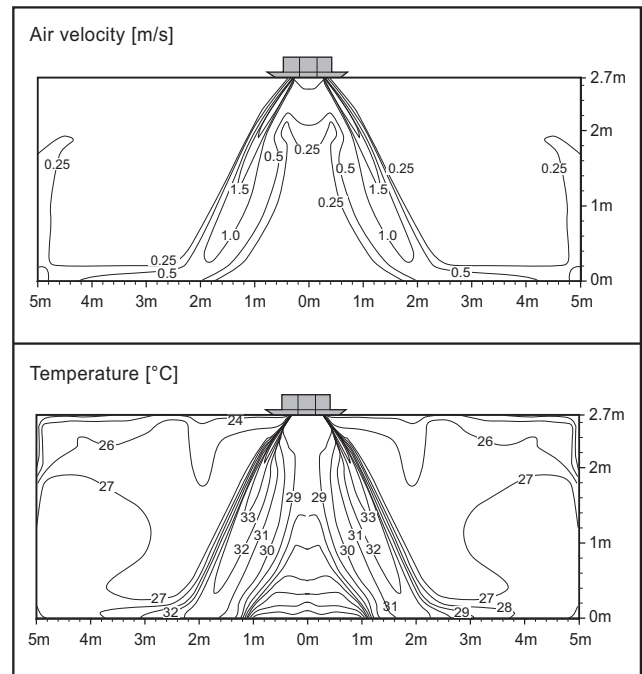
Cooling

Discharge angle: 40°



Heating

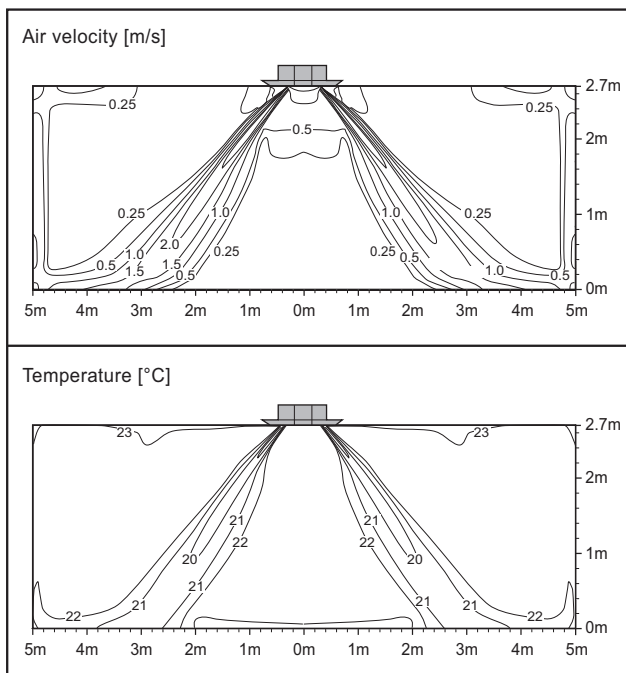
Discharge angle: 50°



Model : ATNW36GNLT1

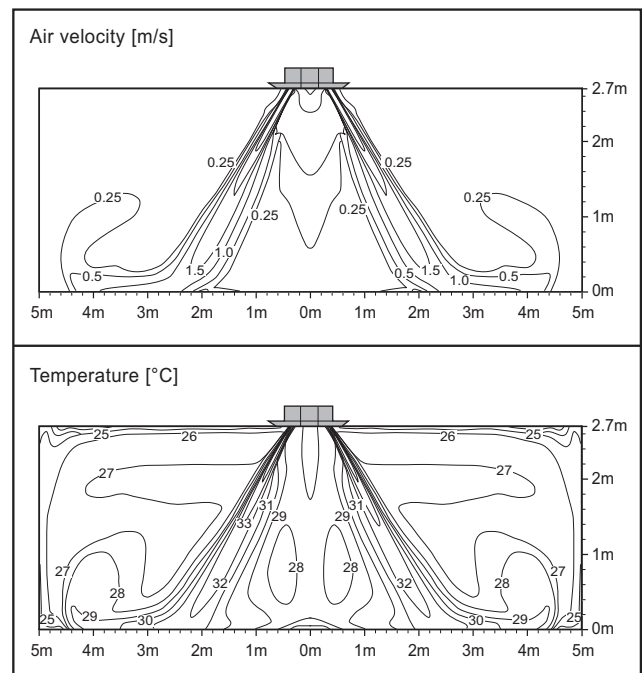
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



Note

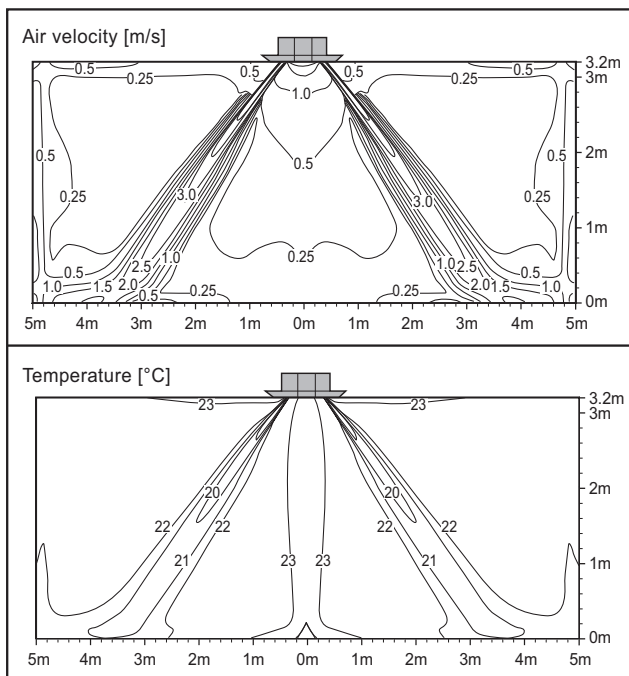
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions

Model : ATNW48GMLT1

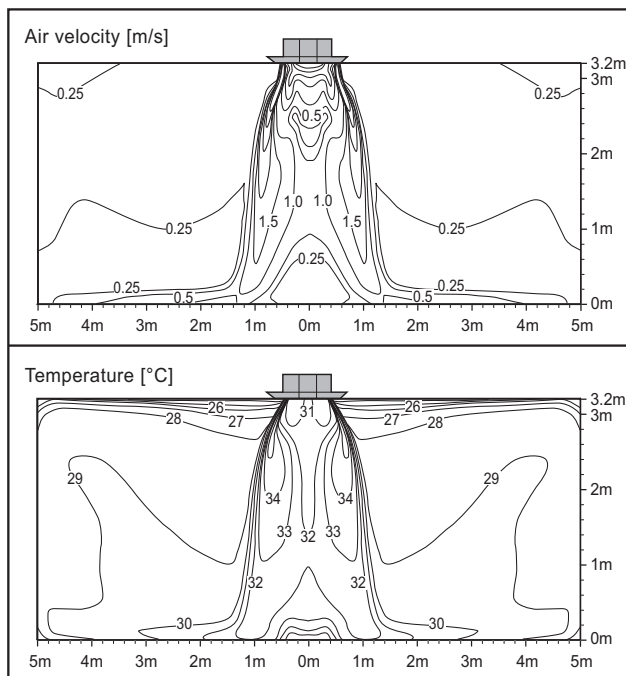
Cooling

Discharge angle: 40°



Heating

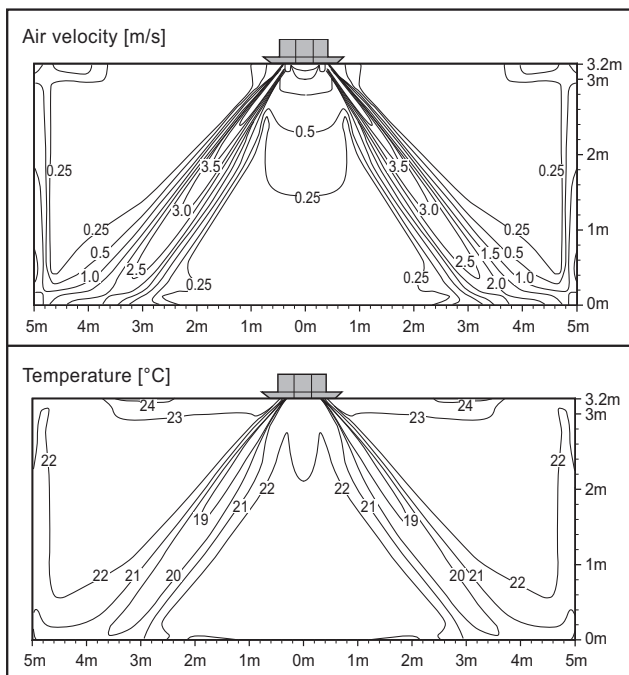
Discharge angle: 50°



Model : ATNW54GMLT1

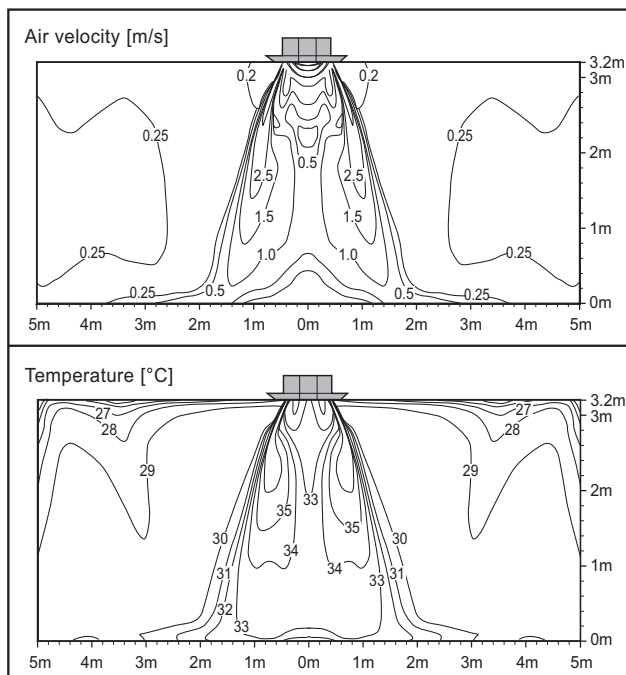
Cooling

Discharge angle: 40°



Heating

Discharge angle: 50°



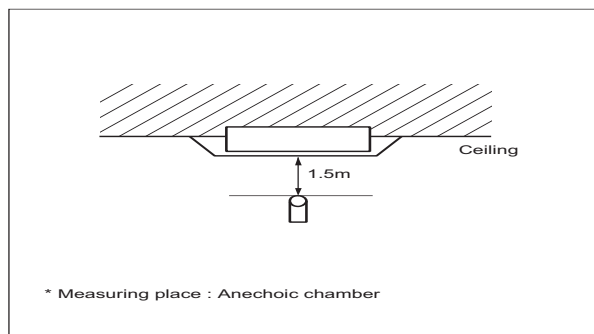
Note

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

7. Sound levels

7.1 Sound pressure level

Overall

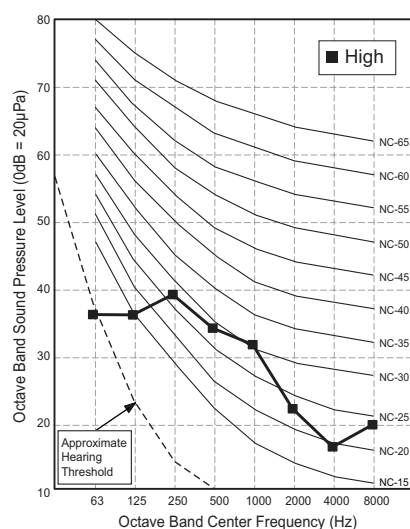


Note

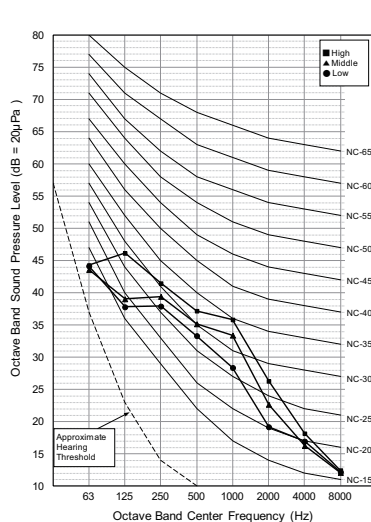
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure $0\text{dB} = 20\mu\text{Pa}$.
4. Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound pressure Levels [dB(A)]		
	H	M	L
ATNW18GPLT1	36	34	32
ATNW24GPLT1	38	36	34
ATNW30GPLT1	41	38	36
ATNW36GNLT1	42	40	38
ATNW48GMLT1	44	42	40
ATNW54GMLT1	44	42	40

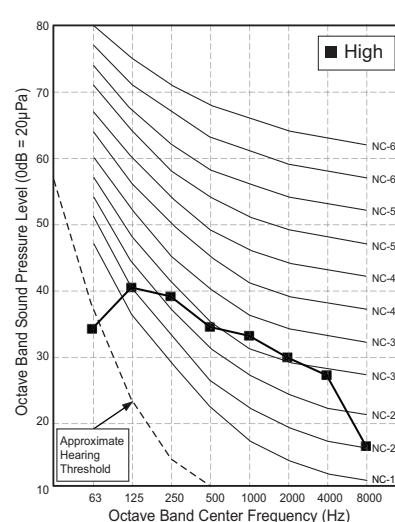
ATNW18GPLT1



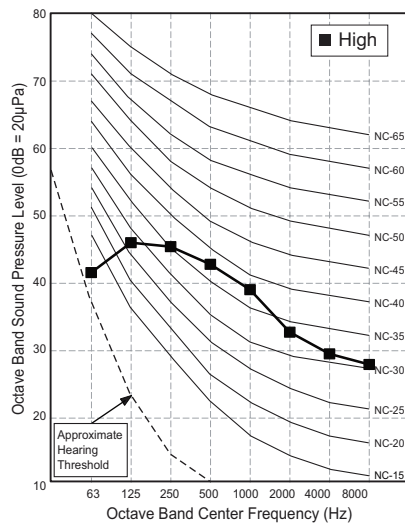
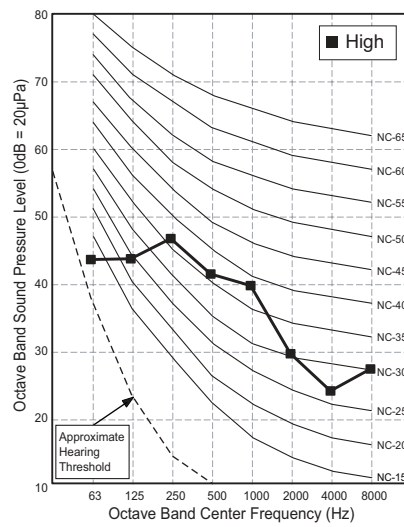
ATNW24GPLT1



ATNW30GPLT1

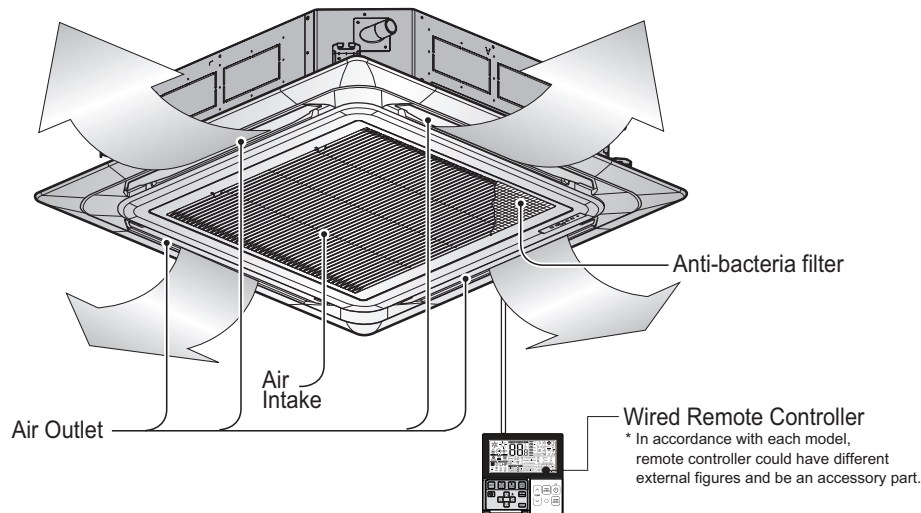


7. Sound levels

ATNW36GNLT1**ATNW48GMLT1
ATNW54GMLT1**

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.)

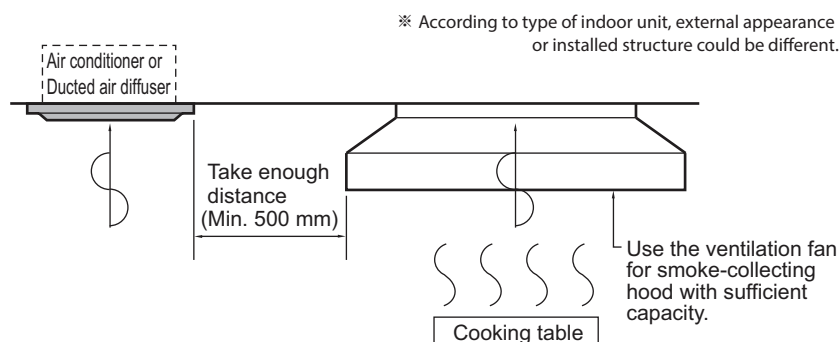


8.1 Selection of the best location

- 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;

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.



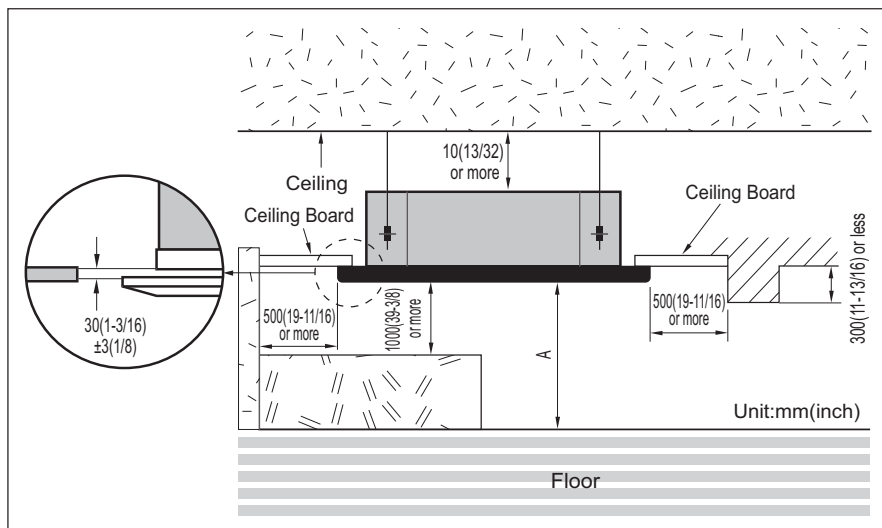
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

⚠ 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.

TQ/TR Chassis

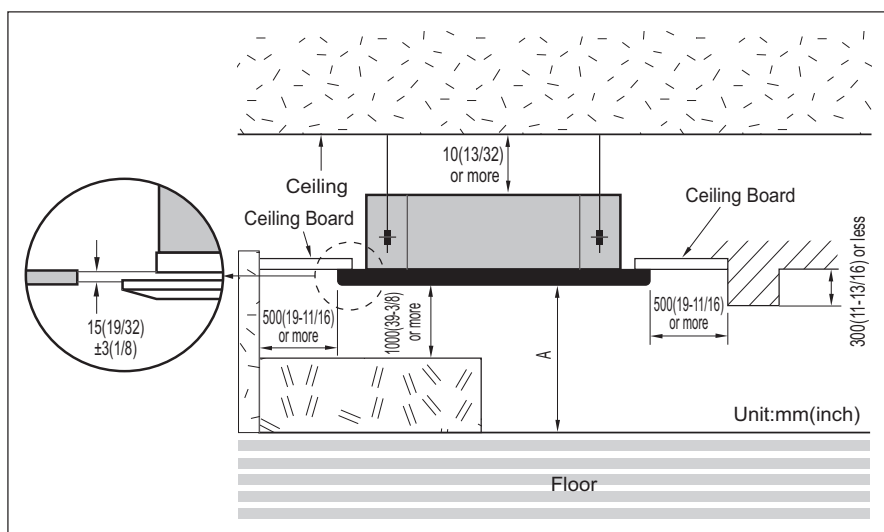
* According to product type, model line up, sales region..etc, applicability of each chassis could be different.



8. Installation

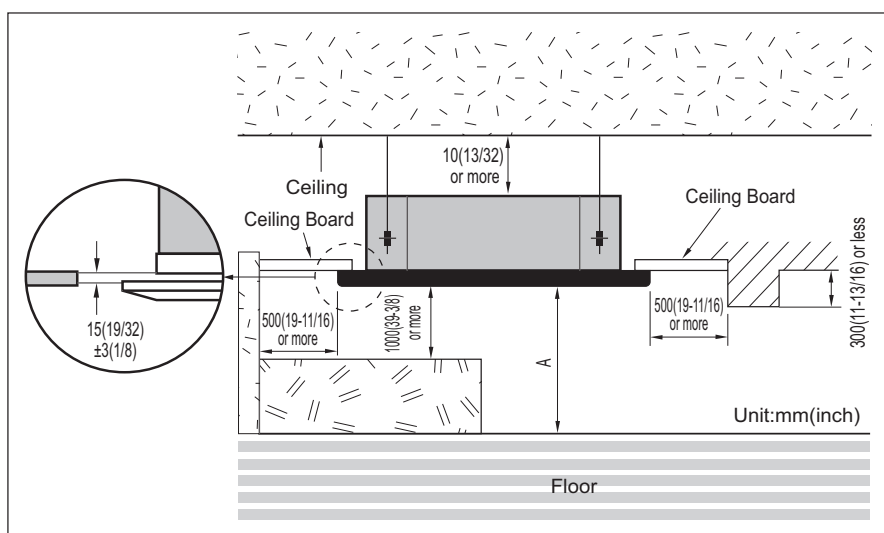
TP Chassis

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



TM/TN Chassis

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

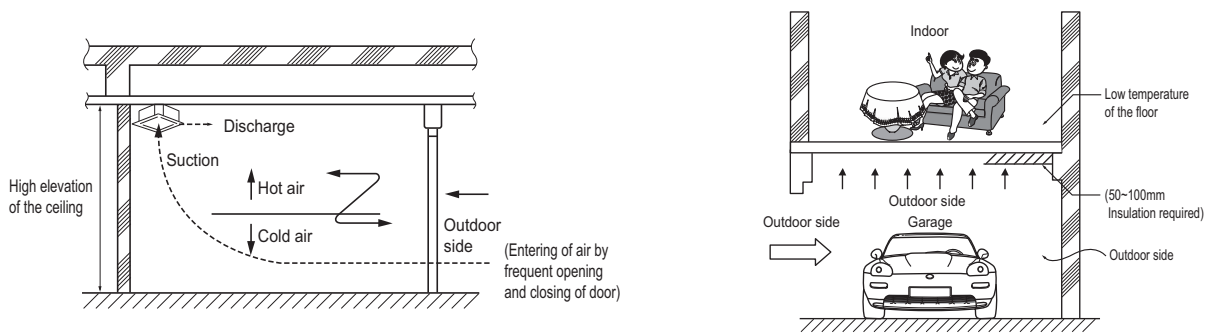


8.2 Precautions regarding cassette indoor unit installation

◆ 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.

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

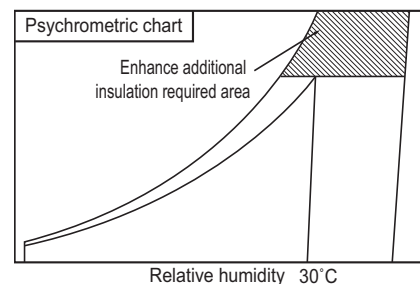
- In case there is a cold air intake,
 - » The duct surface may have some dew drops. So a insulation on the duct is a must. (Insulation material: a glass wool of thickness 25 mm will be appropriate.)

• 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.

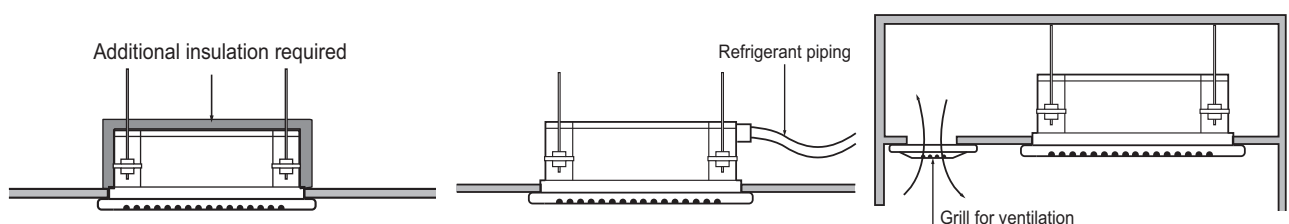
◆ In case of high temperature or humidity between the false ceiling and ceiling slab

- 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.



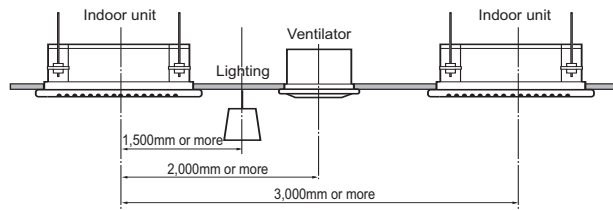
• Countermeasure method

- 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)

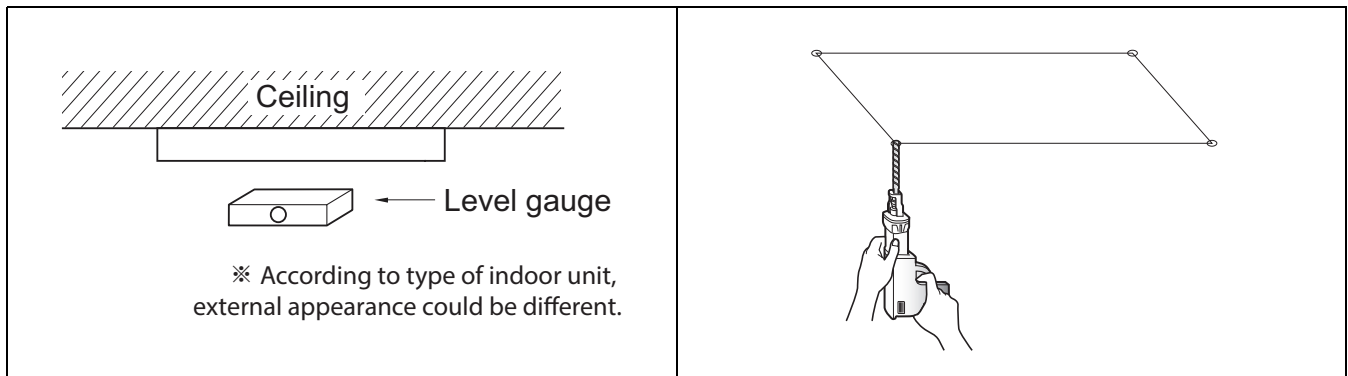


※ According to type of indoor unit, external appearance could be different.

8.3 Ceiling opening dimensions and hanging bolt location

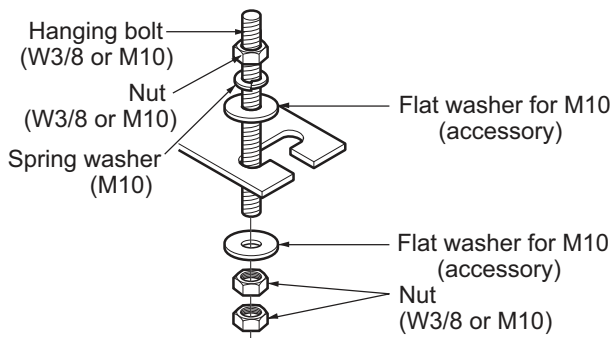
⚠ CAUTION

- 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

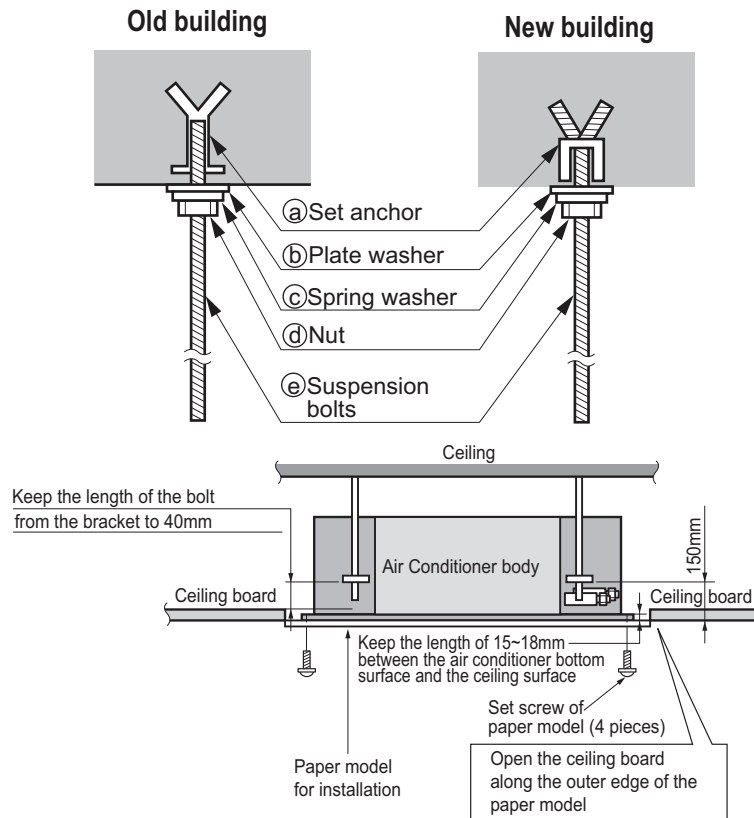


- The following parts are local purchasing.

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

CAUTION

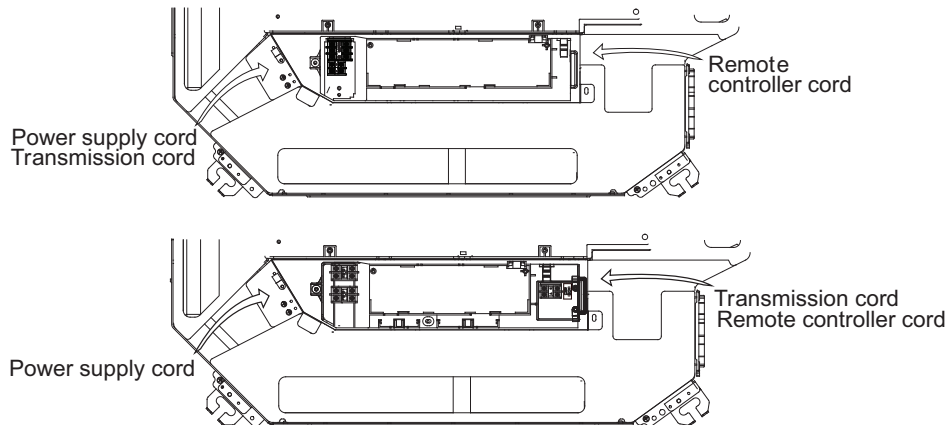
- Tighten the nut and bolt to prevent the unit from falling.



TQ/TR Chassis		TM/TN/TP Chassis
Panel Dimensions [Unit : mm]		
700 x 700	620 x 620	950 x 950

8. Installation

8.4 Connecting Cables between Indoor Unit and Outdoor Unit



8.4.1 General instructions

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

CAUTION

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

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

8. Installation

8.4.2 Wiring connection

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

8.4.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the 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.

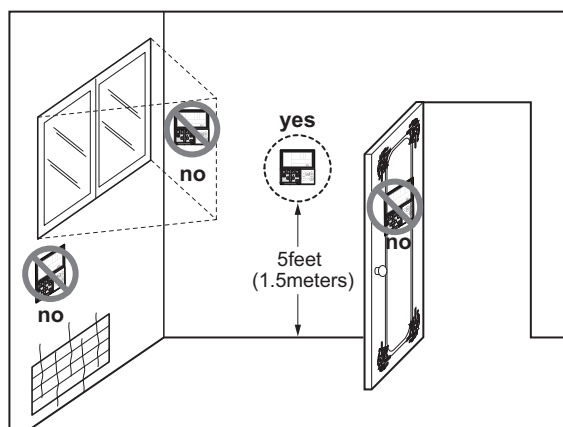
WARNING

- 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.

8.4.4 Wired Remote Controller Installation (Optional)

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

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



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

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

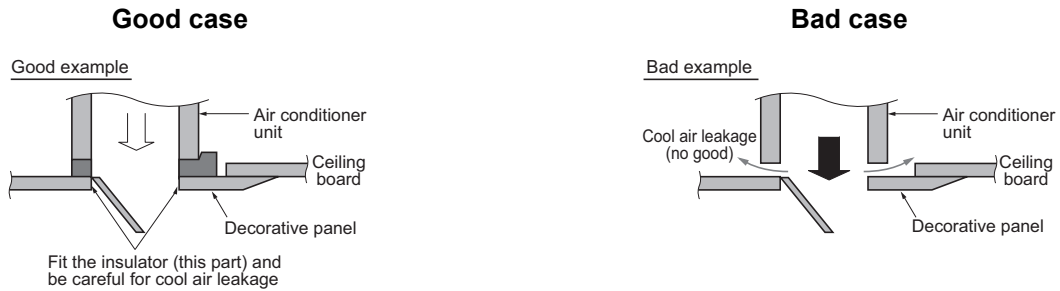
8. Installation

8.5 Installation of Decoration Panel

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

⚠ CAUTION

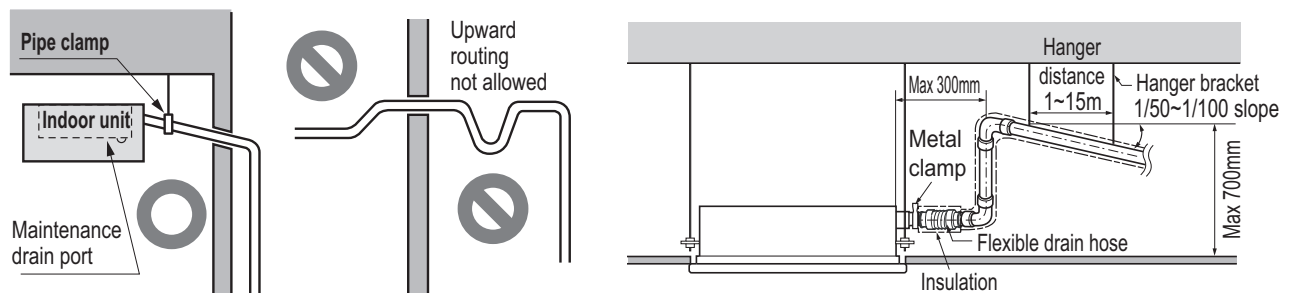
- Install certainly the decoration panel. Cool air leakage causes sweating or falling of water-drops.



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.

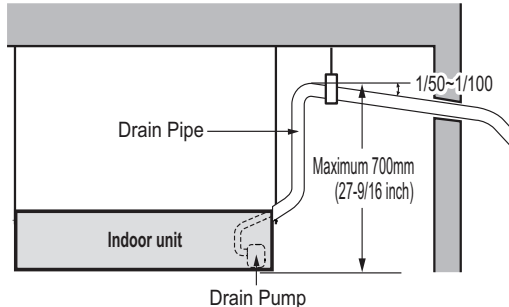


※ According to type of indoor unit, external appearance could be different.

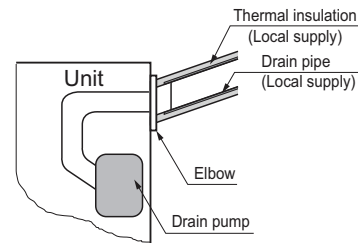
※ According to type of indoor unit, external appearance could be different.

8. Installation

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
 - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



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

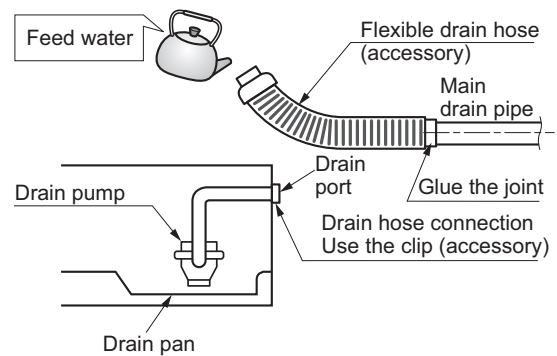


8.6.2 Method of Drainage test

◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

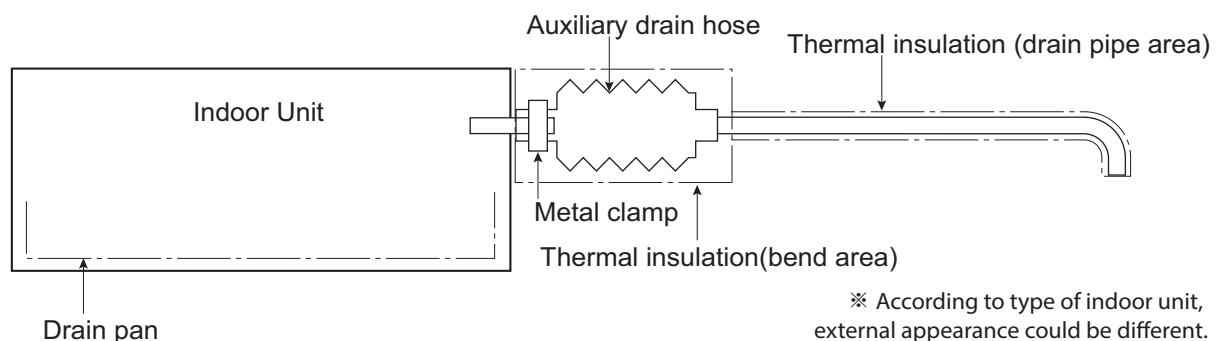
1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is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



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

8.6.3 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



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

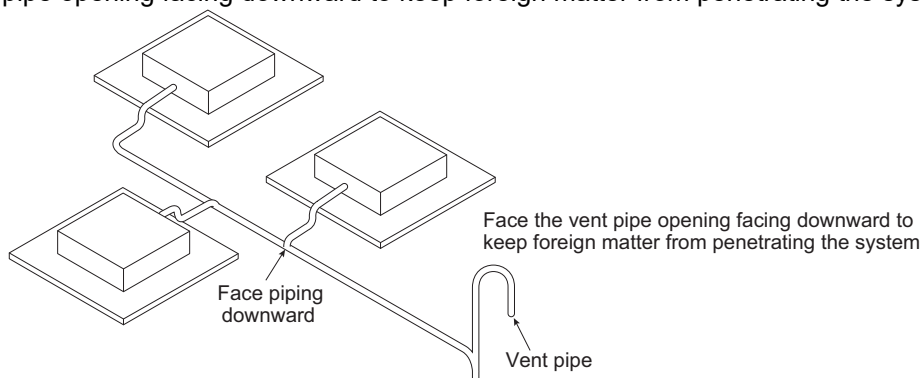
⚠ CAUTION

- 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

8.6.4 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



SINGLE

Heat pump

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

◆ Basic functions of Indoor Unit

Category	Functions	ABNW18GM1T1 / ABNW24GM1T1 ABNW30GM1T1 / ABNW36GM3T1 ABNW48GM3T1 / ABNW54GM3T1 ABNW60GM3T1
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
	Plasma air purifier	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	Self diagnosis	O
	Hot start	O
Convenience	Auto cleaning	X
	Auto changeover	O
	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	O (Accessory)
	Humidity Control	X
	Wireless remote controller Supply (included with product)	X
	Wired remote controller Supply (included with product)	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	ABNW18GM1T1 ABNW24GM1T1 ABNW30GM1T1 ABNW36GM3T1 ABNW48GM3T1 ABNW54GM3T1 ABNW60GM3T1
Wireless Remote Controller		PQWRHQ0FDB / PQWRCQ0FDB	Heat Pump / Cooling Only	O***
		PWLSSB21H / PWLSSB21C	Heat Pump / Cooling Only	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	Connected with the Indoor Units	X
		PSNFP14A0	Connected with the Indoor Units	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	-	O

Note

1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product.

2. * : Some advanced functions controlled by individual controller cannot be operated.

3. ** : It could not be operated some functions.

4. 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			Unit	ABNW18GM1T1	ABNW24GM1T1
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	900 × 270 × 700	900 × 270 × 700
	Shipping	W × H × D	mm	1,100 × 338 × 773	1,100 × 338 × 773
Weight	Net		kg	23.8	25.3
	Shipping		kg	29.1	30.3
Heat Exchanger	Rows × Columns × FPI		-	2 × 13 × 18	3 × 13 × 18
	Face Area		m²	0.21	0.21
Fan Type			-	Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	16.5 / 14.5 / 13.0	18.0 / 16.5 / 14.5
		H / M / L	ft³/min	583 / 512 / 459	636 / 583 / 512
		Max.	m³/min	23.8	23.8
		Max.	ft³/min	841	841
External static pressure	High Mode_Factory Set		mmAq	6	6
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	136.5 × 1	136.5 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.60	1.60
Dehumidification Rate			ℓ/h	1.5	2.5
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	6.35(1/4)	9.52 (3/8)
	Gas Side		mm (inch)	12.7(1/2)	15.88 (5/8)
	Drain Pipe (Natural drainage)	O.D. / I.D.	mm	25.4 / 20.4	25.4 / 20.4
	Drain Pipe (using Drain Pump)	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	34 / 32 / 30	37 / 35 / 32
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75

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.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
 - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

2. Specifications

Model Name			Unit	ABNW30GM1T1	ABNW36GM3T1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	900 x 270 x 700	1,250 x 360 x 700
	Shipping	W × H × D	mm	1,100 x 338 x 773	1,450 x 428 x 773
Weight	Net		kg	25.3	37.5
	Shipping		kg	30.3	45.0
Heat Exchanger	Rows × Columns × FPI		-	3 x 13 x 18	3 x 16 x 18
	Face Area		m²	0.21	0.3
Fan Type			-	Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	22.0 / 20.0 / 18.0	30.0 / 25.0 / 20.0
		H / M / L	ft³/min	777 / 706 / 636	1,060 / 883 / 706
		Max.	m³/min	25.9	41.0
		Max.	ft³/min	915	1,448
External static pressure	High Mode_Factory Set		mmAq	6	6
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	136.5 x 1	154 x 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.6	1.9
Dehumidification Rate			ℓ/h	2.5	2.6
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52 (3/8)	9.52 (3/8)
	Gas Side		mm (inch)	15.88 (5/8)	15.88 (5/8)
	Drain Pipe (Natural drainage)	O.D. / I.D.	mm	25.4 / 20.4	25.4 / 20.4
	Drain Pipe (using Drain Pump)	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	37 / 35 / 34	36 / 33 / 31
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75

Note

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

2. Specifications

Model Name			Unit	ABNW48GM3T1	ABNW54GM3T1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	1,250 × 360 × 700	1,250 × 360 × 700
	Shipping	W × H × D	mm	1,450 × 428 × 773	1,450 × 428 × 773
Weight	Net		kg	43.5	43.5
	Shipping		kg	51.0	51.0
Heat Exchanger	Rows × Columns × FPI		-	3 × 16 × 18	3 × 16 × 18
	Face Area		m²	0.3	0.3
Fan Type			-	Sirocco Fan	Sirocco Fan
Air Flow Rate		H / M / L	m³/min	40.0 / 34.0 / 28.0	50.0 / 45.0 / 40.0
		H / M / L	ft³/min	1,413 / 1,201 / 989	1,766 / 1,589 / 1,413
		Max.	m³/min	58.8	58.8
		Max.	ft³/min	2,077	2,077
External static pressure	High Mode_Factory Set		mmAq	6	6
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	400 × 1	400 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	2.5	2.5
Dehumidification Rate			ℓ/h	4.5	5
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52 (3/8)	9.52 (3/8)
	Gas Side		mm (inch)	19.05 (3/4)	19.05 (3/4)
	Drain Pipe (Natural drainage)	O.D. / I.D.	mm	25.4 / 20.4	25.4 / 20.4
	Drain Pipe (using Drain Pump)	O.D. / I.D.	mm	32 / 25	32 / 25
Sound Pressure Level		H / M / L	dB(A)	38 / 36 / 34	46 / 44 / 42
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75

Note

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

2. Specifications

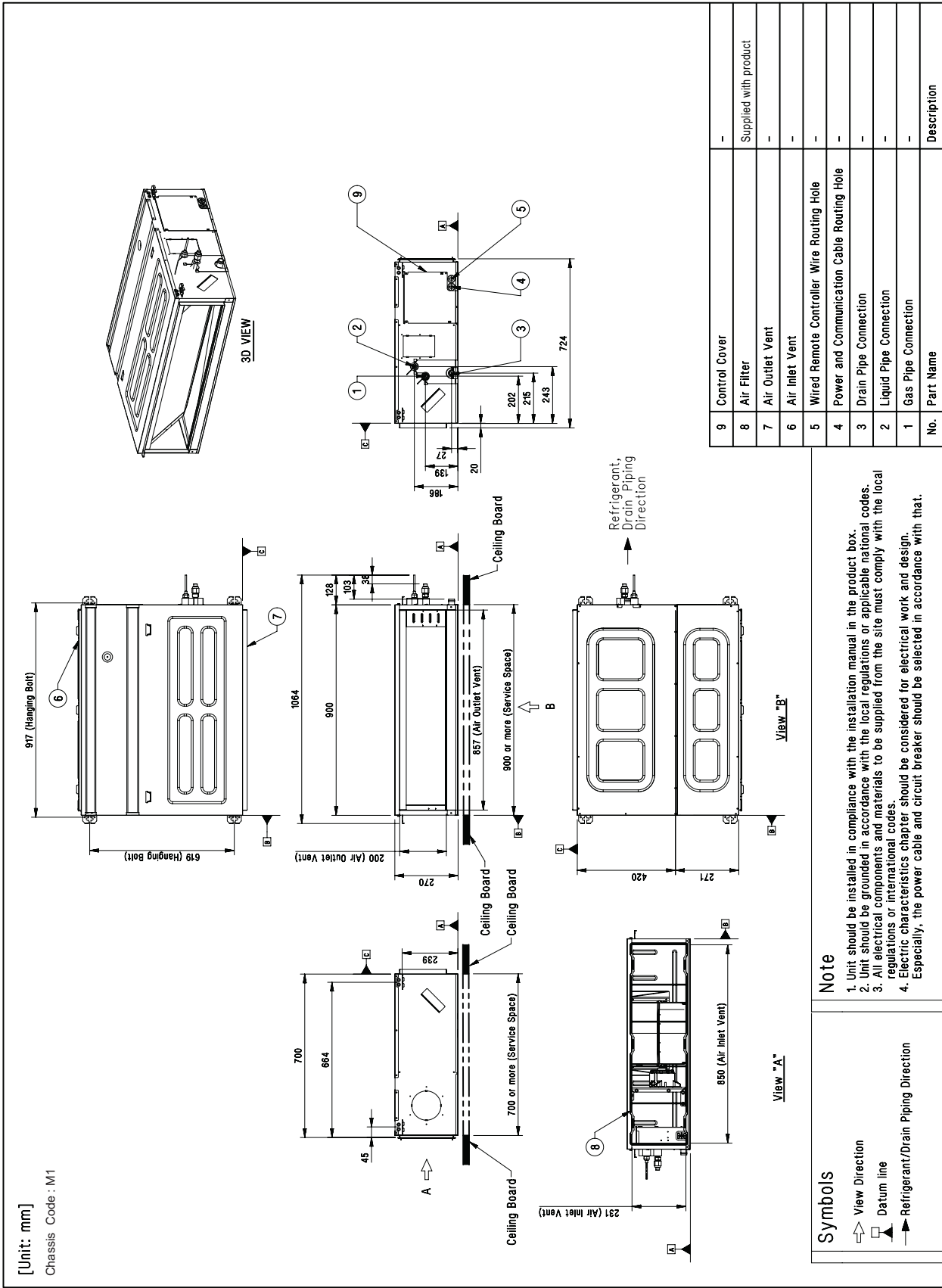
Model Name			Unit	ABNW60GM3T1
Power Supply			V , Ø , Hz	220-240 , 1 , 50
Casing			-	Galvanized Steel Plate
Dimensions	Net	W × H × D	mm	1,250 × 360 × 700
	Shipping	W × H × D	mm	1,450 × 428 × 773
Weight	Net		kg	43.5
	Shipping		kg	51.0
Heat Exchanger	Rows × Columns × FPI		-	3 × 16 × 18
	Face Area		m²	0.3
Fan Type			-	Sirocco Fan
Air Flow Rate	H / M / L		m³/min	50.0 / 45.0 / 40.0
	H / M / L		ft³/min	1,766 / 1,589 / 1,413
	Max.		m³/min	58.8
	Max.		ft³/min	2,077
External static pressure	High Mode_Factory Set		mmAq	6
Fan Motor	Type		-	BLDC
	Drive		-	Internal
	Output		W × No.	400 × 1
	Power Input	H / M / L	W	-
	Running Current		A	-
	FLA (Full Load Ampere)		A	2.5
Dehumidification Rate			ℓ/h	5
Safety Device			-	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52 (3/8)
	Gas Side		mm (inch)	19.05 (3/4)
	Drain Pipe (Natural drainage)	O.D. / I.D.	mm	25.4 / 20.4
	Drain Pipe (using Drain Pump)	O.D. / I.D.	mm	32 / 25
Sound Pressure Level		H / M / L	dB(A)	46 / 44 / 42
Sound Power Level		H / M / L	dB(A)	-
Refrigerant Control			-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75

Note

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

3. Dimensions

[M1 Chassis] ABNW18GM1T1, ABNW24GM1T1, ABNW30GM1T1

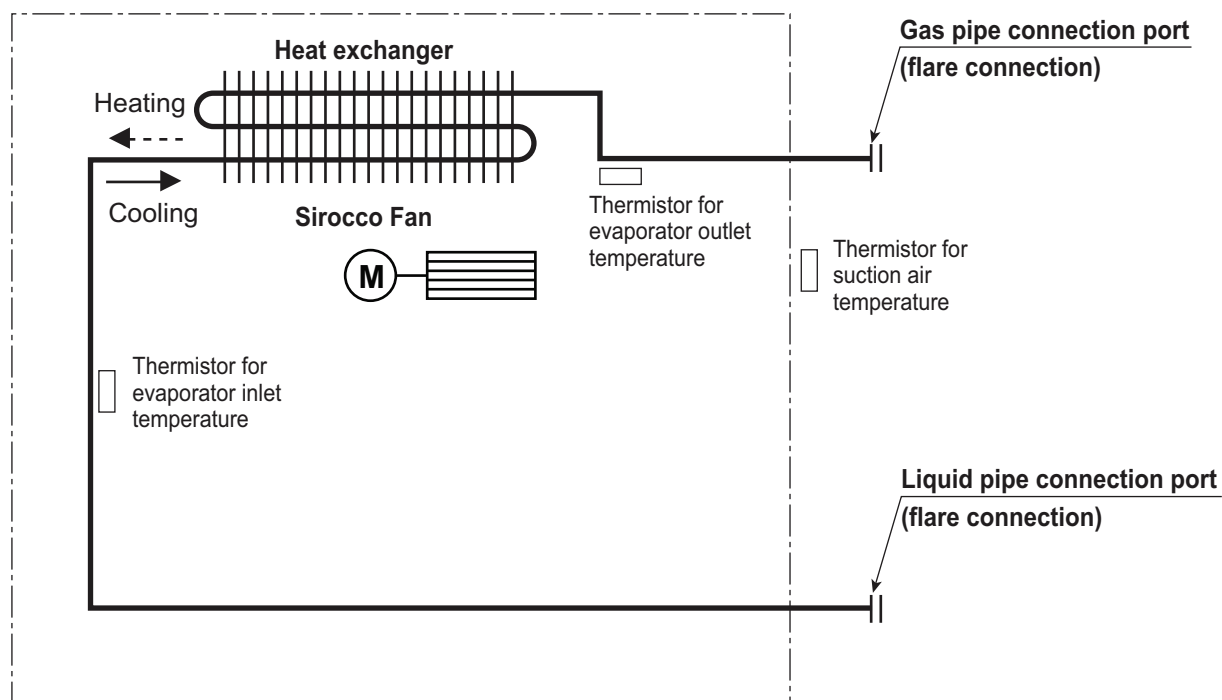


[M3 Chassis] ABNW36GM3T1, ABNW48GM3T1, ABNW54GM3T1, ABNW60GM3T1



4. Piping diagrams

■ Models : ABNW18GM1T1, ABNW24GM1T1, ABNW30GM1T1



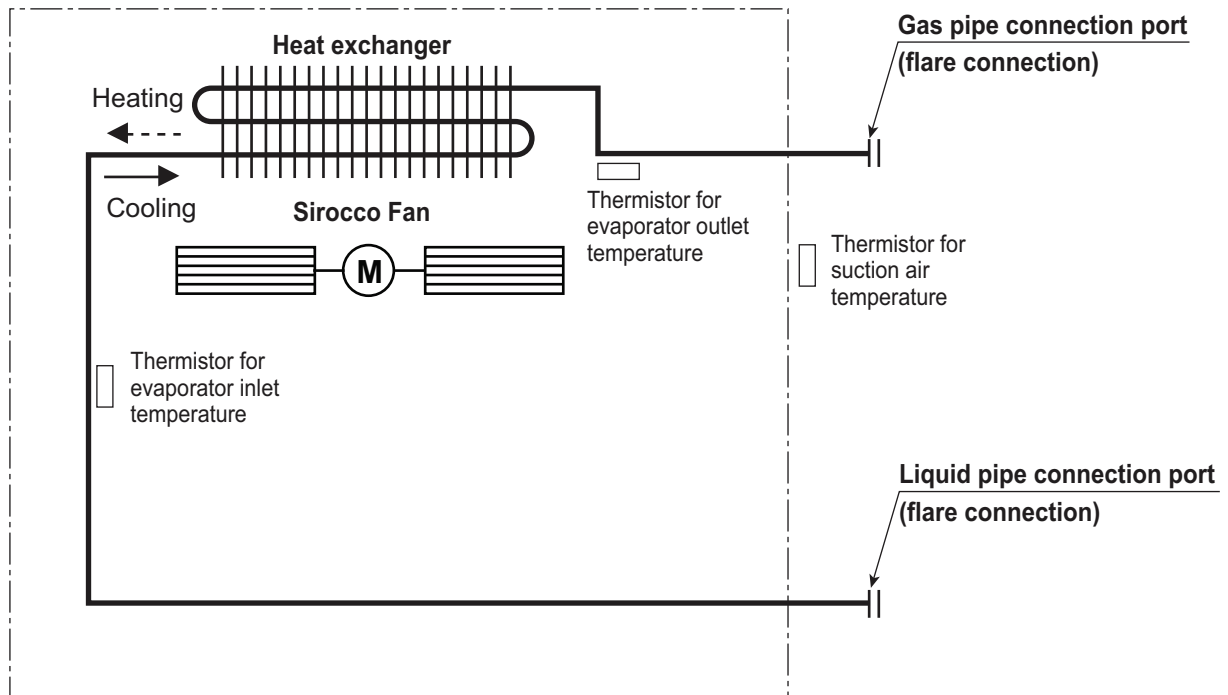
Description	PCB Connector
Thermistor for suction air temperature	CN_ROOM
Thermistor for evaporator inlet temperature	CN_PIPE_IN
Thermistor for evaporator outlet temperature	CN_PIPE_OUT

◆ Refrigerant pipe connection port diameters

Model	Gas	Liquid
	[Unit : mm]	
ABNW18GM1T1	Ø12.7	Ø6.35
ABNW24GM1T1 ABNW30GM1T1	Ø15.88	Ø9.52

4. Piping diagrams

■ Models : ABNW36GM3T1, ABNW48GM3T1, ABNW54GM3T, ABNW60GM3T1



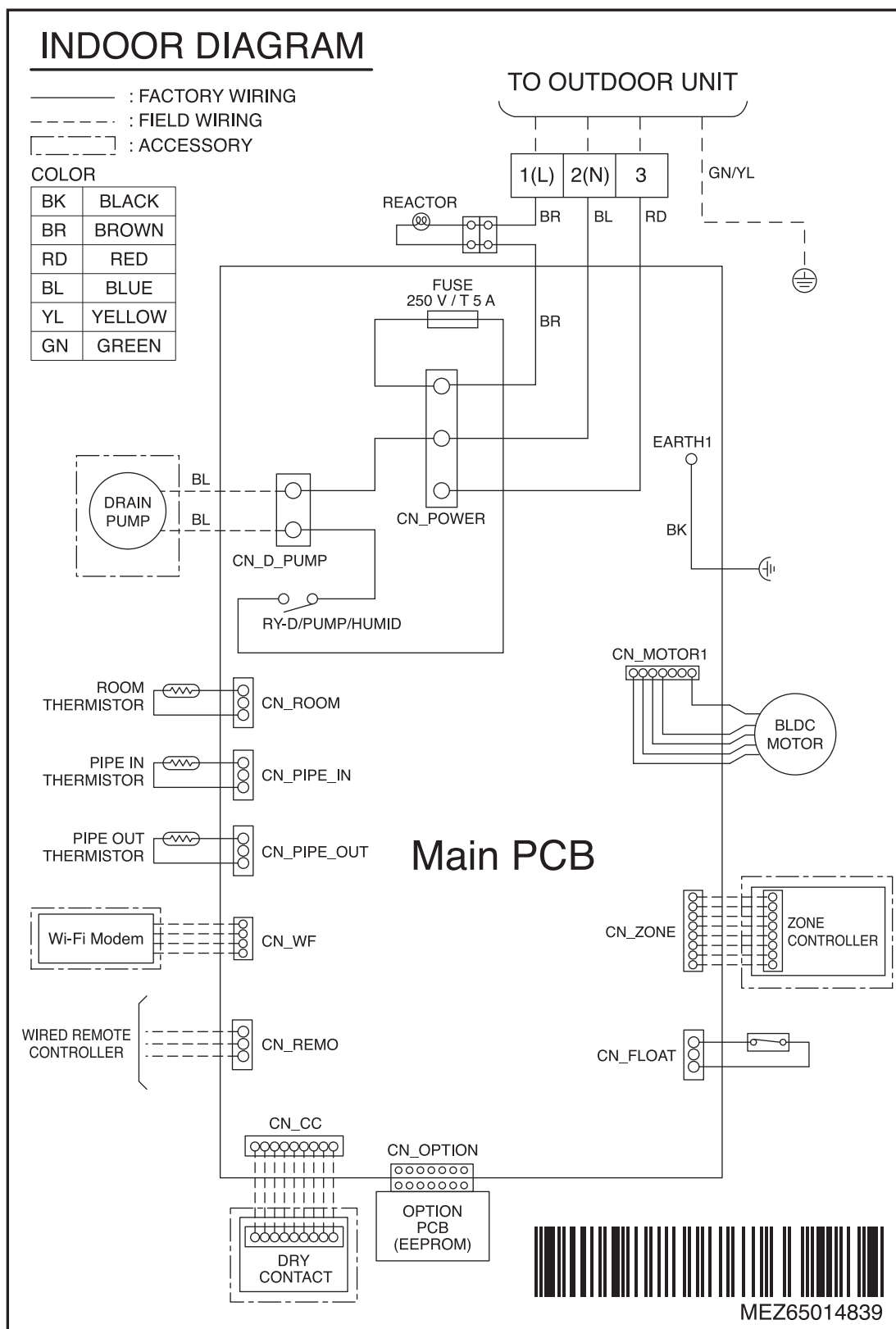
Description	PCB Connector
Thermistor for suction air temperature	CN_ROOM
Thermistor for evaporator inlet temperature	CN_PIPE_IN
Thermistor for evaporator outlet temperature	CN_PIPE_OUT

◆ Refrigerant pipe connection port diameters

Model	Gas	Liquid
	[Unit : mm]	
ABNW36GM3T1	Ø15.88	Ø9.52
ABNW48GM3T1 ABNW54GM3T1 ABNW60GM3T1	Ø19.05	Ø9.52

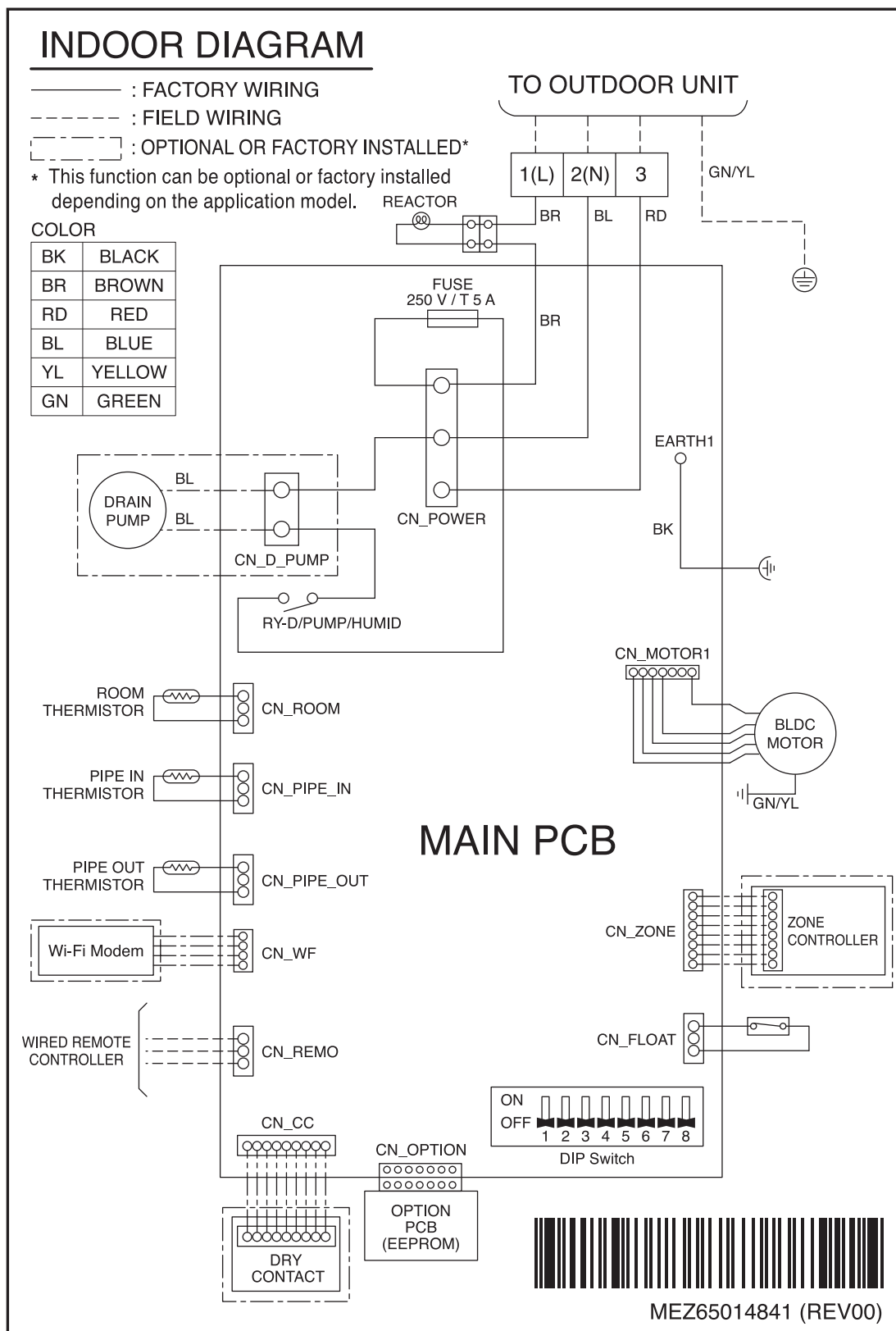
5. Wiring Diagrams

■ Models : ABNW18GM1T1, ABNW24GM1T1, ABNW30GM1T1, ABNW36GM3T1



5. Wiring Diagrams

■ Models : ABNW48GM3T1, ABNW54GM3T1, ABNW60GM3T1



6. External Static Pressure & Air Flow

Table 1 : Static Pressure Step Setting

Notice

For detail information to set the E.S.P condition or Static Pressure Step setting, refer to the installation manual included with product.

Model	Step	CM M	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
ABNW18GM1T1	H	16.5	85	87	90	94	103	110	118	125	128	131	134
	M	14.5	76	77	85	91	97	107	114	121	125	128	131
	L	13.0	73	74	77	88	93	103	111	117	120	125	128
ABNW24GM1T1	H	18.0	90	92	95	99	108	115	122	129	132	135	138
	M	16.5	85	87	90	94	103	111	118	125	128	131	134
	L	14.5	76	77	85	89	97	106	114	121	124	127	130

Model	Step	CM M	Static Pressure[mmAq(Pa)]										
			2.5(25)	4(39)	5(49)	6(59)	7(78)	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
ABNW30GM1T1	H	22.0	110	117	121	124	127	130	133	136	137	138	140
	M	20.0	102	110	114	118	121	125	127	130	133	134	136
	L	18.0	96	102	107	110	114	118	122	125	127	130	132

Model	Step	CM M	Static Pressure[mmAq(Pa)]										
			2.5(25)	3(29)	4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	11(108)	12(118)	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
ABNW36GM3T1	H	30.0	66	69	71	76	80	84	86	91	97	101	105
	M	25.0	62	65	67	72	76	80	82	87	92	97	101
	L	20.0	58	61	63	68	72	76	78	83	88	92	97

Model	Step	CM M	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
ABNW48GM3T1	H	40.0	83	89	92	94	98	100	102	105	108	110	116
	M	34.0	78	82	84	89	94	96	98	101	104	106	112
	L	28.0	74	76	79	82	89	92	94	96	99	102	107
ABNW54GM3T1 ABNW60GM3T1	H	50.0	94	97	100	104	107	109	112	115	117	119	121
	M	45.0	90	92	96	98	102	104	106	109	112	114	117
	L	40.0	82	89	92	94	98	100	102	105	108	110	113

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 is below.

Model	Factory set (E.S.P.) [mmAq(Pa)]	Limit of Setting Value* (In case of E.S.P=0)
ABNW18GM1T1	6(59)	115
ABNW24GM1T1		
ABNW30GM1T1		
ABNW36GM3T1		98
ABNW48GM3T1		
ABNW54GM3T1 ABNW60GM3T1		

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

6. External Static Pressure & Air Flow

■ Table 2 : E.S.P vs Air Flow Rate

Notice

For detail information to set the E.S.P condition or Static Pressure Step setting, refer to the installation manual included with product.

◆ ABNW18GM1T1

Setting value	Static Pressure [mmAq(Pa)]							
	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]							
70	11.3							
75	12.8							
80	14.4	11.4						
85	15.9	13.2	10.2					
90	17.5	15.0	12.0					
95	19.0	16.7	13.7	10.7				
100	20.6	18.5	15.5	12.5				
105	22.1	20.3	17.3	14.3	11.1			
110	23.7	22.1	19.0	16.1	13.1	10.0		
115		23.8	20.8	17.9	15.1	12.2		
120			22.6	19.7	17.1	14.3	11.3	
125				21.5	19.1	16.5	13.6	11.9
130				23.3	21.2	18.7	15.8	14.3
135					23.2	20.8	18.0	16.7
140						23.0	20.3	19.1
145							22.5	21.5
150								23.8

◆ ABNW24GM1T1 / ABNW30GM1T1

Setting value	Static Pressure [mmAq(Pa)]							
	2.5(25)	4(39)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]							
85	16.8	14.6						
90	18.1	15.9						
95	19.4	17.2	15.0					
100	20.7	18.5	16.3	13.9				
105	22.0	19.8	17.7	15.3	13.0			
110	23.3	21.1	19.1	16.8	14.6			
115	24.6	22.4	20.5	18.3	16.3	14.2		
120	25.9	23.7	21.8	19.7	17.9	15.9	13.3	
125		25.1	23.2	21.2	19.6	17.5	15.2	14.6
130			24.6	22.7	21.2	19.2	17.1	16.3
135				24.2	22.9	20.9	19.0	18.1
140					24.5	22.6	20.9	19.9

Note

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

6. External Static Pressure & Air Flow

◆ ABNW36GM3T1

Setting value	Static Pressure [mmAq(Pa)]						
	2.5(25)	4(39)	6(59)	8(78)	11(118)	12(118)	15(147)
	Air Flow Rate [m³/min]						
55	19.0						
60	24.0						
65	30.0	22.0					
70	35.0	26.0					
75		32.0	22.0				
80		37.0	30.0	21.0			
85		41.0	35.0	28.0	17.0		
90				32.1	24.0	19.0	
95					29.0	24.0	18.0
100					32.0	30.0	24.0
105							30.0

◆ ABNW48GM3T1 / ABNW54GM3T1 / ABNW60GM3T1

Setting value	Static Pressure [mmAq(Pa)]						
	5(49)	6(59)	8(78)	10(98)	12(118)	14(137)	15(147)
	Air Flow Rate [m³/min]						
70	25.1						
75	29.5	26.1					
80	34.0	30.8	25.9				
85	38.4	35.4	30.6	23.2			
90	42.9	40.1	35.2	28.1	21.0		
95	47.3	44.8	39.9	33.1	26.3	19.5	
100	51.8	49.4	44.6	38.0	31.7	25.2	22.6
105	56.2	54.1	49.2	43.0	37.1	31.0	28.5
110		58.8	53.9	47.9	42.4	36.7	34.4
115			58.6	52.9	47.8	42.5	40.3
120				57.8	53.1	48.2	46.1
121					54.2	49.4	47.3

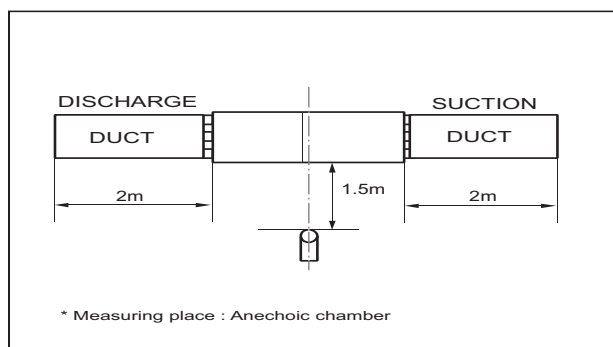
Note

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

7. Sound levels

7.1 Sound pressure level

Overall

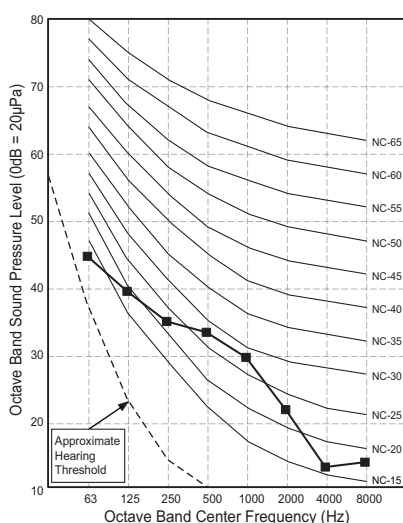


Note

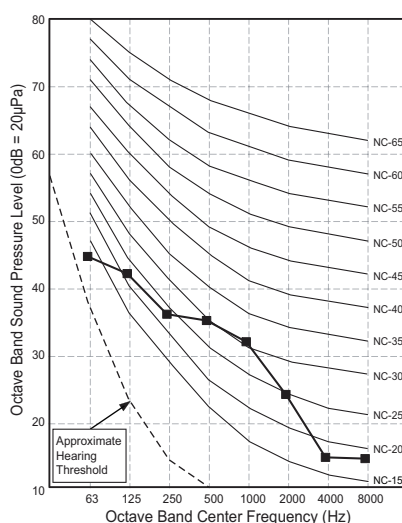
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure $0\text{dB} = 20\mu\text{Pa}$.
4. Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	Sound Pressure Levels (dB(A))		
	H	M	L
ABNW18GM1T1	34	32	30
ABNW24GM1T1	37	35	32
ABNW30GM1T1	37	35	34
ABNW36GM3T1	36	33	31
ABNW48GM3T1	38	36	34
ABNW54GM3T1 ABNW60GM3T1	46	44	42

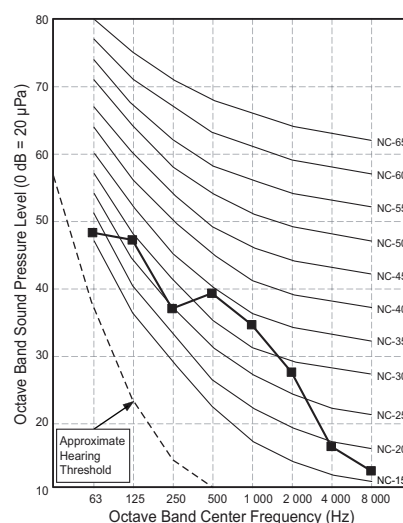
ABNW18GM1T1



ABNW24GM1T1

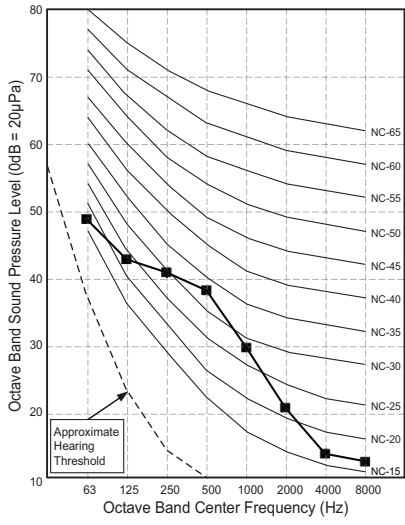


ABNW30GM1T1

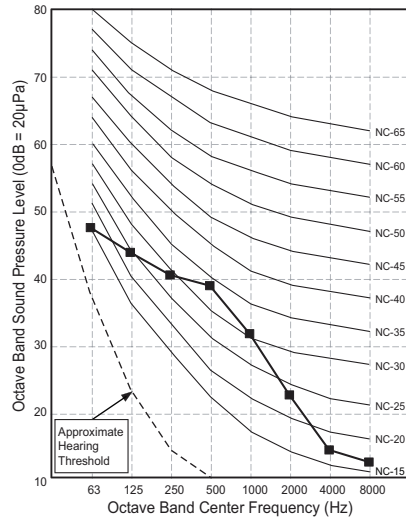


7. Sound levels

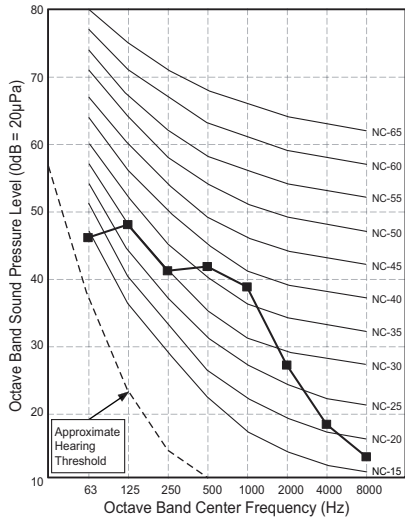
ABNW36GM3T1



ABNW48GM3T1

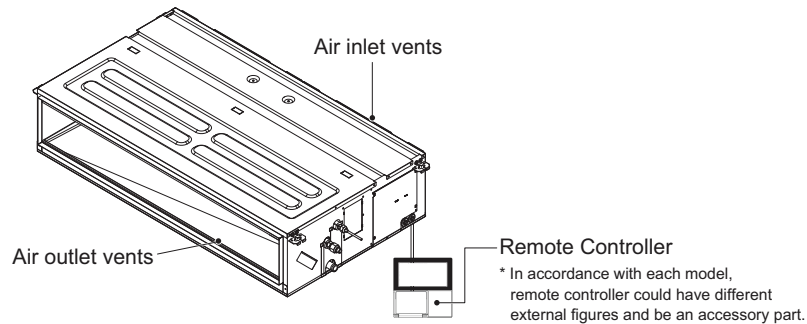


**ABNW54GM3T1
ABNW60GM3T1**



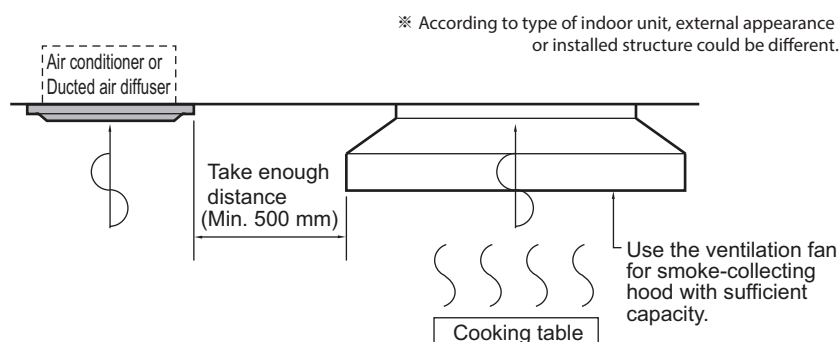
8. Installation

- 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.



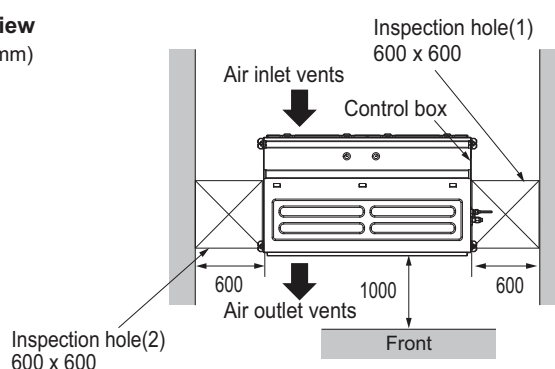
8. Installation

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.

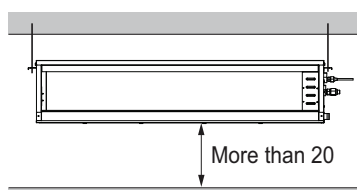
⚠ CAUTION

- 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

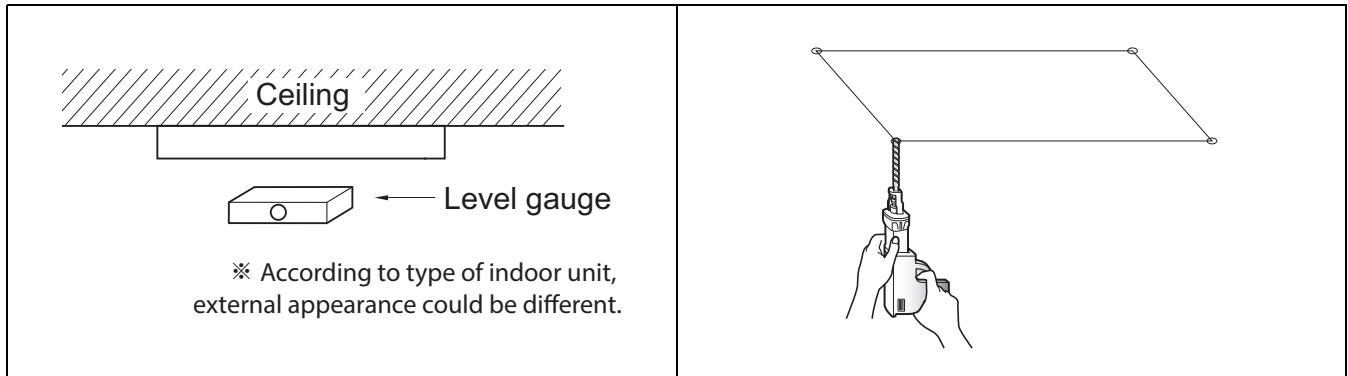
Distance between false ceiling & actual ceiling	Number of in spection hole	Remarks
More than 100cm	1	Sufficient space in the ceiling for servicing.
20cm to 100cm	2	Insufficient space. Difficult for servicing
Less than 20cm	Hole size should be more than the size of IDU.	Minimum height for motor replacement.

8. Installation

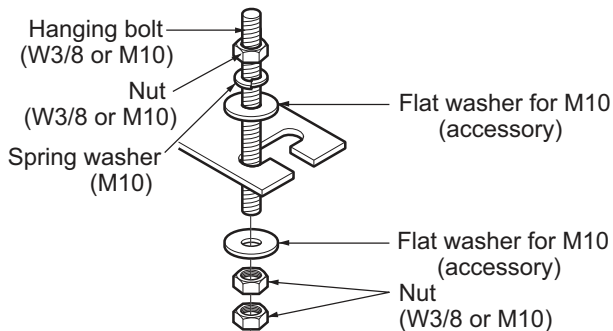
8.2 Ceiling dimension and hanging bolt location

⚠ 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.

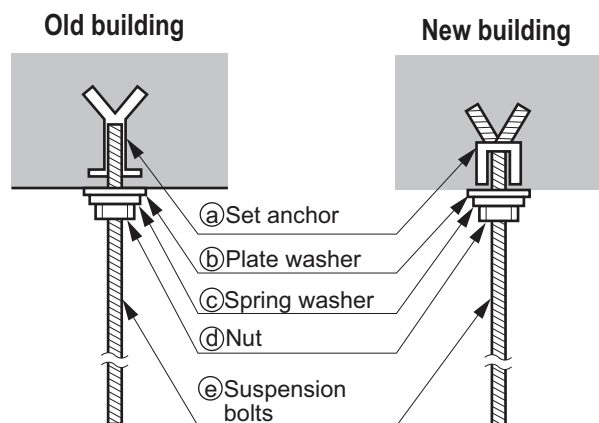


- The following parts are local purchasing.

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.

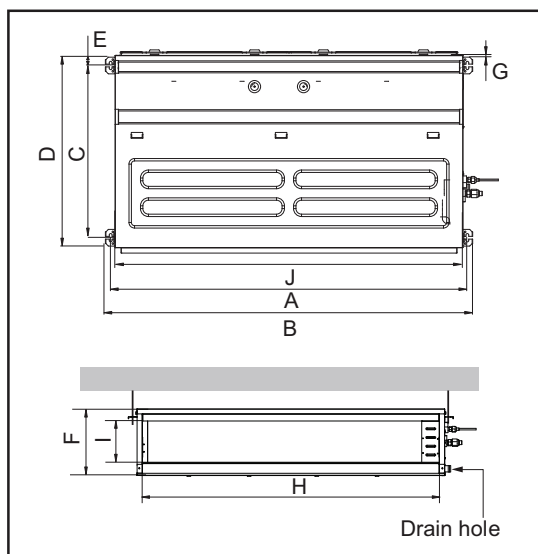


8. Installation

■ Installation dimension of Indoor unit

M1/M2/M3 Chassis

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



Chassis name	Dimension (mm)									
	A	B	C	D	E	F	G	H	I	J
M1	933.4	971.6	619.2	691	30	270	15.2	858	201.4	900
M2	1,283.4	1,321.6	619.2	691	30	270	15.2	1,208	201.4	1,250
M3	1,283.4	1,321.6	619.2	691	30	360	15.2	1,208	291.4	1,250

8. Installation

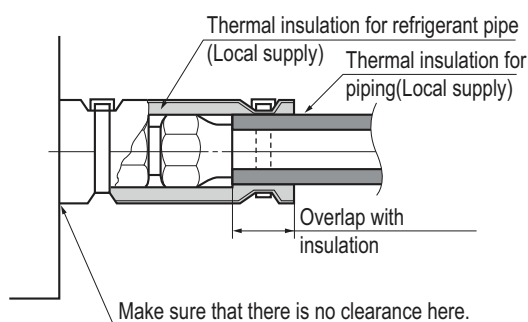
8.3 Connecting pipes to the indoor unit

■ Refrigerant piping work

To detail information for connecting the refrigerant pipes, please refer to the installation manual included with product.

■ Piping insulation work

- Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.
- Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 120°C (248°F)).
- Precautions in high humidity circumstance
 - This air conditioner has been tested according to the "KS Conditions" and confirmed.
 - If it is operated for a long time in high humid atmosphere (dew point temperature: more than 23°C(73°F)), water drops are liable to fall. In this case, add heat insulation material according to the following procedure.



- Heat insulation material : Adiabatic glass wool with thickness of 10~20mm(13/32 ~13/16 inch).
- Stick glass wool on all air conditioners that are located in ceiling atmosphere.

⚠ CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

8. Installation

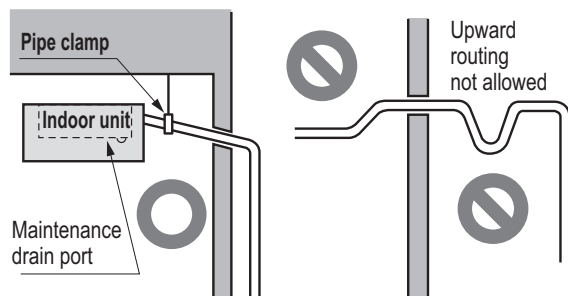
8.4 Indoor Unit Drain Piping

Important

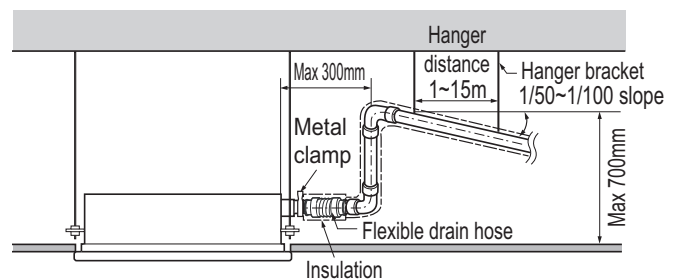
- The drain pipe should be at least equal in size to drain conduit of the indoor unit.
- The drain pipe is thermally insulated to prevent the formation of condensation inside the pipe.
- The drain up mechanism should be fitted before the indoor unit is installed and when the electricity has been connected a little of water should be added to the drain pan and the drain pump to check and see if it is functioning correctly.
- All connections should be secure. (Special care is needed with PVC pipe)

8.4.1 Drain piping of indoor unit with drain pump

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

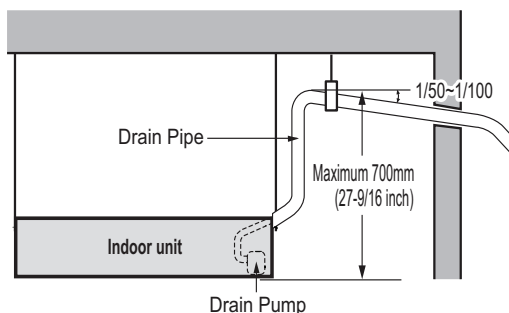


※ According to type of indoor unit, external appearance could be different.

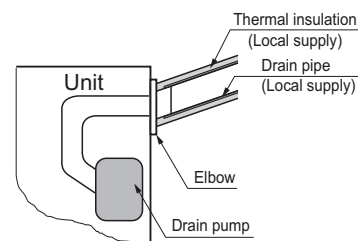


※ According to type of indoor unit, external appearance could be different.

- Possible drain head height is upto 700 mm (27-6/19 inch). So the drain head should be installed below 700 mm (27-6/19 inch).
- Be sure to install heat insulation on the drain piping.
 - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



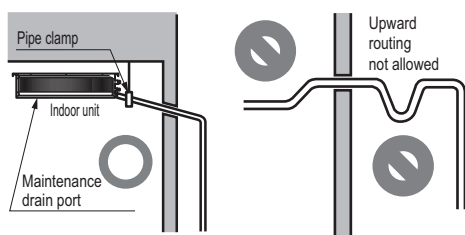
※ According to type of indoor unit, external appearance could be different.



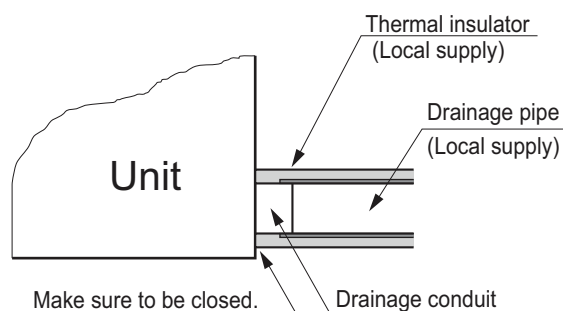
8. Installation

8.4.2 Drain pipe connection without drain pump

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit and drain piping fittings should be referenced from 'Specifications' of each models.
 - Piping material: Use the Polyvinyl chloride pipe.
- Be sure to install heat insulation on the drain piping.
 - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



* U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)



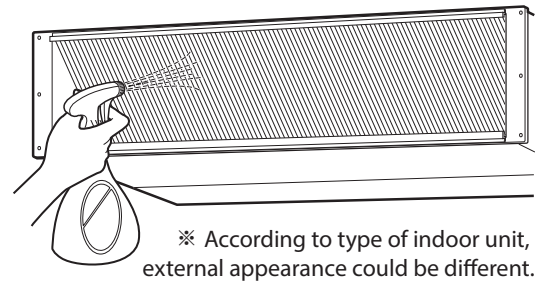
8. Installation

8.4.3 Method of Drainage test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

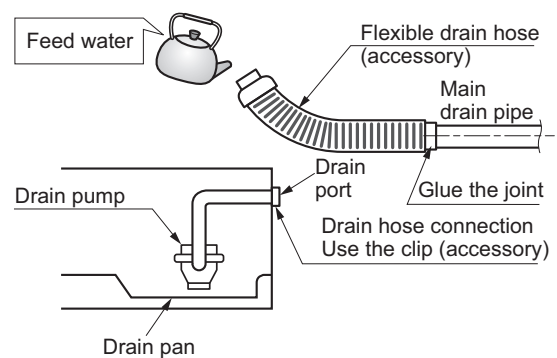
1. In case that there are air filter, remove the air filter first.
2. Spray one or two glasses of water on the evaporator.
3. Check the drainage. Ensure that water flows through drain hose of indoor unit without any leakage.



◆ Drainage test of indoor unit with drain pump

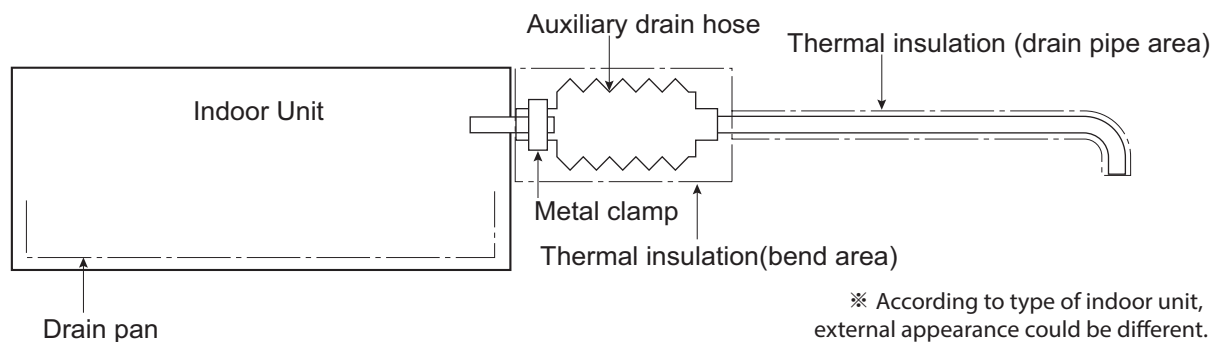
Use the following procedure to test the drain pump operation.

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



8.4.4 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



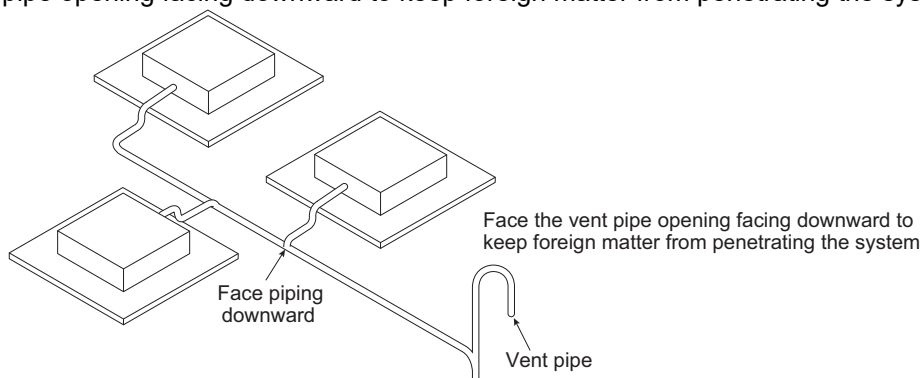
⚠ CAUTION

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

8. Installation

8.4.5 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



8. Installation

8.5 Electric wiring work

8.5.1 General instructions

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

CAUTION

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

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

8.5.2 Wiring connection

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

8.5.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the 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.

8. Installation

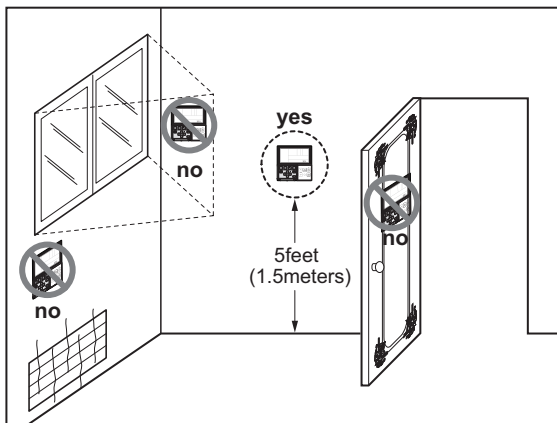
⚠ WARNING

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

8.5.4 Wired Remote Controller Installation

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

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



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

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

SINGLE

Heat pump

Ceiling Suspended Unit

- 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

◆ Basic functions of Indoor Unit

Category	Functions	AVNW18GM1T1 / AVNW24GM1T1 / AVNW30GM1T1 AVNW36GM2T1 / AVNW48GM2T1 / AVNW54GM2T1
Air flow	Air supply outlet	1
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 5
	Chaos wind(auto wind)	X
	Jet cool/heat	O / O
	Swirl wind	X
Air purifying	Triple filter (Deodorizing)	X
	Plasma air purifier	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	Self diagnosis	O
	Hot start	O
Convenience	Auto cleaning	X
	Auto changeover	O
	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	X
Special Functions	Wi-Fi	O (Accessory)
	Humidity Control	O
Wireless remote controller Supply (included with product)		O**
Wired remote controller Supply (included with product)		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

◆ Network solution Accessory List

Category		Product	Remark	AVNW18GM1T1 AVNW24GM1T1 AVNW30GM1T1 AVNW36GM2T1 AVNW48GM2T1 AVNW54GM2T1
Wireless Remote Controller		PQWRHQ0FDB / PQWRCQ0FDB	Heat Pump / Cooling Only	O
		PWLSSB21H / PWLSSB21C	Heat Pump / Cooling Only	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
	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	Connected with the Indoor Units	X
		PSNFP14A0	Connected with the Indoor Units	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	Electronic thermostat	AQETC	-	X
	CTI (Communication transfer interface)	PKFC0	-	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	-	O
Note 1. O: Possible, X: Impossible, - : Not applicable, Embedded : Included with product. 2. * : Some advanced functions controlled by individual controller cannot be operated. 3. ** : It could not be operated some functions. 4. If you need more detail, please refer to the BECON PDB or the manual of product. (http://partner.lge.com/global : Home> Doc.Library> Product > Control(BECON))				

2. Specifications

Model Name			Unit	AVNW18GM1T1	AVNW24GM1T1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	-	-
Dimensions	Net	W × H × D	mm	1,200 × 235 × 690	1,200 × 235 × 690
	Shipping	W × H × D	mm	1,315 × 317 × 768	1,315 × 317 × 768
Weight	Net		kg	27.3	28.0
	Shipping		kg	34.0	34.5
Heat Exchanger	Rows × Columns × FPI		-	2 × 18 × 18	3 × 18 × 18
	Face Area		m²	0.27	0.31
Fan Type			-	Cross Flow Fan	Cross Flow Fan
Air Flow Rate		H / M / L	m³/min	13.0 / 12.0 / 11.0	16.5 / 15.0 / 14.0
		H / M / L	ft³/min	459 / 424 / 388	583 / 530 / 494
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	85.9 × 1	85.9 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.00	1.00
Dehumidification Rate			ℓ/h	1.9	3.0
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	6.35(1/4)	9.52 (3/8)
	Gas Side		mm (inch)	12.7(1/2)	15.88 (5/8)
	Drain Pipe	O.D. / I.D.	mm	21.5 / 16.0	21.5 / 16.0
Sound Pressure Level		H / M / L	dB(A)	40 / 38 / 37	44 / 43 / 41
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75

Note

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

2. Specifications

Model Name			Unit	AVNW30GM1T1	AVNW36GM2T1
Power Supply			V , Ø , Hz	220-240 , 1 , 50	220-240 , 1 , 50
Casing			-	-	-
Dimensions	Net	W × H × D	mm	1,200 × 235 × 690	1,600 × 235 × 690
	Shipping	W × H × D	mm	1,315 × 317 × 768	1,715 × 317 × 768
Weight	Net		kg	28.0	36.5
	Shipping		kg	34.5	44.5
Heat Exchanger	Rows × Columns × FPI		-	3 x 18 x 18	3 x 18 x 18
	Face Area		m²	0.31	0.46
Fan Type			-	Cross Flow Fan	Cross Flow Fan
Air Flow Rate		H / M / L	m³/min	20.0 / 18.0 / 16.0	28.0 / 24.0 / 20.0
		H / M / L	ft³/min	706 / 636 / 565	989 / 848 / 706
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	85.9 x 1	125 x 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.00	1.47
Dehumidification Rate			ℓ/h	3.8	5.8
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52(3/8)	9.52(3/8)
	Gas Side		mm (inch)	15.88(5/8)	15.88(5/8)
	Drain Pipe	O.D. / I.D.	mm	21.5 / 16.0	21.5 / 16.0
Sound Pressure Level		H / M / L	dB(A)	47 / 45 / 42	44 / 41 / 38
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm²	4 × 0.75	4 × 0.75

Note

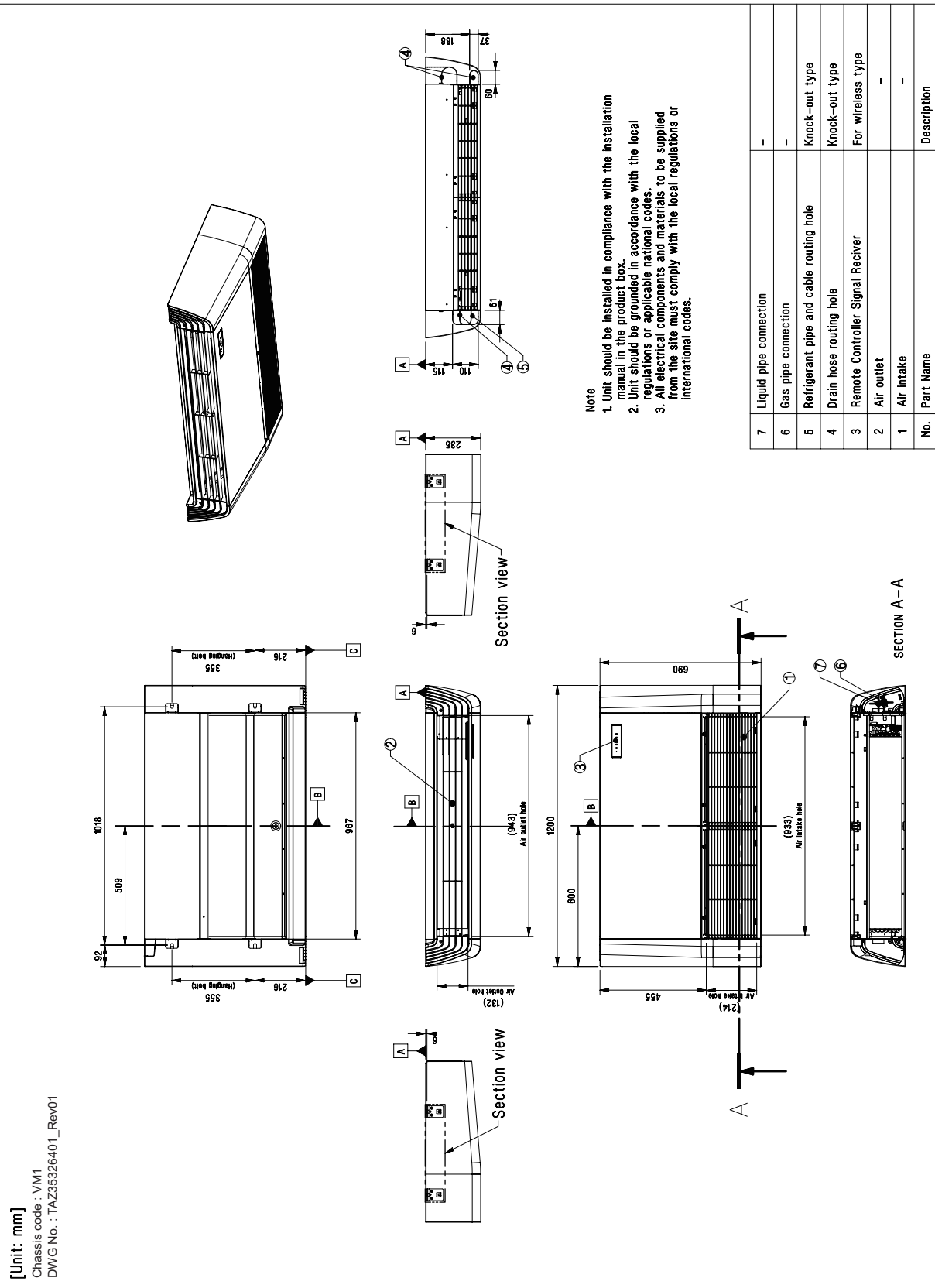
- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker 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.
- Capacities are net capacities and based on the following conditions. Refer to the Outdoor Unit Specifications for calculating the real capacity.
 - Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - Heating : Indoor Ambient Temp. 20°CDB / 15°CWB, Outdoor Ambient Temp. 7°CDB / 6°CWB
 - Interconnected Pipe is standard length and difference of Elevation (Outdoor ~ Indoor Unit) is 0m.

2. Specifications

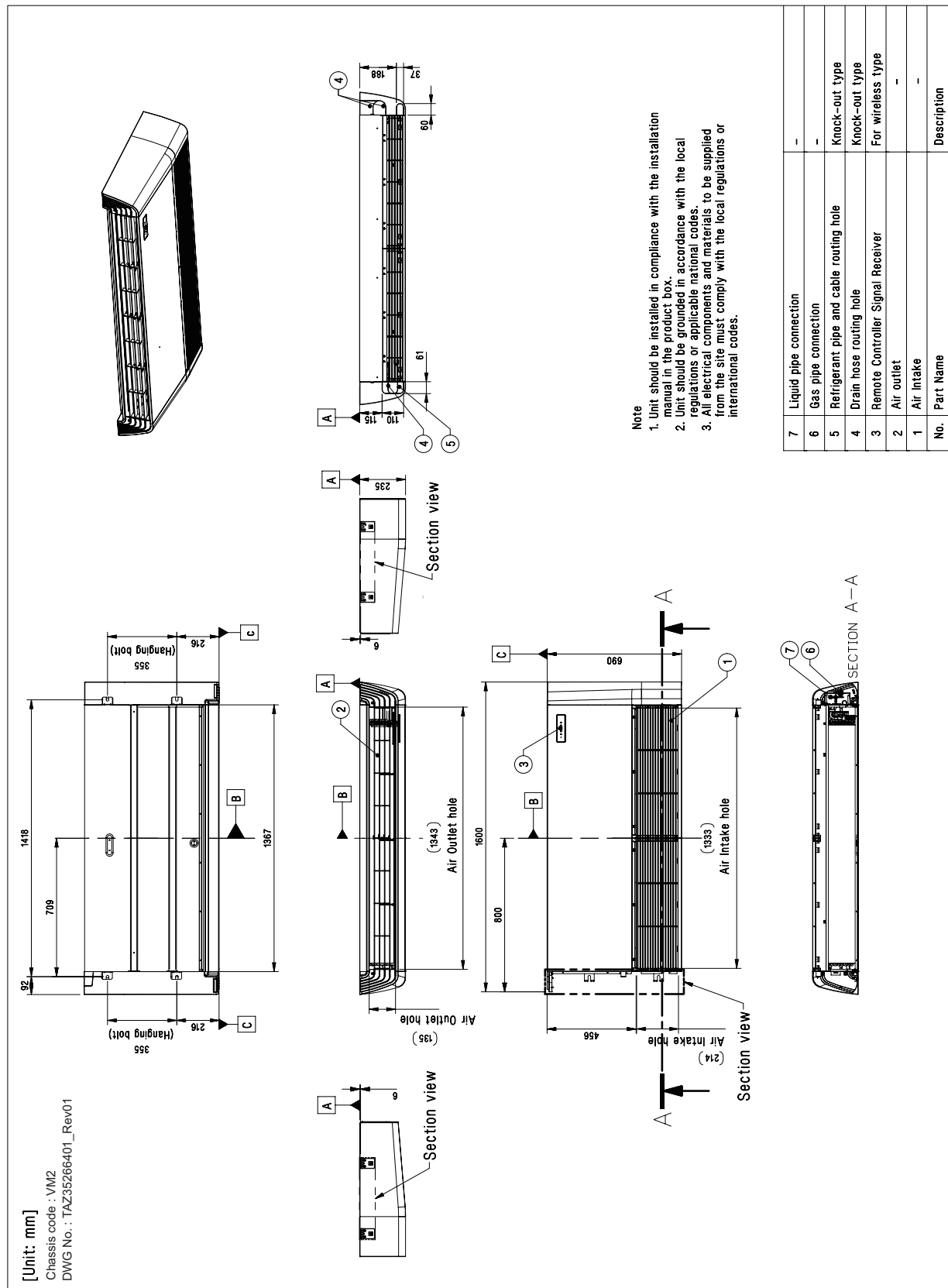
Model Name			Unit	AVNW48GM2T1	AVNW54GM2T1
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Casing			-	-	-
Dimensions	Net	W × H × D	mm	1,600 × 235 × 690	1,600 × 235 × 690
	Shipping	W × H × D	mm	1,715 × 317 × 768	1,715 × 317 × 768
Weight	Net		kg	36.5	36.5
	Shipping		kg	44.5	44.5
Heat Exchanger	Rows × Columns × FPI		-	3 × 18 × 18	3 × 18 × 18
	Face Area		m ²	0.46	0.46
Fan Type			-	Cross Flow Fan	Cross Flow Fan
Air Flow Rate		H / M / L	m ³ /min	30.0 / 25.0 / 20.0	30.0 / 25.0 / 20.0
		H / M / L	ft ³ /min	1,060 / 883 / 706	1,060 / 883 / 706
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W × No.	125 × 1	125 × 1
	Power Input	H / M / L	W	-	-
	Running Current		A	-	-
	FLA (Full Load Ampere)		A	1.47	1.47
Dehumidification Rate			ℓ/h	6.3	7.1
Safety Device			-	Fuse	Fuse
Piping Connections	Liquid Side		mm (inch)	9.52 (3/8)	9.52 (3/8)
	Gas Side		mm (inch)	19.05 (3/4)	19.05 (3/4)
	Drain Pipe	O.D. / I.D.	mm	21.5 / 16.0	21.5 / 16.0
Sound Pressure Level		H / M / L	dB(A)	46 / 42 / 38	46 / 42 / 38
Sound Power Level		H / M / L	dB(A)	-	-
Refrigerant Control			-	-	-
Power and Communication Cable (included Earth)			No. × mm ²	4 × 0.75	4 × 0.75

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.
- 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.

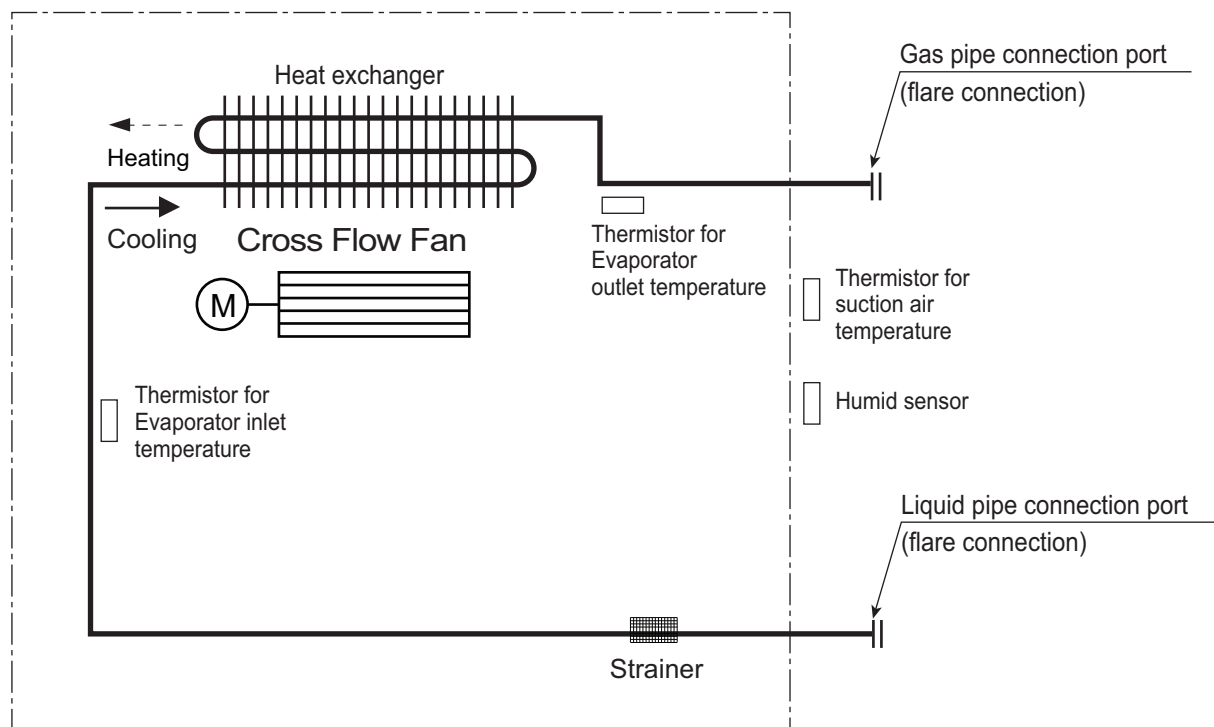


[VM2 Chassis] AVNW36GM2T1, AVNW48GM2T1, AVNW54GM2T1



4. Piping diagrams

■ Models : AVNW18GM1T1, AVNW24GM1T1, AVNW30GM1T1



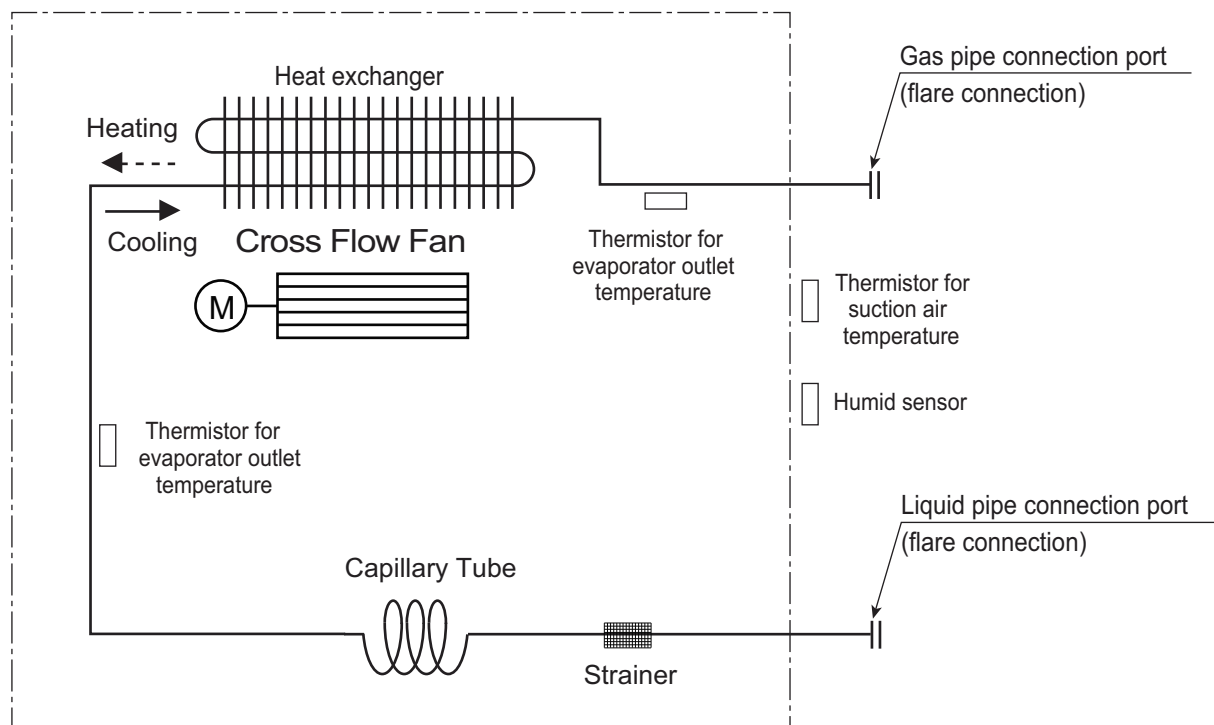
Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT
Humid sensor	CN-HUMID

◆ Refrigerant pipe connection port diameters

Model	Gas	Liquid
	[Unit : mm]	
AVNW18GM1T1	Ø12.7	Ø6.35
AVNW24GM1T1 AVNW30GM1T1	Ø15.88	Ø9.52

4. Piping diagrams

■ Models : AVNW36GM2T1, AVNW48GM2T1, AVNW54GM2T1



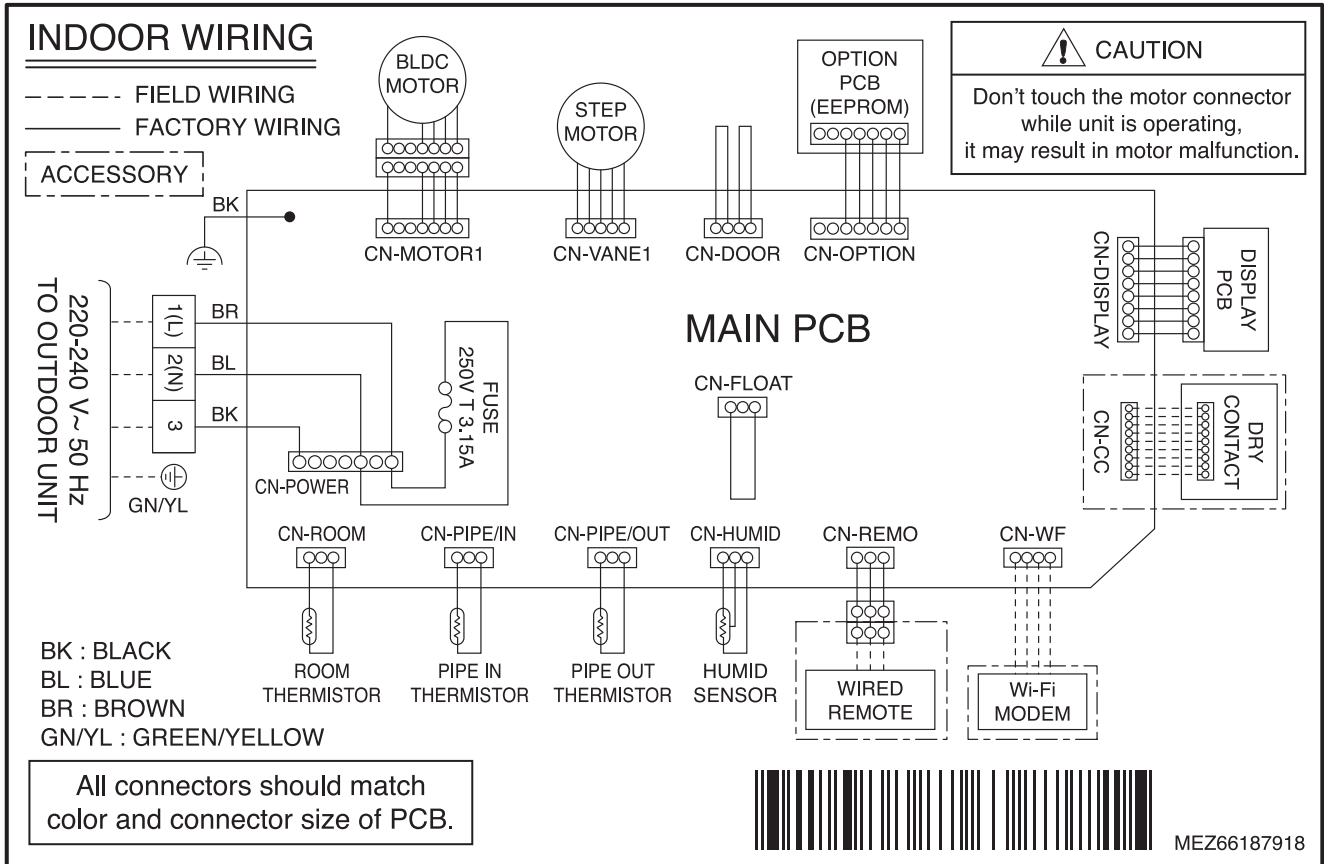
Description	PCB Connector
Thermistor for suction air temperature	CN-ROOM
Thermistor for evaporator inlet temperature	CN-PIPE / IN
Thermistor for evaporator outlet temperature	CN-PIPE / OUT
Humid sensor	CN_HUMID

◆ Refrigerant pipe connection port diameters

Model	Gas	Liquid
	[Unit : mm]	
AVNW36GM2T1	Ø15.88	Ø9.52
AVNW48GM2T1	Ø19.05	
AVNW54GM2T1		

5. Wiring Diagrams

■ Models : AVNW18GM1T1, AVNW24GM1T1, AVNW30GM1T1, AVNW36GM2T1
AVNW48GM2T1, AVNW54GM2T1

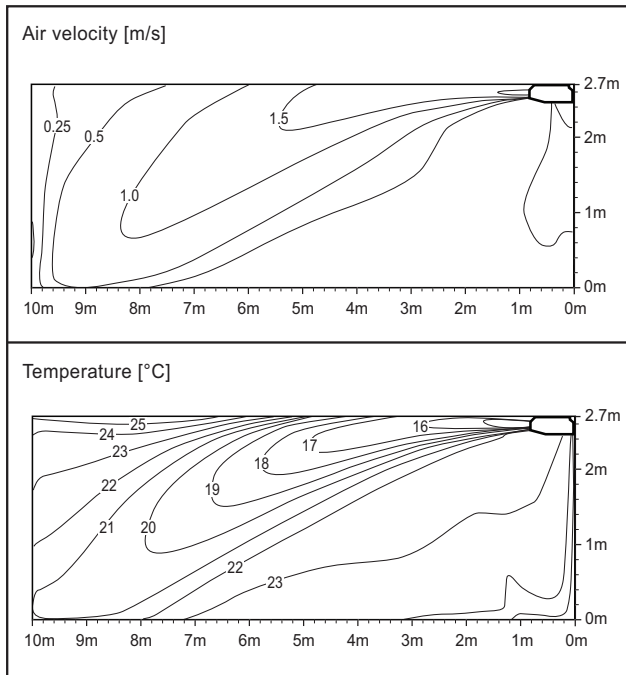


6. Air flow and temperature distributions (reference data)

Models : AVNW18GM1T1

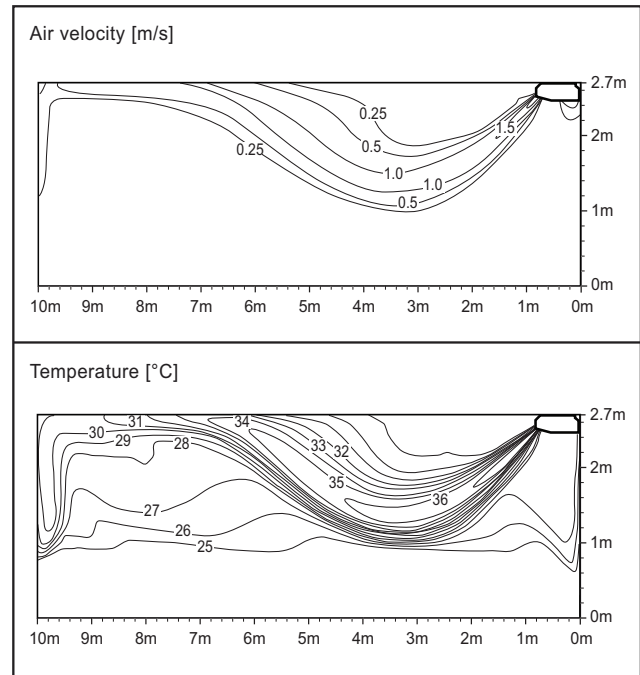
Cooling

Discharge angle: 0°



Heating

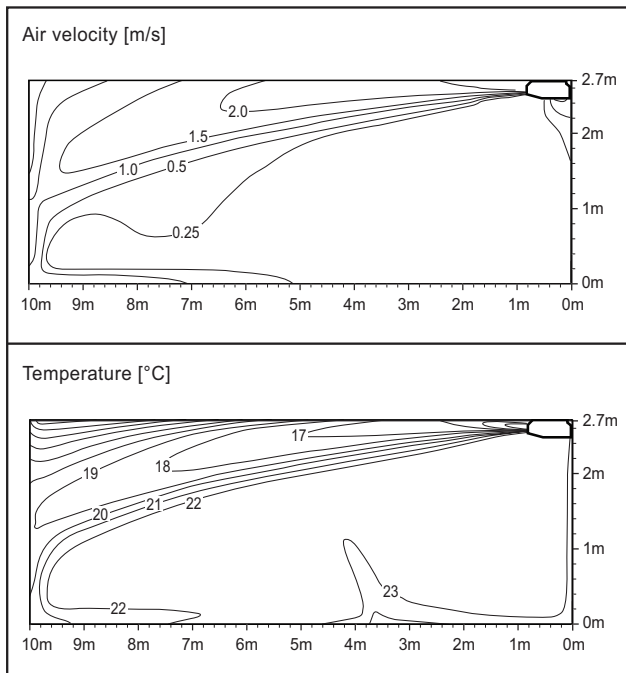
Discharge angle: 40°



Models : AVNW24GM1T1

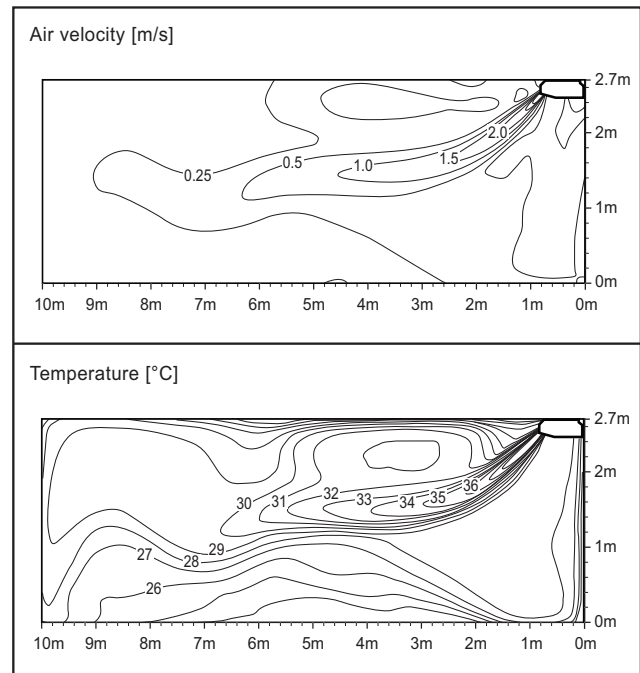
Cooling

Discharge angle: 0°



Heating

Discharge angle: 40°



Note

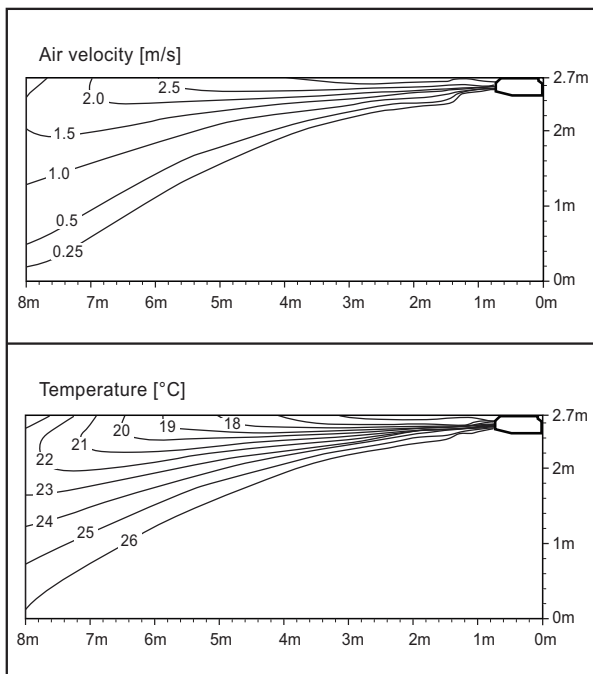
- These figures are accordance with normal certain condition and environment. (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

Models : AVNW30GM1T1

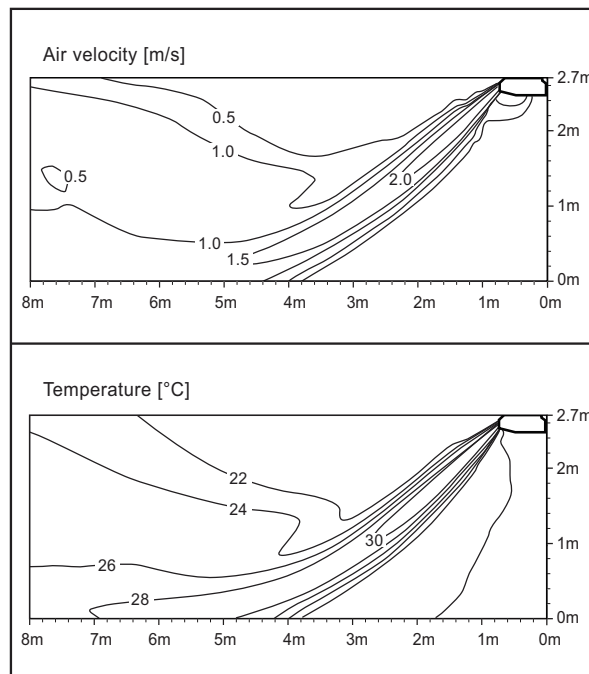
Cooling

Discharge angle: 0°



Heating

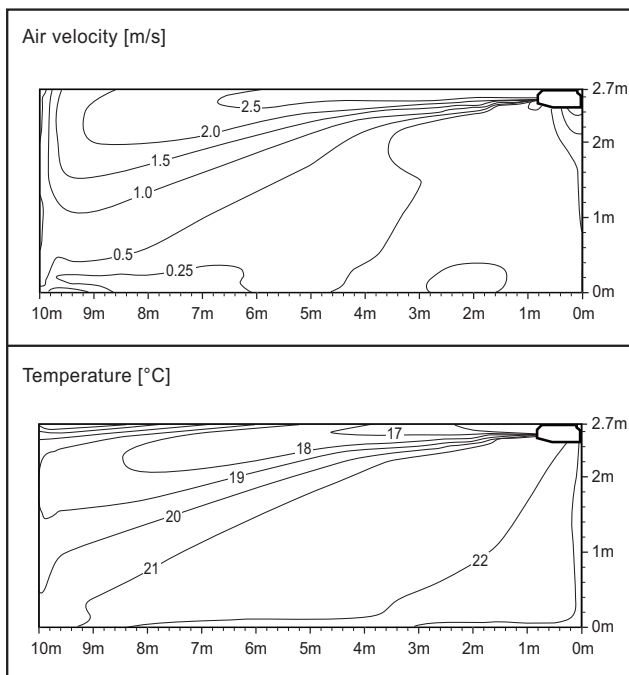
Discharge angle: 40°



Models : AVNW36GM2T1

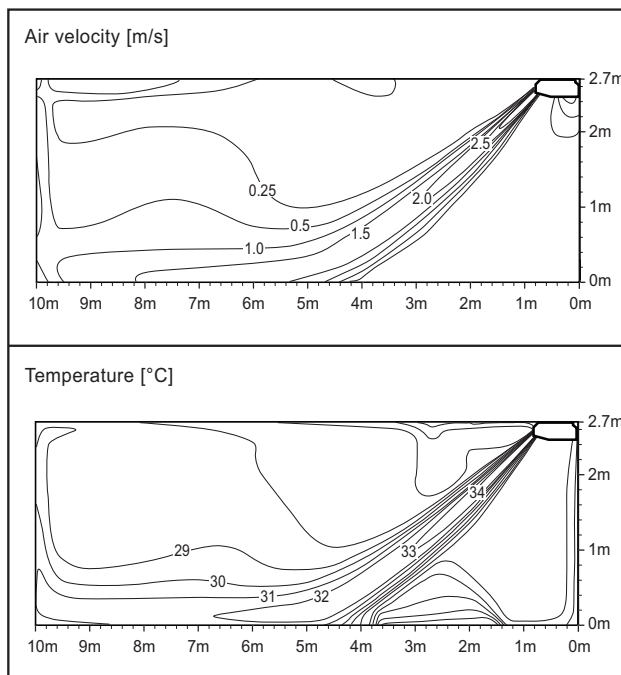
Cooling

Discharge angle: 0°



Heating

Discharge angle: 40°



Note

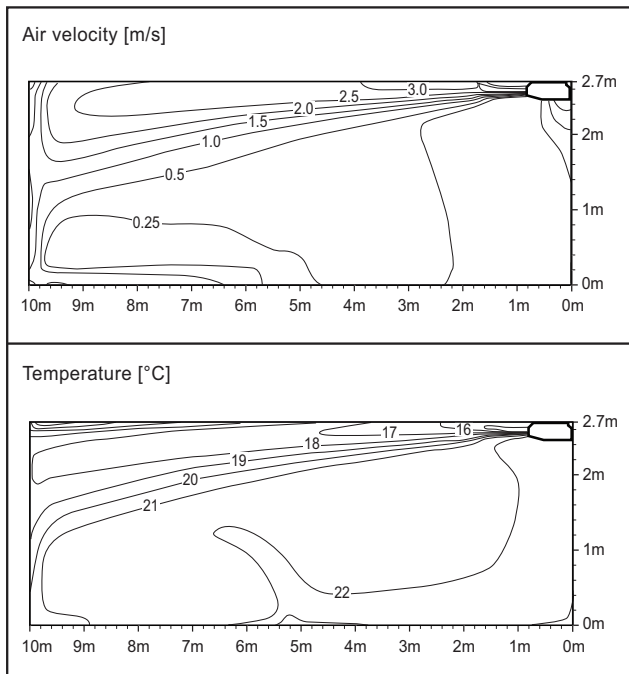
- These figures are accordance with normal certain condition and environment.
(Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

6. Air flow and temperature distributions (reference data)

Models : AVNW48GM2T1

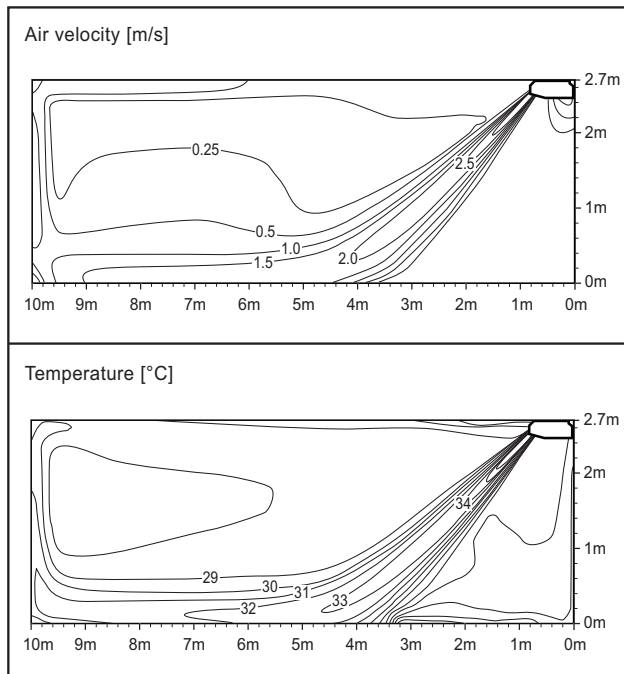
Cooling

Discharge angle: 0°



Heating

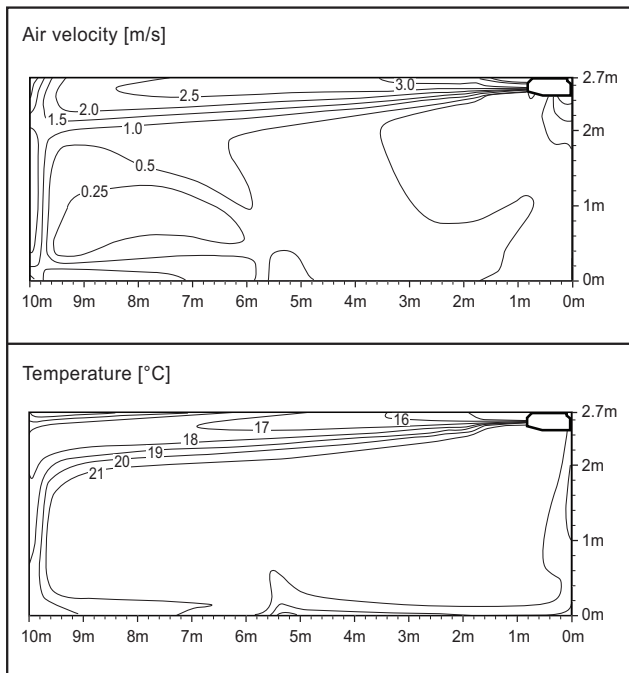
Discharge angle: 40°



Models : AVNW54GM2T1

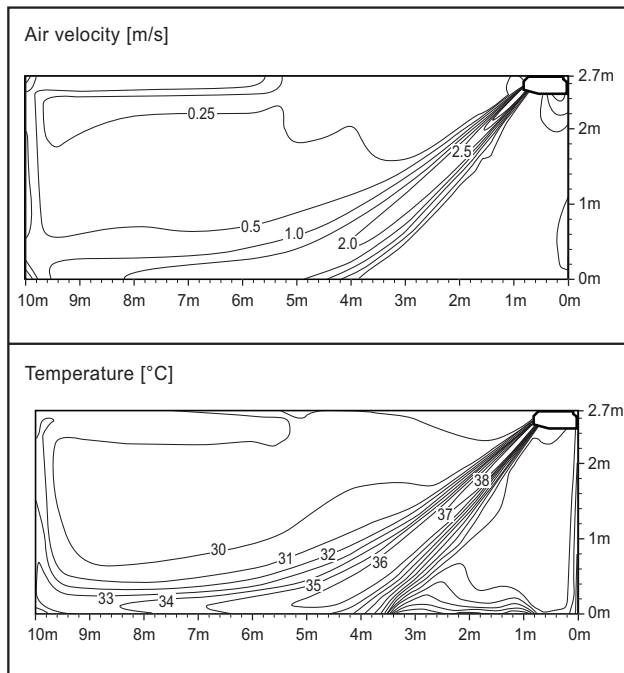
Cooling

Discharge angle: 0°



Heating

Discharge angle: 40°



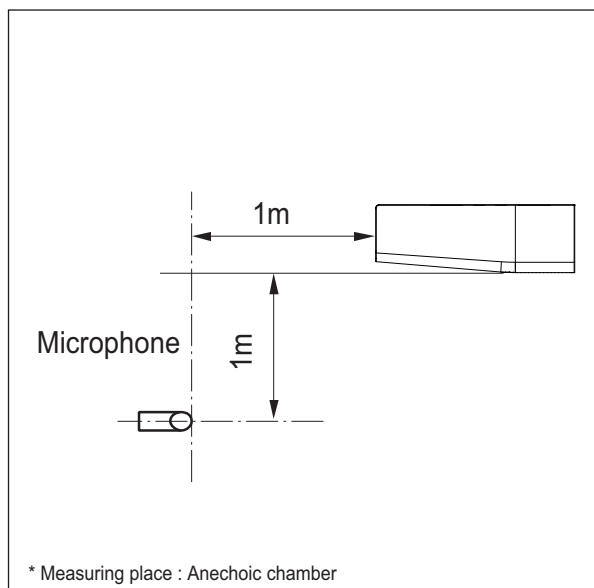
Note

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

7. Sound levels

7.1 Sound pressure level

■ Overall

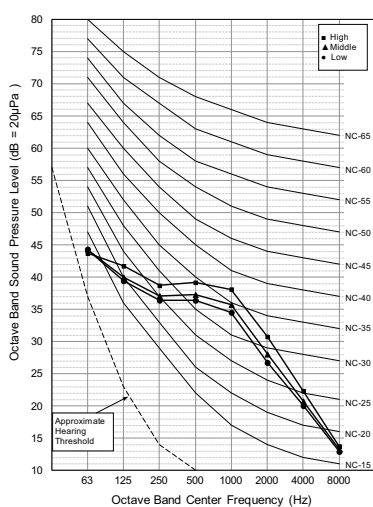


Note

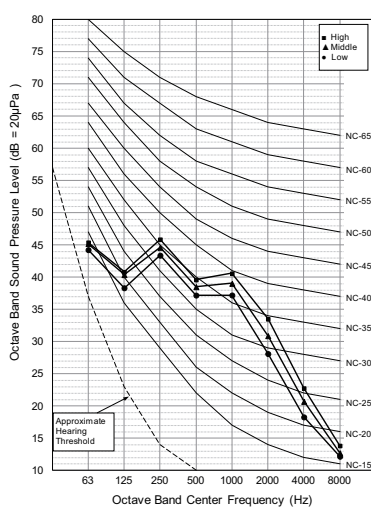
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference acoustic pressure $0\text{dB} = 20\mu\text{Pa}$.
4. Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
5. Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
6. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

Model	50Hz, 220-240V		
	Sound pressure Levels [dB(A)]		
	H	M	L
AVNW18GM1T1	40	38	37
AVNW24GM1T1	44	43	41
AVNW30GM1T1	47	45	42
AVNW36GM2T1	44	41	38
AVNW48GM2T1	46	42	38
AVNW54GM2T1	46	42	38

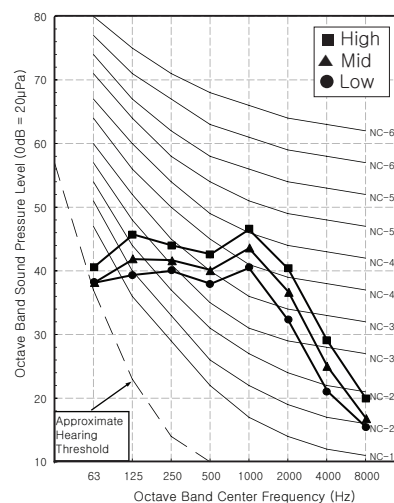
AVNW18GM1T1



AVNW24GM1T1

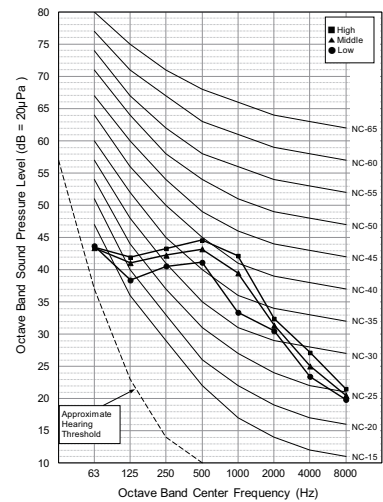


AVNW30GM1T1

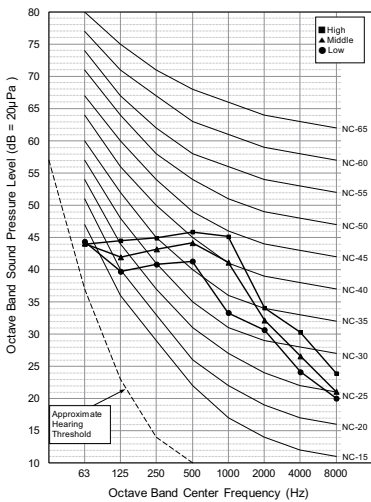


7. Sound levels

AVNW36GM2T1

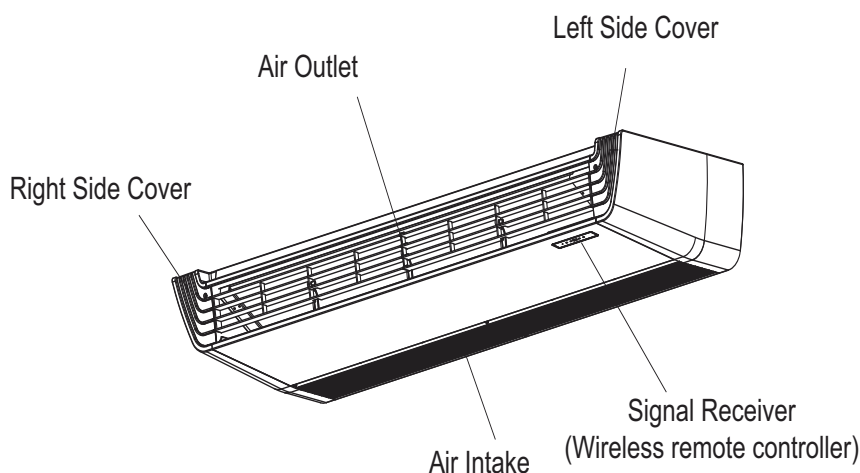


AVNW48GM2T1
AVNW54GM2T1



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.)

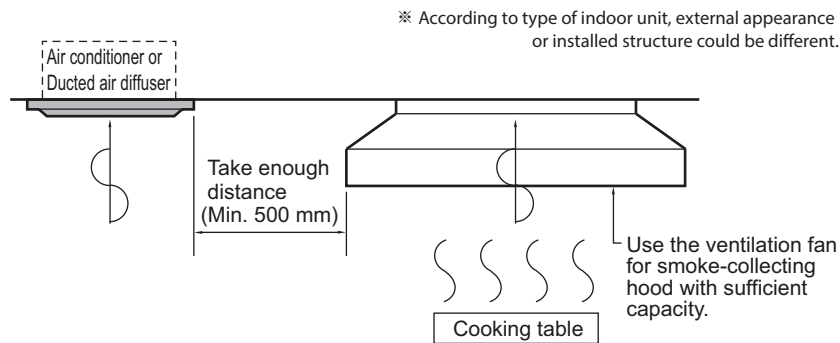


8.1 Selection of the best location

- 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;

8. Installation

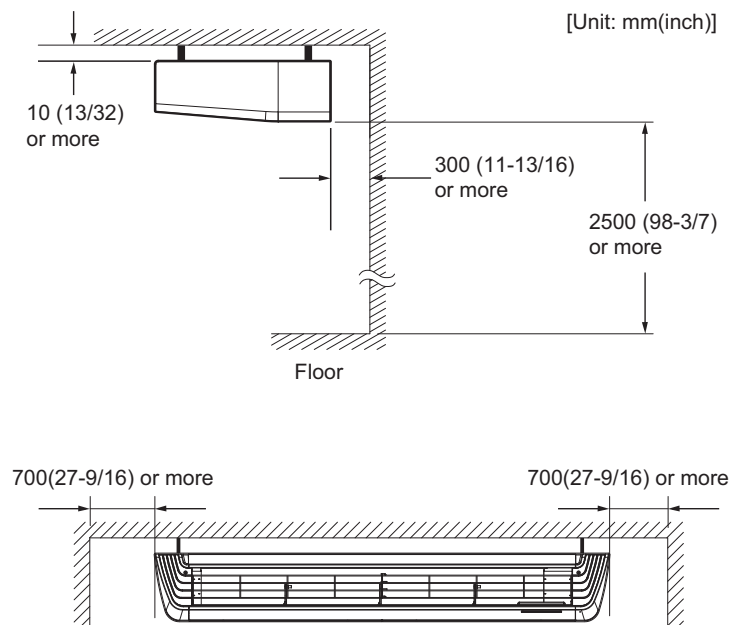
- Make sure that ventilation fan is enough to cover all noxious gases from this place.
- Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



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.



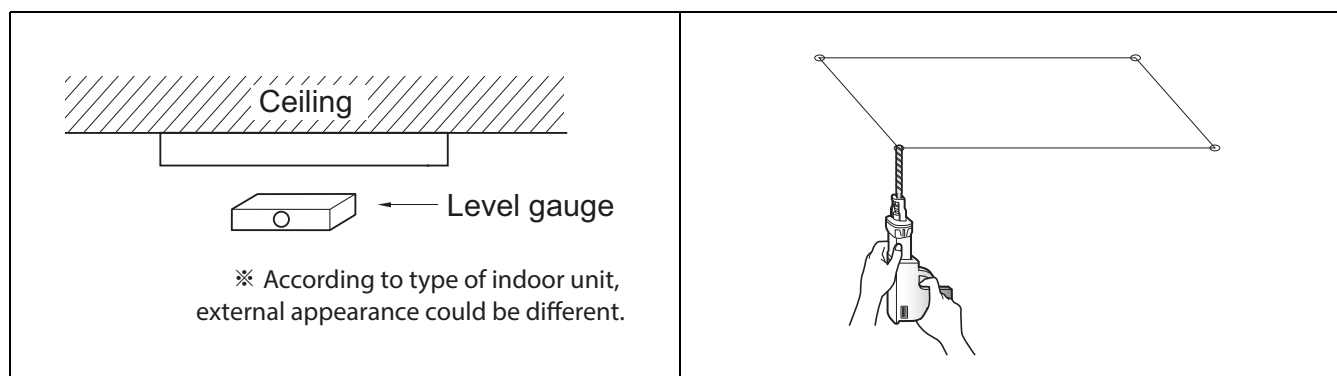
8. Installation

8.2 Installation of indoor units

8.2.1 Ceiling dimension and hanging bolt location

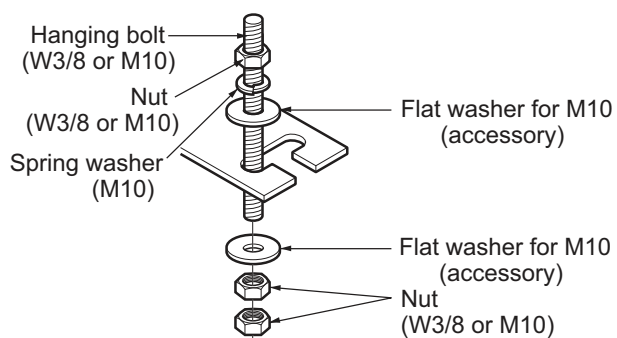
CAUTION

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



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

8. Installation

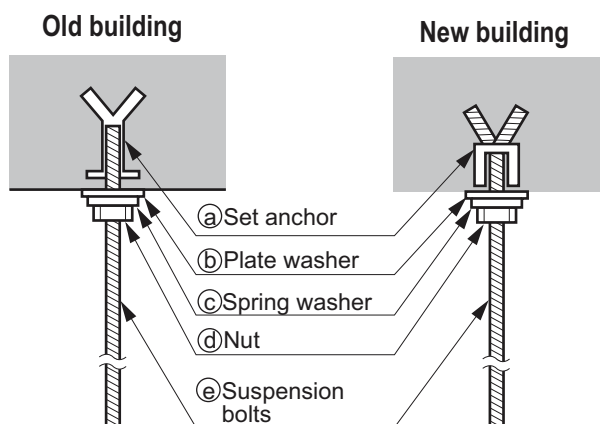


- The following parts are local purchasing.

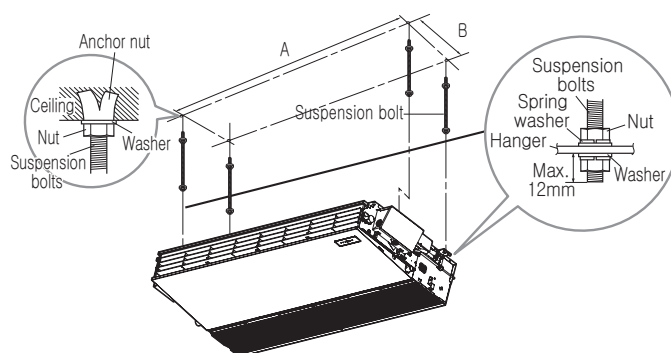
1. Hanging bolt - W 3/8 or M10
2. Nut - W 3/8 or M10
3. Spring washer - M10
4. Plate washer - M10

⚠ CAUTION

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



◆ Hanging bolts dimensions



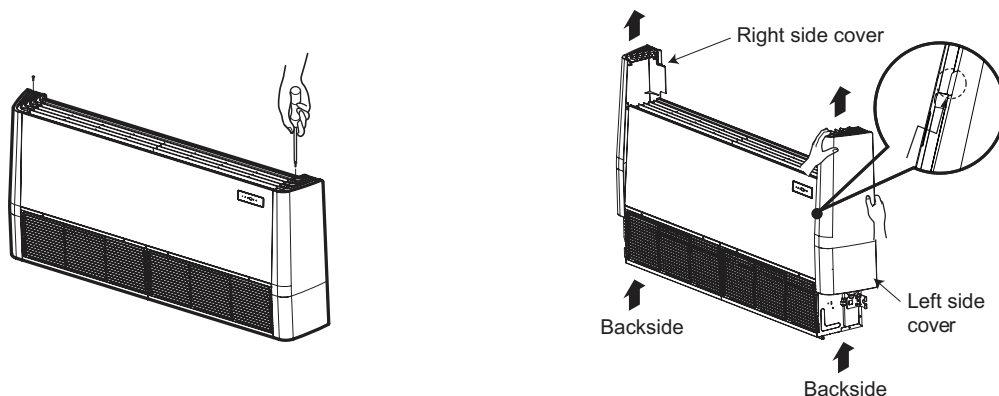
Chassis	Bolt lactions [Unit: mm]	
	A	B
VM1	1,018	355
VM2	1,418	355

8. Installation

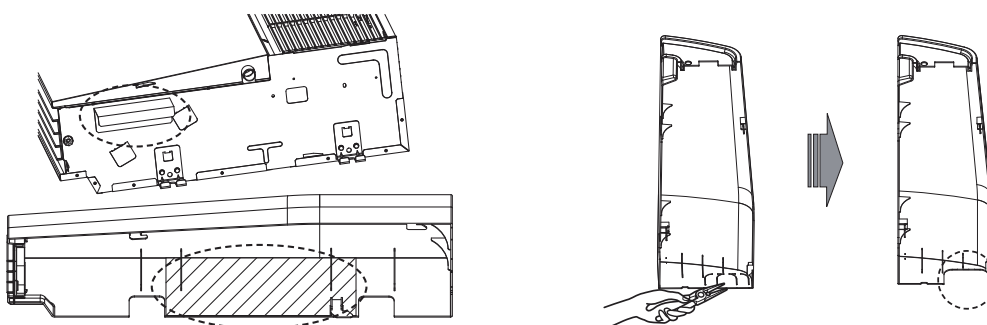
8.2.2 Preparing work for Installation

■ Open side cover

- 1) Remove two screws from Left and Right side-cover.
- 2) Unlock side-cover from side panel by slightly pulling the edge of side cover.
Tap the side-cover with your palm on the backside.



- 3) Remove bracket from side-panel and paper bracket from side-cover.
- 4) Knock out the pipe hole from the left side cover with nipper/plier.



- 5) Remove the rubber stopple in the desired drain direction.

Important

- It is recommended to select the left side for drain to have common hole in the side-cover along with pipe and wiring.
- Knock hole on right side-cover only if right side is selected for water drain.

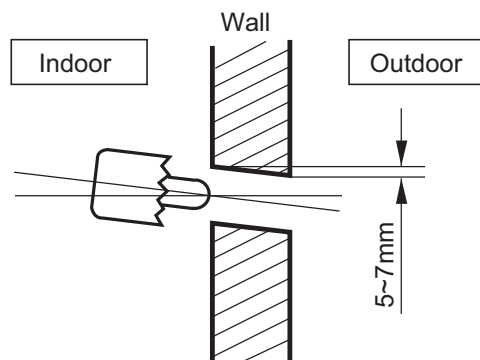
CAUTION

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

8. Installation

■ Drill a hole in the wall

- 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 hole slightly slanted to the outdoor side.



8.2.3 Indoor unit installation

Hang the Indoor unit on suspension bolt as per following guidelines:

- 1) Lift the indoor unit to sufficient height.
- 2) Insert the suspended part of four suspension bolt in the four hangers provided on the side of main body one by one.
- 3) Lower the indoor unit till the hangers rest on their respective flat washer.
- 4) Adjust the level in the top down direction by adjusting the suspension bolts. Inclined the indoor unit as per direction provided in the figures.

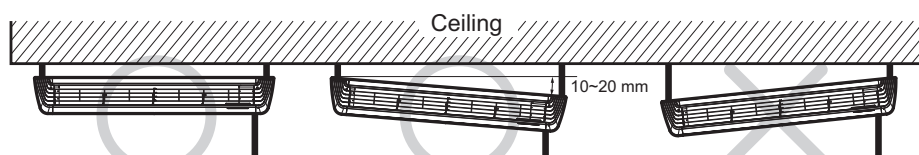
■ Installation Information For Declination

⚠ CAUTION

- Installation with declination of the indoor unit is very important for the drain of air conditioner.
- Minimum thickness of the insulation for the connecting pipe shall be 10mm.
- If the Installation Plates are fixed to horizontal line, the indoor unit after installing will be declined to the bottomside.

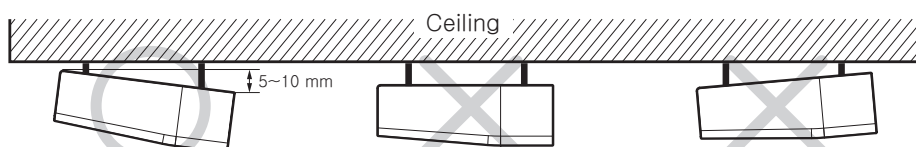
[Front of view]

- The unit must be horizontal or inclined at angle.
- The inclination should be less than or equal to 1° or in between 10 to 20mm inclined in drain direction as shown in fig.



[Side of view]

- The unit must be declined to the bottomside of the unit when finished installation.

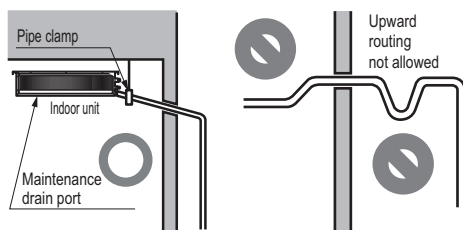


8. Installation

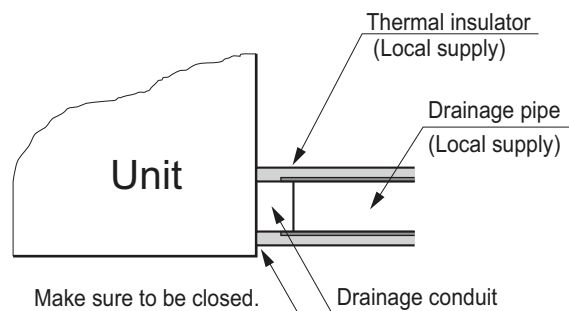
8.3 Indoor Unit Drain Piping

8.3.1 Drain piping of indoor unit

- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit and drain piping fittings should be referenced from 'Specifications' of each models.
 - Piping material: Use the Polyvinyl chloride pipe.
- Be sure to install heat insulation on the drain piping.
 - Heat insulation material: Polyethylene foam with thickness more than 8 mm (5/16 inch).



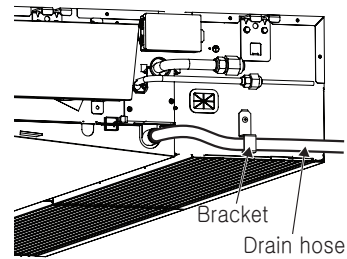
※ U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)



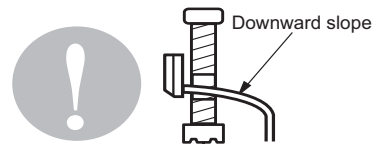
8. Installation

Important

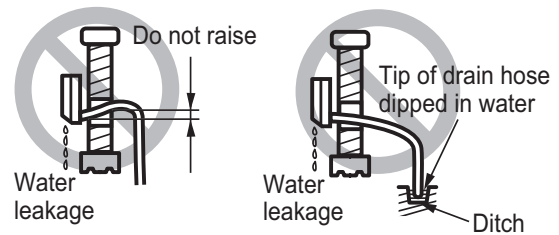
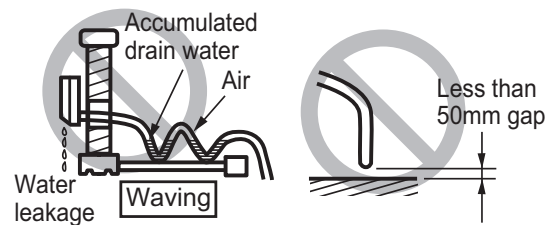
- Hook on the bracket after connecting the drain hose as shown figure.



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



- Do not make drain piping like the following.
- Be sure to execute heat insulation on the drain piping.



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

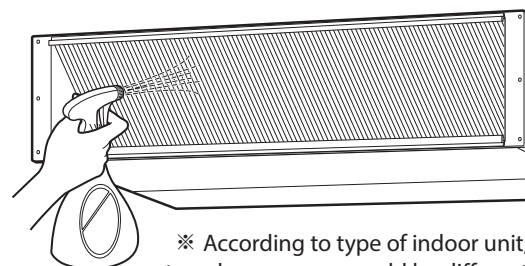
8. Installation

8.3.2 Drain test

◆ Drainage test of indoor unit

Use the following procedure to test the drainage.

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



8.4 Connecting Cables between Indoor Unit and Outdoor Unit

8.4.1 General instructions

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

⚠ CAUTION

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

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

8. Installation

8.4.2 Wiring connection

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

8.4.3 Clamping of cables

1. Arrange 2 power cables on the control panel.
2. First, fasten the steel clamp with a screw to the inner boss of control panel.
3. For connecting of communication (transmission) cable, put the 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.

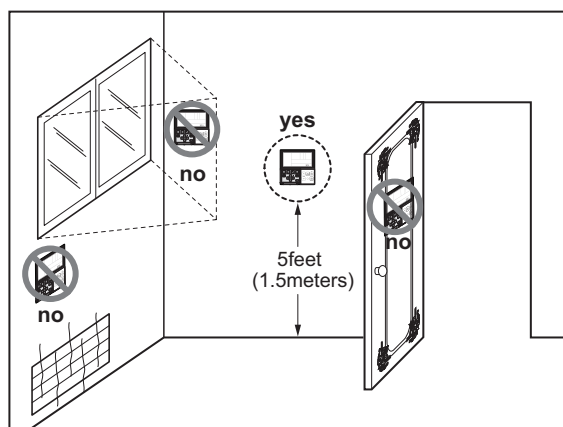
WARNING

- 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.

8.4.4 Wired Remote Controller Installation (Accessory)

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

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



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

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

SINGLE CAC

Heat Pump

Ceiling Mounted Cassette Round

- 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

◆ Basic functions of Indoor Unit

Category	Functions	ATNW36GYLT1 / ATNW48GYLT1
Air flow	Air supply outlet	Round
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	O
	Auto swing (left & right)	X
	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	O
Air purifying	Triple filter (Deodorizing)	X
	Allergy Safe filter	X
	Long-life prefilter (washable / anti-fungus)	O
Installation	Drain pump	O
	E.S.P. control*	X
	Electric heater	X
	High ceiling operation*	O
Reliability	Hot start	O
	Self diagnosis	O
Convenience	Auto changeover	O
	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	X
Special Functions	Wi-Fi Control	O (Accessory)
	Humidity Control	O
	Human Detecting Control	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 to 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	ATNW36GYLT1 ATNW48GYLT1
Wireless Remote Controller		PQWRHQ0FDB	Heat Pump	O
		PWLSSB21H	Heat Pump	O
Wired Remote Controller	Simple	PQRCVCL0Q(W)	Simple	O
		PQRCHCA0Q(W)	for Hotel	O
	Standard	PREMTB001	Standard II (White)	O
		PREMTBB01	Standard II (Black)	O
		PREMTB100**	Standard III (White)	O
		PREMTBB10**	Standard III (Black)	O
	Premium	PREMTA000(A/B)	Premium	O
Dry contact	Simple Contact	PDRYCB000	Simple Dry Contact	O
	Communication type	PDRYCB400	2 Points Dry Contact (For Setback)	O
		PDRYCB300	For 3rd Party Thermostat	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO 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	X
	Extension Wire	PZCWRC1	10m	X
	Wi-Fi Controller*	PWFMDD200	-	O

Note

1. O: Possible, X: Impossible, -: Not applicable, Embedded: Included with product.
2. *: Some advanced functions controlled by individual controller cannot be operated.
3. **: It could not be operated some functions.
4. 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

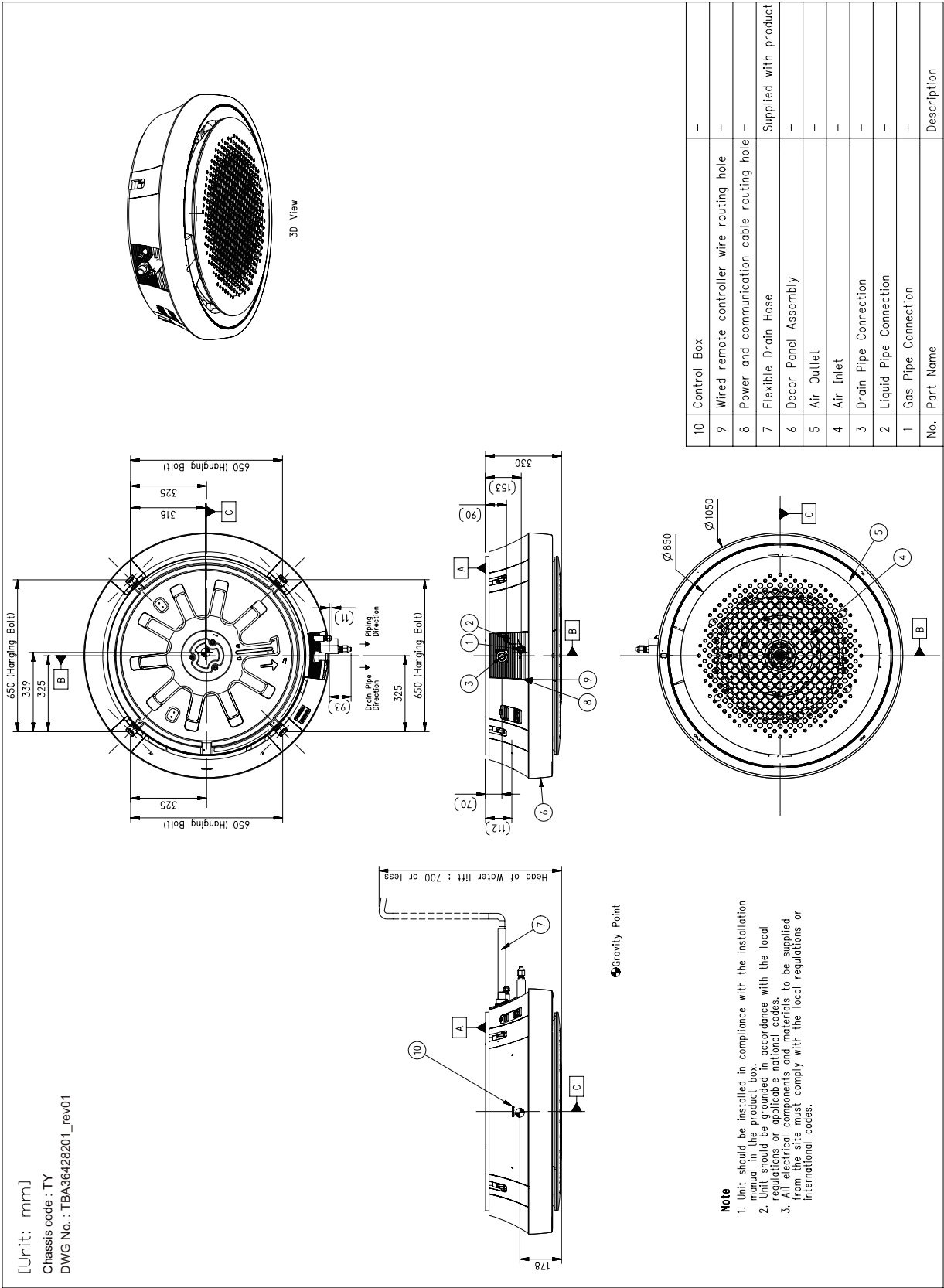
Model Name				ATNW36GYLT1	ATNW48GYLT1
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Power Input		Min./Nom./Max.	W	34 / 37 / 40	40 / 63 / 90
Running Current			A	0.67	0.67
Exterior Color			-	White	White
Dimensions	Body	W x H x D	mm	1,050 x 330 x 1,050	1,050 x 330 x 1,050
Weight	Net		kg	30	30
	Shipping		kg	38	38
Heat Exchanger	(Row x Column x FPI) x No.		-	(2 x 12 x 21) x 1+ (1 x 12 x 21) x 1	(2 x 12 x 21) x 1+ (1 x 12 x 21) x 1
	Face Area		m ² (ft ²)	0.47 (5.05)	0.47 (5.05)
Fan	Type		-	3D Turbo Fan	3D Turbo Fan
	Air Flow Rate	H / M / L	m ³ /min	25.0 / 23.0 / 21.0	32.0 / 28.0 / 23.0
Fan Motor	Type		-	BLDC	BLDC
	Output		W x No.	146 x 1	136 x 1
Dehumidification Rate			l/h	4.9	4.9
Sound Pressure Level	Cooling	H / M / L	dB(A)	39 / 37 / 34	47 / 44 / 39
	Heating	H / M / L	dB(A)	39 / 37 / 34	47 / 44 / 39
Sound Power Level	Cooling	Max.	dB(A)	-	-
Piping Connections	Liquid		mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm(inch)	Ø 15.88 (5/8)	Ø 19.05 (3/4)
	Drain (O.D. / I.D.)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
Safety Devices			-	Fuse	
Power and Communication Cable (included Earth)			No. x mm2	4C x 1.0	4C x 1.0

Note

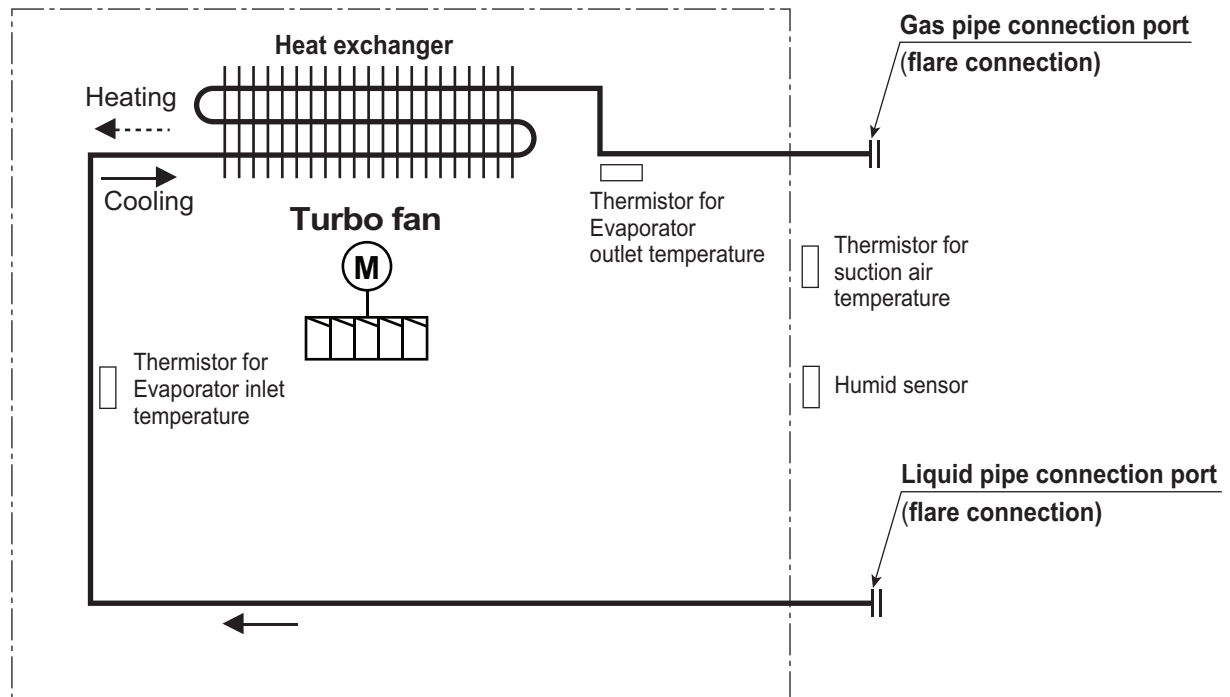
1. Due to our policy of innovation some specifications may be changed without notification.
2. Wiring cable size must comply with the applicable local and national code. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit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

3. Dimensions

[TY Chassis] ATNW36GYLT1 / ATNW48GYLT1



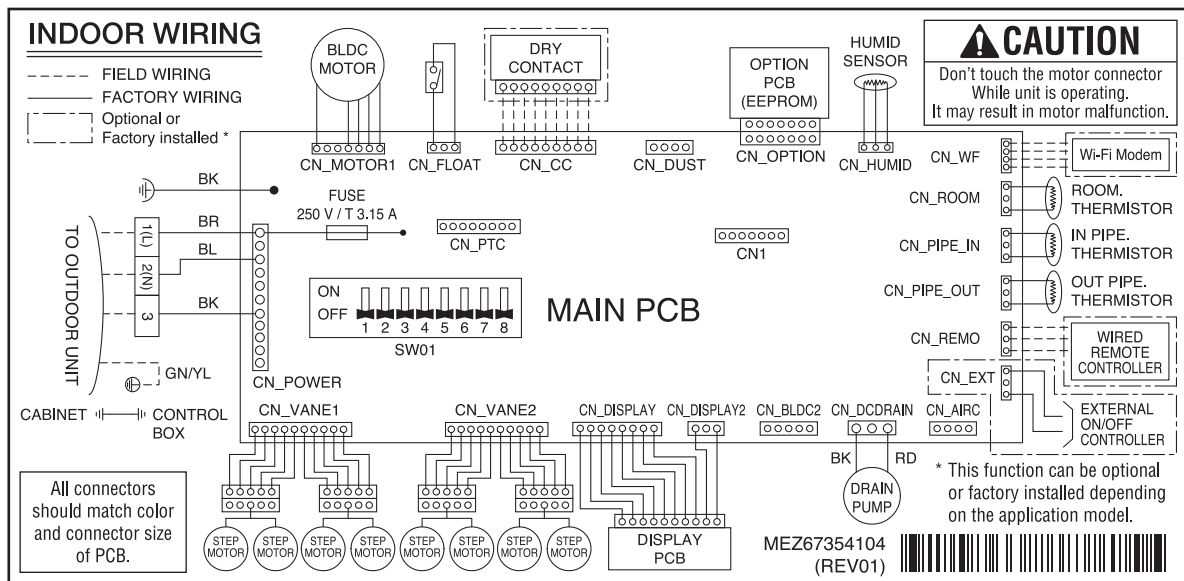
4. Piping diagrams



Description	PCB Connector
Thermistor for suction air temperature	CN_ROOM
Thermistor for evaporator inlet temperature	CN-PIPE_IN
Thermistor for evaporator outlet temperature	CN-PIPE_OUT

5. Wiring Diagrams

■ ATNW36GYLT1 / ATNW48GYLT1

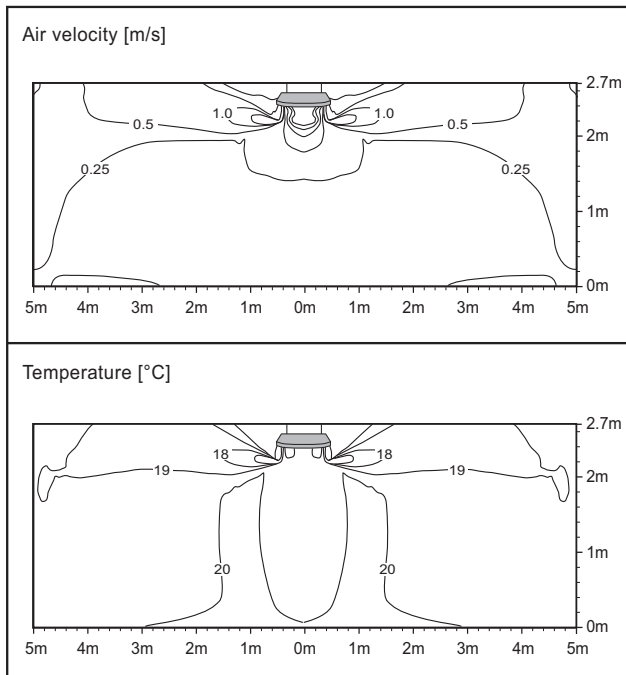


6. Air flow and temperature distributions

Model : ATNW36GYLT1

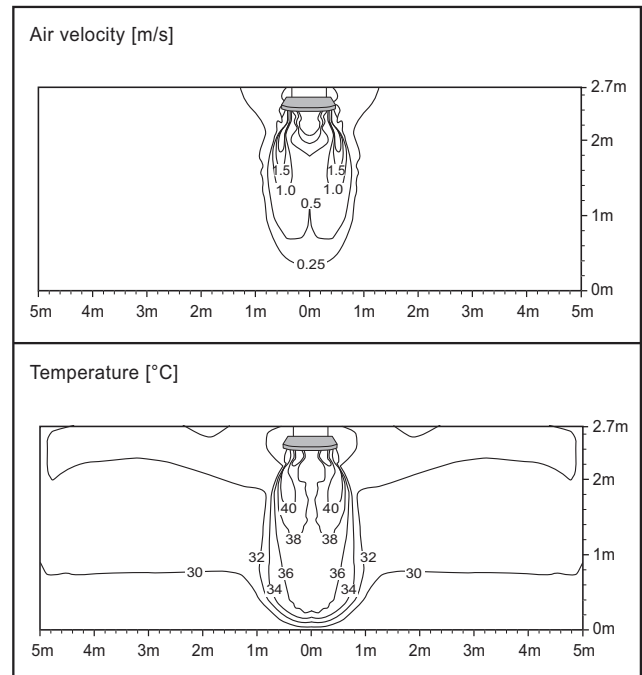
Cooling

Vane : 0 mm



Heating

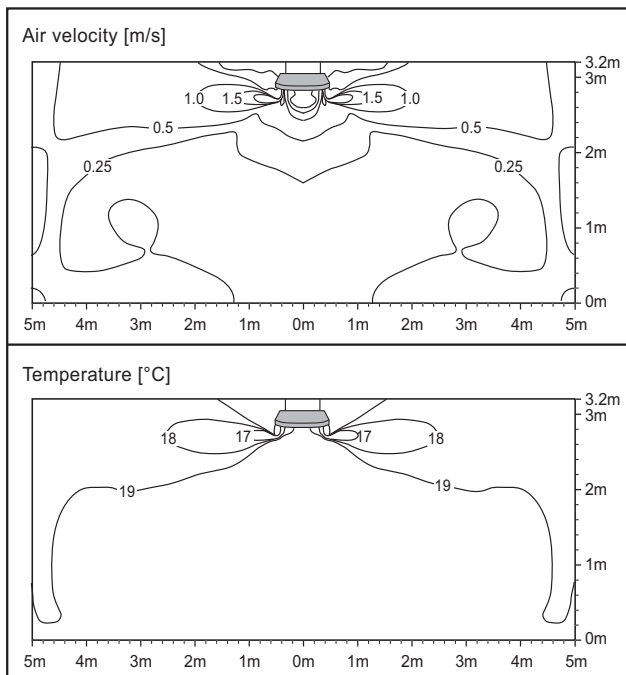
Vane : 15 mm



Model : ATNW48GYLT1

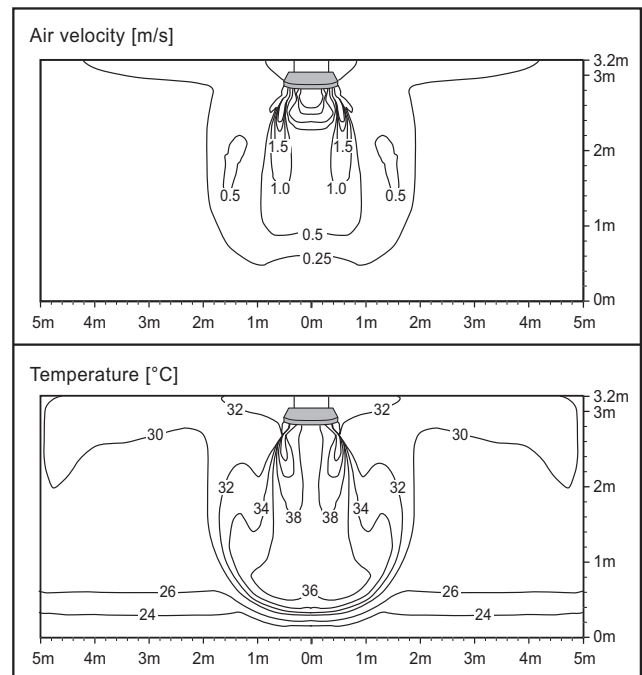
Cooling

Vane : 1 step



Heating

Vane : 6 step



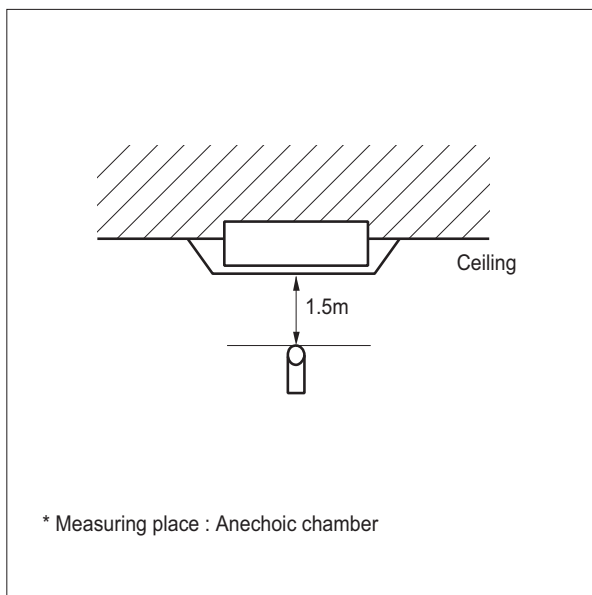
Note

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

7. Sound levels

7.1 Sound pressure level

Overall

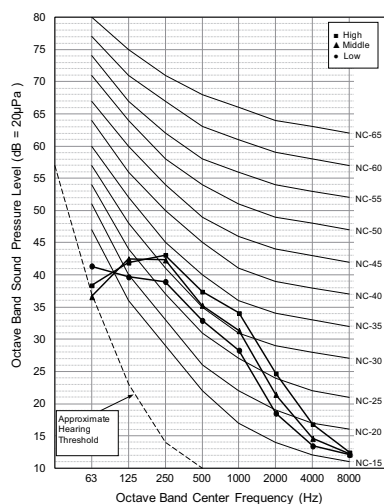


Note

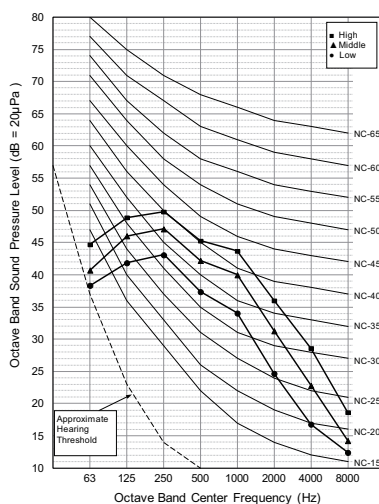
- 1.Sound measured at some distance away from the center of the unit.
- 2.Data is valid at free field condition.
- 3.Reference acoustic pressure 0dB = 20μPa.
- 4.Data is valid at nominal operation condition.
Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, etc)
- 5.Sound levels can be increased in accordance with installation and operating conditions. (Static pressure mode, used air guide, Room target temperature setting, etc)
- 6.Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- 7.Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound pressure Levels [dB(A)]		
	H	M	L
ATNW36GYLT1	39	37	34
ATNW48GYLT1	47	44	39

ATNW36GYLT1

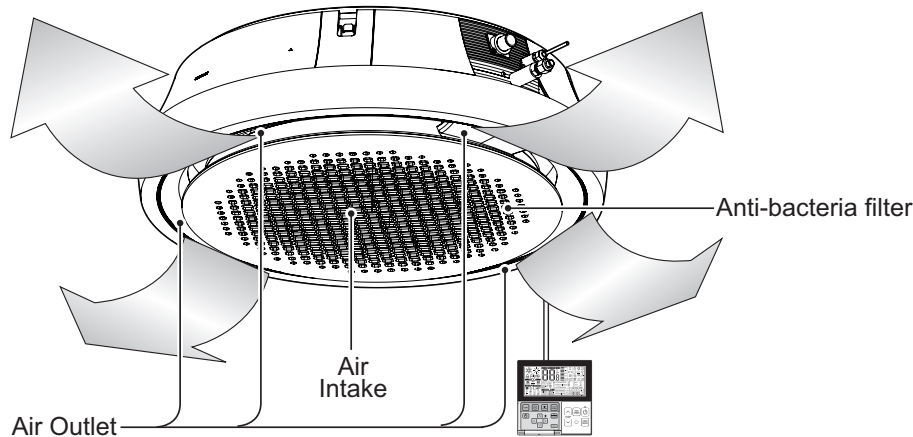


ATNW48GYLT1



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.)



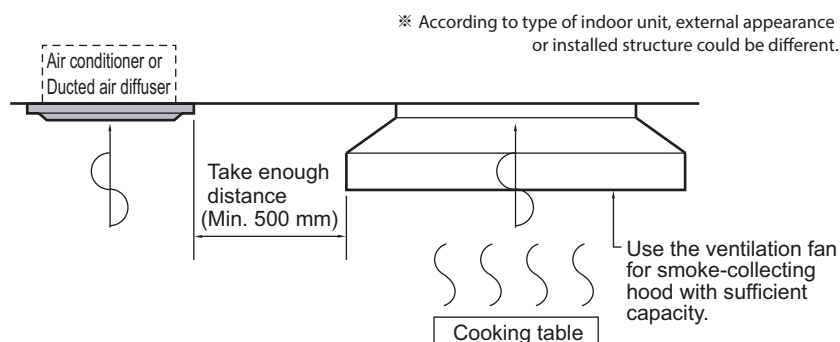
Wired Remote Controller(Accessory)

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. (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.



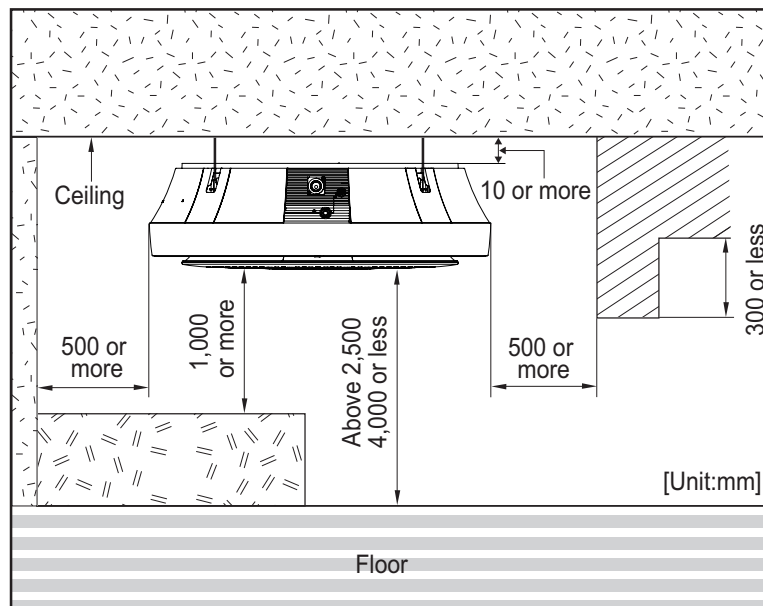
2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.

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.

TY Chassis

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



CAUTION

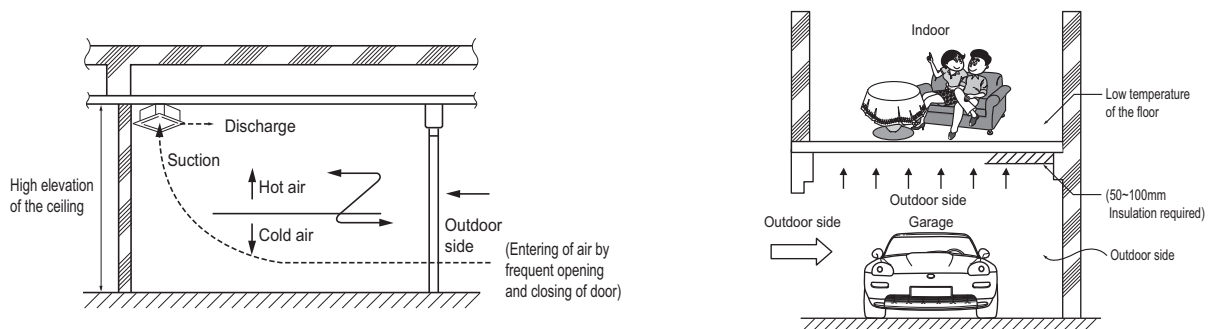
- This product is based on exposure installation. Do not install it in a landfill site such as ceiling tax.

8. Installation

8.2 Precautions regarding cassette indoor unit installation

◆ Main points about the indoor installation

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



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

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

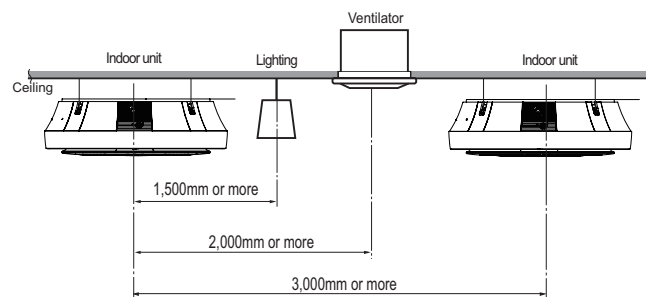
⚠ CAUTION

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

• Countermeasure method

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

◆ In case of multiple indoor cassette units (recommended)

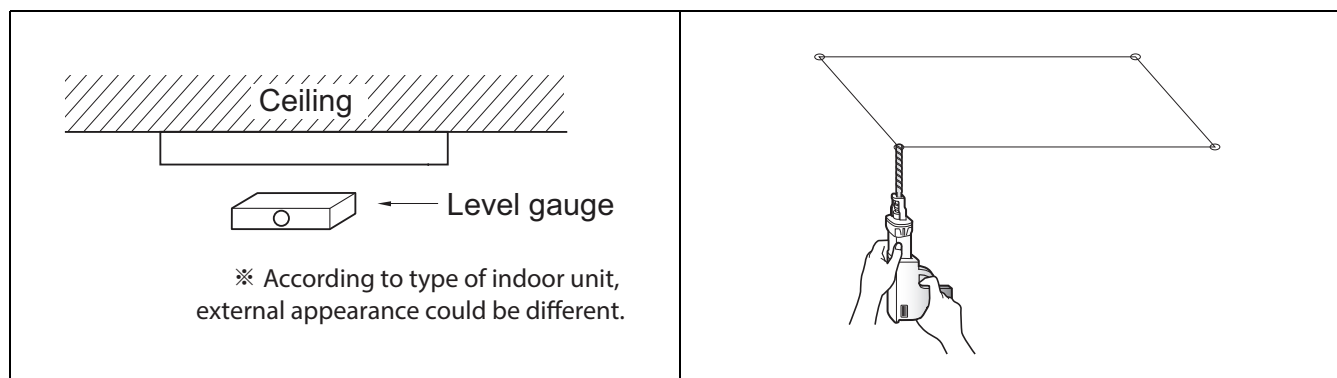


8. Installation

8.3 Ceiling opening dimensions and hanging bolt location

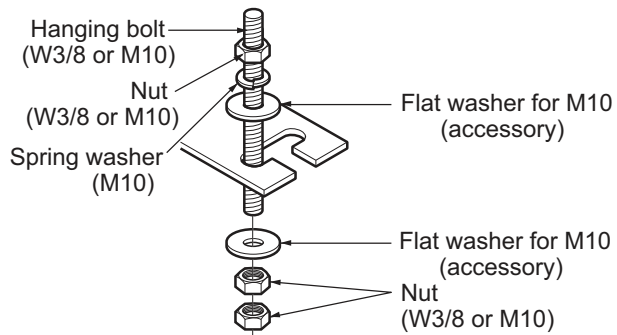
⚠ CAUTION

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



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

8. Installation

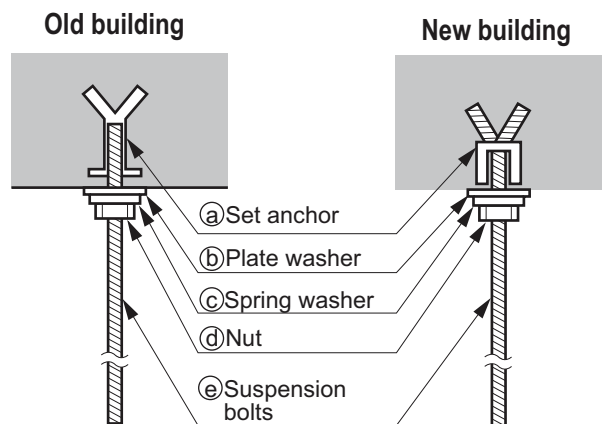


- The following parts are local purchasing.

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

⚠ CAUTION

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



8. Installation

8.4 Connecting Cables between Indoor Unit and Outdoor Unit

8.4.1 General instructions

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

CAUTION

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

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

8.4.2 Wiring connection

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

8.4.3 Clamping of cables

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

8. Installation

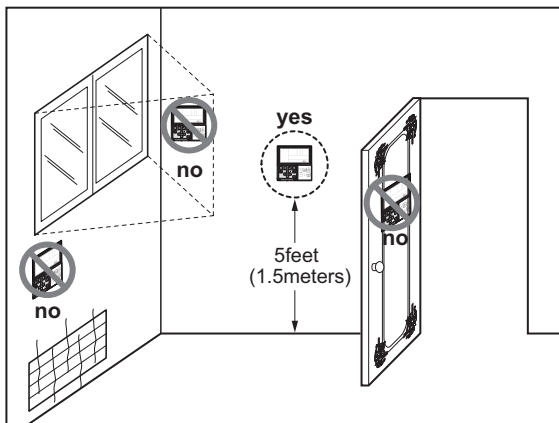
! WARNING

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

8.4.4 Wired Remote Controller Installation (Optional)

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

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



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

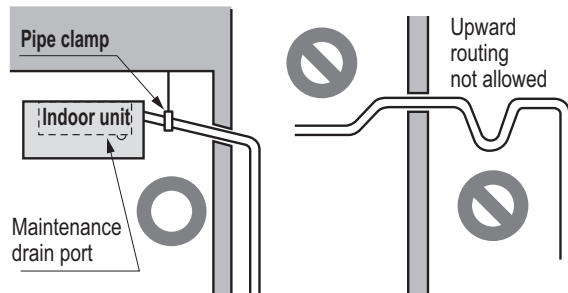
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display.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

8. Installation

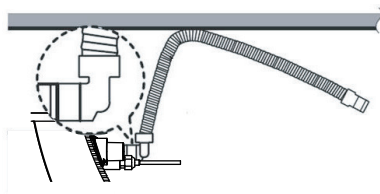
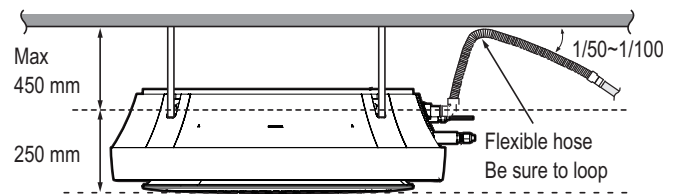
8.5 Indoor Unit Drain Piping

8.5.1 Drain piping of indoor unit with drain pump

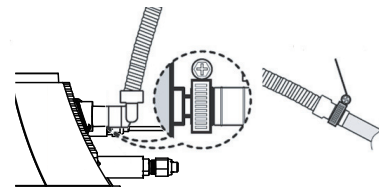
- Drain piping must have down-slope (1/50 to 1/100). Be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm (1-1/4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



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

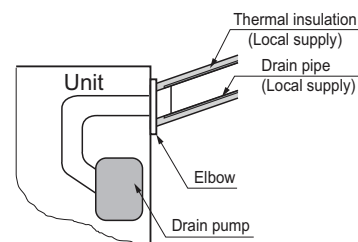
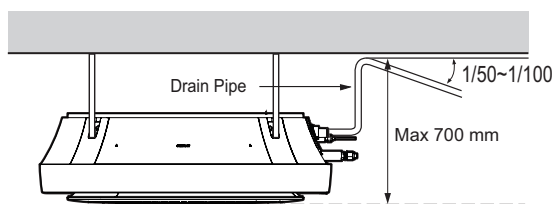


Place the elbow connection upwards and connect to the product.



Place the bolt of the clamp clamping part upwards and fix the connection part.

- 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).



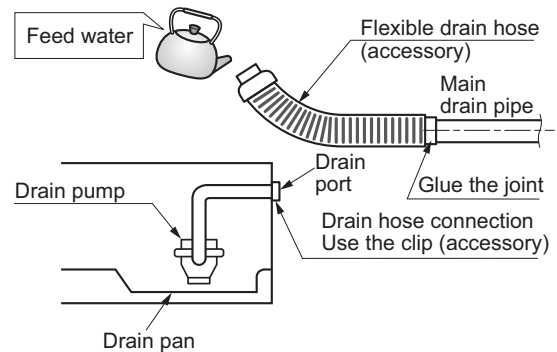
8. Installation

8.5.2 Method of Drainage test

◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

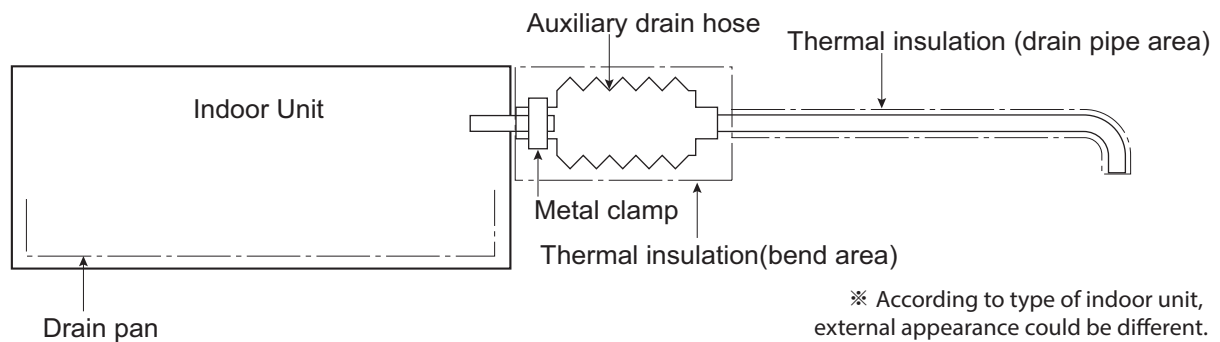
1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is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

8.5.3 Connection of an auxiliary(flexible) drain hose

- To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



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

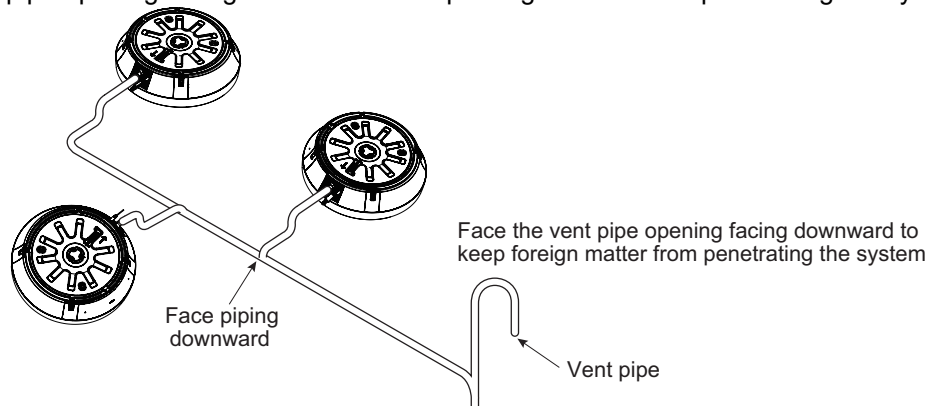
⚠ CAUTION

- 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

8.5.4 Ground drain piping

- It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.
- The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.
- Face the vent pipe opening facing downward to keep foreign matter from penetrating the system.



SINGLE

Heat pump

Outdoor units

- 1.List of Functions**
- 2.Specifications**
- 3.Dimensions**
- 4.Piping diagrams**
- 5.Wiring diagrams**
- 6.Capacity tables**
- 7.Capacity Correction Factor**
- 8.Operation range**
- 9.Electric characteristics**
- 10.Sound levels**

1. List of functions

■ Basic functions of Indoor Unit

Category	Functions	ATUW18GPLT1 / ABUW18GM1T1 / AVUW18GM1T1
Reliability	High pressure switch	X
	Low pressure switch	X
	Defrost / Deicing	O
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Low Noise Operation	X
	Wiring Error Check	X
	Peak Control	X
	Mode Lock	X
	Forced Cooling Operation (Outdoor Unit)	X
	SLC(Smart Load Control)	X
	Auto detecting mode	O
Network function	Network solution(LGAP)	X
ODU Dry Contact function		X

Category	Functions	ATUW24GPLT1 / ATUW30GPLT1 / ATUW36GNLT1 / ABUW24GM1T1 UU27WGTX1 / ABUW30GM1T1 / ABUW36GM3T1 / AVUW24GM1T1 AVUW30GM1T1 / AVUW36GM2T1
Reliability	High pressure switch	X
	Low pressure switch	X
	Defrost / Deicing	O
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Low Noise Operation	O
	Wiring Error Check	X
	Peak Control	X
	Mode Lock	O
	Forced Cooling Operation (Outdoor Unit)	O
	SLC(Smart Load Control)	X
	Auto detecting mode	O
Network function	Network solution(LGAP)	O
ODU Dry Contact function		X

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.

1. List of functions

Category	Functions	ATUW36GYLT1 / ATUW48GYLT1
Reliability	Defrost / Deicing	O
	High pressure switch	X
	Low pressure switch	X
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Low Noise Operation	X
	Wiring Error Check	X
	Peak Control	X
	Mode Lock	X
	Forced Cooling Operation (Outdoor Unit)	X
	SLC(Smart Load Control)	X
Network function	Network solution(LGAP)	O
ODU Dry Contact		O

Note

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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.

Category	Functions	ATUW48GMLT1 / ATUW54GMLT1 / ABUW48GM3T1 / ABUW54GM3T1 ABUW60GM3T1 / AVUW48GM2T1 / AVUW54GM2T1
Reliability	High pressure switch	X
	Low pressure switch	X
	Defrost / Deicing	O
	Phase protection	X
	Restart delay (3-minutes)	O
	Self diagnosis	O
	Soft start	O
Convenience	Test function	O
	Night Low Noise Operation	O
	Wiring Error Check	X
	Peak Control	X
	Mode Lock	O
	Forced Cooling Operation (Outdoor Unit)	O
	SLC(Smart Load Control)	X
	Auto detecting mode	O
Network function	Network solution(LGAP)	O
ODU Dry Contact function		O (On/off control)

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.

1. List of functions

■ Accessory Compatibility List

Category		Product	Etc	ATUW18GPLT1 ABUW18GM1T1 AVUW18GM1T1
Central Controller	Simple	PQCSZ250S0	AC EZ	X
	AC Ez Touch	PACEZA000	AC Ez Touch	X
	AC Smart	PACS4B000	AC Smart IV	X
		PACS5A000	AC Smart 5	X
	ACP	PACP4B000	ACP IV	X
		PACP5A000	ACP 5	X
	AC Manager ²⁾	PACM4B000	AC Manager IV	X
		PACM5A000	AC Manager 5	X
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	X
		PV485N000	PI 485 Gateway	X
	Low Ambient Kit	PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return / Room Air Control	X
		PAHCMS000	Supply Air Control by DDC	X
	BACnet	PQNFB17C0	ACP BACnet	X
ETC	Lonworks	PLNWKB000	ACP Lonworks	X
	PDI	PPWRDB000	PDI Standard	X
		PQNUD1S40	PDI Premium	X
	ACS IO Module	PEXPMB000	-	X

Note

1. O: Possible, X: Impossible, - : Not applicable
2. * : Some advanced functions controlled by individual controller cannot be operated.
3. ²⁾ : ACP or AC Smart is needed.
4. Compatibility of individual controller(wireless/wired remote controller) could be found with function list on Indoor Unit's PDB.
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

Category		Product	Etc	ATUW24GPLT1 / ATUW30GPLT1 ATUW36GNLT1 / ATUW38GNLT1 ABUW24GM1T1 / ABUW30GM1T1 ABUW36GM3T1 / AVUW24GM1T1 AVUW30GM1T1/ AVUW36GM2T1
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS4B000	AC Smart IV	O
		PACS5A000	AC Smart 5	O
	ACP	PACP4B000	ACP IV	O
		PACP5A000	ACP 5	O
	AC Manager ²⁾	PACM4B000	AC Manager IV	O
		PACM5A000	AC Manager 5	X
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
		PV485N000	PI 485 Gateway	X
	Low Ambient Kit	PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return / Room Air Control	O
		PAHCMS000	Supply Air Control by DDC	X
	BACnet	PQNFB17C0	ACP BACnet	O
ETC	Lonworks	PLNWKB000	ACP Lonworks	O
		PPWRDB000	PDI Standard	X
	PDI	PQNUD1S40	PDI Premium	X
ETC	ACS IO Module	PEXPMB000	-	X

Note

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1. List of functions

Category		Product	Etc	ATUW36GYLT1 / ATUW48GYLT1
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS5A000	AC Smart 5	O
	ACP	PACP5A000	ACP 5	O
	AC Manager ²⁾	PACM5A000	AC Manager 5	O
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
	Low Ambient Kit	PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return / Room Air Control	X
		PAHCMS000	Supply Air Control by DDC	X
	BACnet	PQNFB17C0	ACP BACnet	X
ETC	Lonworks	PLNWKB000	ACP Lonworks	X
		PPWRDB000	PDI Standard	O
	PDI	PQNUD1S40	PDI Premium	O
	ACS IO Module	PEXPMB000	-	X

Note

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4. Compatibility of individual controller(wireless/wired remote controller) could be found with function list on Indoor Unit's PDB.
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))

Category		Product	Etc	ATUW48GMLT1 / ATUW54GMLT1 ABUW48GM3T1 / ABUW54GM3T1 AVUW48GM2T1 / AVUW54GM2T1 ABUW60GM3T1
Central Controller	Simple	PQCSZ250S0	AC EZ	O
	AC Ez Touch	PACEZA000	AC Ez Touch	O
	AC Smart	PACS4B000	AC Smart IV	O
		PACS5A000	AC Smart 5	O
	ACP	PACP4B000	ACP IV	O
		PACP5A000	ACP 5	O
	AC Manager ²⁾	PACM4B000	AC Manager IV	O
Gateway	ODU PI485	PMNFP14A1	PI 485 Gateway	O
		PV485N000	PI 485 Gateway	X
	Low Ambient Kit	PRVC2	From MULTI V 4 series	X
	AHU Comm. Kit	PAHCMR000	Return / Room Air Control	O
		PAHCMS000	Supply Air Control by DDC	X
	BACnet	PQNFB17C0	ACP BACnet	O
	Lonworks	PLNWKB000	ACP Lonworks	O
ETC	PDI	PPWRDB000	PDI Standard	O
		PQNUD1S40	PDI Premium	O
	ACS IO Module	PEXPMB000	-	X

Note

1. O: Possible, X: Impossible, -: Not applicable
2. *: Some advanced functions controlled by individual controller cannot be operated.
3. ²⁾: ACP or AC Smart is needed.
4. Compatibility of individual controller(wireless/wired remote controller) could be found with function list on Indoor Unit's PDB.
5. If you need more detail, please refer to the **BECON** PDB or the manual of product.
(<http://partner.lge.com/global> : Home> Doc.Library> Product > Control(BECON))

2. Specifications

2.1 Combinational Specification

Combination	Outdoor unit		Unit	ATUW18GPLT1	ABUW18GM1T1	AVUW18GM1T1
	Indoor unit			ATNW18GPLT1	ABNW18GM1T1	AVNW18GM1T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	2.10 ~ 5.27 ~ 5.86	2.10 ~ 5.27 ~ 5.86	2.10 ~ 5.27 ~ 5.86
			Btu/h	7,200 ~ 18,000 ~ 20,000	7,200 ~ 18,000 ~ 20,000	7,200 ~ 18,000 ~ 20,000
	Cooling**	Rated	kW	4.53	4.53	4.37
			Btu/h	15,450	15,480	14,900
	Heating*	Min.~ Rated ~ Max.	kW	2.10 ~ 5.27 ~ 6.10	2.10 ~ 5.27 ~ 6.10	2.22 ~ 5.56 ~ 6.10
			Btu/h	7,200 ~ 18,000 ~ 21,000	7,200 ~ 18,000 ~ 21,000	7,600 ~ 19,000 ~ 21,000
Power Input	Cooling*	Rated	kW	1.55	1.55	1.55
	Cooling**	Rated	kW	1.71	1.72	1.73
	Heating*	Rated	kW	1.50	1.50	1.62
Running Current	Cooling*	Rated	A	6.8	6.8	6.8
	Heating*	Rated	A	6.6	6.6	7.1
EER			W/W	3.40	3.40	3.40
COP			W/W	3.51	3.51	3.43

Combination	Outdoor unit		Unit	ATUW24GPLT1	ABUW24GM1T1	AVUW24GM1T1
	Indoor unit			ATNW24GPLT1	ABNW24GM1T1	AVNW24GM1T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	2.81 ~ 7.03 ~ 8.20	2.81 ~ 7.03 ~ 7.91	2.81 ~ 7.03 ~ 7.91
			Btu/h	9,600 ~ 24,000 ~ 28,000	9,600 ~ 24,000 ~ 27,000	9,600 ~ 24,000 ~ 27,000
	Cooling**	Rated	kW	5.86	5.86	6.04
			Btu/h	20,000	20,000	20,610
	Heating*	Min.~ Rated ~ Max.	kW	2.80 ~ 7.03 ~ 8.20	2.80 ~ 7.03 ~ 8.20	2.80 ~ 7.03 ~ 8.20
			Btu/h	9,600 ~ 24,000 ~ 28,000	9,600 ~ 24,000 ~ 28,000	9,600 ~ 24,000 ~ 28,000
Power Input	Cooling*	Rated	kW	2.06	2.06	2.06
	Cooling**	Rated	kW	2.25	2.32	2.38
	Heating*	Rated	kW	2.05	2.05	2.05
Running Current	Cooling*	Rated	A	9.0	9.0	9.0
	Heating*	Rated	A	9.0	9.0	9.0
EER			W/W	3.41	3.41	3.41
COP			W/W	3.43	3.43	3.43

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 codes. 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. Power factor could vary less than $\pm 1\%$ according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
5. Performances are based on the following conditions :
 - Applicable standard according to indoor type : Non Ducted - ISO 5151 / Ducted - ISO 13253
 - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - **Cooling : Indoor Ambient Temp. 29°CDB / 19°CWB, Outdoor Ambient Temp. 46°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.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit		Unit	ATUW30GPLT1	ABUW30GM1T1	AVUW30GM1T1
	Indoor unit			ATNW30GPLT1	ABNW30GM1T1	AVNW30GM1T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	3.44 ~ 8.20 ~ 9.38	3.36 ~ 8.20 ~ 9.96	3.36 ~ 8.20 ~ 10.26
			Btu/h	11,760 ~ 28,000 ~ 32,000	11,480 ~ 28,000 ~ 34,000	11,480 ~ 28,000 ~ 35,000
	Cooling**	Rated	kW	7.38	7.05	7.05
			Btu/h	25,200	24,080	24,080
	Heating*	Min.~ Rated ~ Max.	kW	3.28 ~ 8.20 ~ 9.09	3.28 ~ 8.20 ~ 9.09	3.28 ~ 8.20 ~ 9.09
			Btu/h	11,200 ~ 28,000 ~ 31,000	11,200 ~ 28,000 ~ 31,000	11,200 ~ 28,000 ~ 31,000
Power Input	Cooling*	Rated	kW	2.41	2.41	2.41
	Cooling**	Rated	kW	3.02	2.74	2.85
	Heating*	Rated	kW	2.33	2.55	2.33
Running Current	Cooling*	Rated	A	10.5	10.5	10.5
	Heating*	Rated	A	10.1	11.1	10.1
EER			W/W	3.40	3.40	3.40
COP			W/W	3.52	3.22	3.52

Combination	Outdoor unit		Unit	ATUW36GNLT1	ABUW36GM3T1	AVUW36GM2T1
	Indoor unit			ATNW36GNLT1	ABNW36GM3T1	AVNW36GM2T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	4.70 ~ 9.99 ~ 11.13	4.70 ~ 9.99 ~ 11.13	4.46 ~ 9.49 ~ 11.13
			Btu/h	16,030 ~ 34,100 ~ 38,000	16,030 ~ 34,100 ~ 38,000	15,230 ~ 32,400 ~ 38,000
	Cooling**	Rated	kW	8.49	8.49	8.16
			Btu/h	28,980	28,980	27,860
	Heating*	Min.~ Rated ~ Max.	kW	4.0~9.99~10.84	3.75 ~ 9.38 ~ 10.26	3.80 ~ 9.49 ~ 10.84
			Btu/h	13,640 ~ 34,100 ~ 37,000	12,800 ~ 32,000 ~ 35,000	12,960 ~ 32,400 ~ 37,000
Power Input	Cooling*	Rated	kW	2.93	2.93	2.79
	Cooling**	Rated	kW	3.44	3.24	3.23
	Heating*	Rated	kW	2.84	2.46	2.70
Running Current	Cooling*	Rated	A	12.7	12.7	12.1
	Heating*	Rated	A	12.3	10.7	11.7
EER			W/W	3.41	3.41	3.40
COP			W/W	3.52	3.81	3.51

Note

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3. Power factor could vary less than $\pm 1\%$ according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
5. Performances are based on the following conditions :
 - Applicable standard according to indoor type : Non Ducted - ISO 5151 / Ducted - ISO 13253
 - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - **Cooling : Indoor Ambient Temp. 29°CDB / 19°CWB, Outdoor Ambient Temp. 46°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.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit			ATUW36GYLT1	ATUW48GYLT1
	Indoor unit			ATNW36GYLT1	ATNW48GYLT1
Capacity	Cooling*	Min. ~ Rated ~ Max.	kW	3.40 ~ 10.25 ~ 10.80	4.20 ~ 14.65 ~ 17.40
		Min. ~ Rated ~ Max.	Btu/h	11,600 ~ 35,000 ~ 36,850	14,330 ~ 50,000 ~ 59,370
	Cooling**	Rated	kW	8.20	11.42
		Rated	Btu/h	28,000	39,000
	Heating*	Min. ~ Rated ~ Max.	kW	4.20 ~ 11.00 ~ 13.00	6.10 ~ 16.70 ~ 19.20
		Min. ~ Rated ~ Max.	Btu/h	14,330 ~ 37,537 ~ 44,350	20,810 ~ 57,000 ~ 65,510
Power Input	Cooling*	Rated	kW	3.18	4.36
	Cooling**	Rated	kW	3.45	4.81
	Heating*	Min. ~ Rated ~ Max.	kW	0.75 ~ 3.10 ~ 4.06	1.15 ~ 5.30 ~ 8.00
Running Current	Cooling*	Rated	A	14.0	19.2
	Heating*	Rated	A	13.7	23.4
EER			W / W	3.24	3.24
COP			W / W	3.55	3.15

Combination	Outdoor unit		Unit	ATUW48GMLT1	ABUW48GM3T1	AVUW48GM2T1
	Indoor unit			ATNW48GMLT1	ABNW48GM3T1	AVNW48GM2T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	5.39 ~ 13.48 ~ 15.53	5.39 ~ 13.48 ~ 15.53	5.39 ~ 13.48 ~ 15.53
			Btu/h	18,400 ~ 46,000 ~ 53,000	18,400 ~ 46,000 ~ 53,000	18,400 ~ 46,000 ~ 53,000
	Cooling**	Rated	kW	11.45	11.59	10.51
			Btu/h	39,100	39,560	35,880
	Heating*	Min.~ Rated ~ Max.	kW	5.62 ~ 14.06 ~ 15.80	5.62 ~ 14.06 ~ 15.80	5.62 ~ 14.06 ~ 15.80
			Btu/h	19,200 ~ 48,000 ~ 54,000	19,200 ~ 48,000 ~ 54,000	19,200 ~ 48,000 ~ 54,000
Power Input	Cooling*	Rated	kW	3.96	3.96	3.96
	Cooling**	Rated	kW	4.66	4.27	4.10
	Heating*	Rated	kW	4.00	4.00	4.00
Running Current	Cooling*	Rated	A	17.4	17.4	17.4
	Heating*	Rated	A	17.6	17.6	17.6
EER			W/W	3.40	3.40	3.40
COP			W/W	3.52	3.52	3.52

Note

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3. Power factor could vary less than $\pm 1\%$ according to the operating conditions.
4. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
5. Performances are based on the following conditions :
 - Applicable standard according to indoor type : Non Ducted - ISO 5151 / Ducted - ISO 13253
 - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - **Cooling : Indoor Ambient Temp. 29°CDB / 19°CWB, Outdoor Ambient Temp. 46°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.
6. This product contains Fluorinated greenhouse gases.

2. Specifications

Combination	Outdoor unit		Unit	ATUW54GMLT1	ABUW54GM3T1	AVUW54GM2T1
	Indoor unit			ATNW54GMLT1	ABNW54GM3T1	AVNW54GM2T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	6.33 ~ 15.82 ~ 16.70	6.33 ~ 15.82 ~ 16.70	6.33 ~ 15.82 ~ 16.70
			Btu/h	21,600 ~ 54,000 ~ 57,000	21,600 ~ 54,000 ~ 57,000	21,600 ~ 54,000 ~ 57,000
	Cooling**	Rated	kW	12.34	12.66	12.66
			Btu/h	42,120	43,200	43,200
	Heating*	Min.~ Rated ~ Max.	kW	6.56 ~ 16.41 ~ 17.60	6.56 ~ 16.41 ~ 17.60	6.56 ~ 16.41 ~ 17.60
			Btu/h	22,400 ~ 56,000 ~ 60,000	22,400 ~ 56,000 ~ 60,000	22,400 ~ 56,000 ~ 60,000
Power Input	Cooling*	Rated	kW	5.39	5.39	5.39
	Cooling**	Rated	kW	5.40	5.07	5.00
	Heating*	Rated	kW	5.09	4.61	5.09
Running Current	Cooling*	Rated	A	23.7	23.7	23.7
	Heating*	Rated	A	22.4	22.4	22.4
EER			W/W	2.94	2.94	2.94
COP			W/W	3.22	3.56	3.22

Combination	Outdoor unit		Unit	ABUW60GM3T1
	Indoor unit			ABNW60GM3T1
Capacity	Cooling*	Min.~ Rated ~ Max.	kW	6.33 ~ 15.82 ~ 16.70
			Btu/h	21,600 ~ 54,000 ~ 57,000
	Cooling**	Rated	kW	12.66
			Btu/h	43,200
	Heating*	Min.~ Rated ~ Max.	kW	6.56 ~ 16.41 ~ 17.60
			Btu/h	22,400 ~ 56,000 ~ 60,000
Power Input	Cooling*	Rated	kW	5.39
	Cooling**	Rated	kW	5.07
	Heating*	Rated	kW	4.61
Running Current	Cooling*	Rated	A	23.7
	Heating*	Rated	A	22.4
EER			W/W	2.94
COP			W/W	3.56

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 codes. 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.
- Power factor could vary less than $\pm 1\%$ according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - Applicable standard according to indoor type : Non Ducted - ISO 5151 / Ducted - ISO 13253
 - *Cooling : Indoor Ambient Temp. 27°CDB / 19°CWB, Outdoor Ambient Temp. 35°CDB / 24°CWB
 - **Cooling : Indoor Ambient Temp. 29°CDB / 19°CWB, Outdoor Ambient Temp. 46°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.
- This product contains Fluorinated greenhouse gases.

2. Specifications

2.2 Outdoor Unit Specifications

Model Name			Unit	ATUW18GPLT1 ABUW18GM1T1 AVUW18GM1T1	ATUW24GPLT1 ABUW24GM1T1 AVUW24GM1T1
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.99	0.99
Power Supply Cable (included Earth)			No. × mm ²	3C × 2.5	3C × 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W × H × D	mm	770 x 545 x 288	870 x 650 x 330
	Shipping	W × H × D	mm	920 x 585 x 388	1,026 x 693 x 446
Weight	Net		kg	35.2	45.5
	Shipping		kg	37.7	49.6
Compressor	Type		-	Twin Rotary	Twin Rotary
	Model		Model × No.	GAT156MAD x 1	GKT208MAB x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W × No.	1,500 × 1	1,500 × 1
Refrigerant	Type		-	R410A	R410A
	GWP (Global Warming Potential)		-	-	-
	Precharged Amount		g	1,100	1,400
	t-CO ₂ eq.		-	-	-
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	20	40
Refrigerant Oil	Type		-	RB68A	FVC68D
	Charged volume		cc × No.	400 × 1	670 × 1
Heat Exchanger	(Row × Column × FPI) × No.		-	(2 × 24 × 14) × 1	(2 × 28 × 14) × 1
Fan	Type		-	Axial	Axial
	Air Flow Rate	Rated	m³/min × No.	28 × 1	50 × 1
		Rated	ft³/min × No.	989 × 1	1,766 × 1
Fan Motor	Type		-	BLDC	BLDC
	Output		W × No.	43 × 1	85 × 1
Sound Pressure Level	Cooling	Rated	dB(A)	49	50
	Heating	Rated	dB(A)	52	52
Sound Power Level	Cooling	Rated	dB(A)	-	-
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 6.35 (1/4)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 12.7 (1/2)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Min./Max.	m	5/30	5/50
Maximum Height Difference (ODU ~ IDU)		Max.	m	15	30

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 codes. 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.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - *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.
- This product contains Fluorinated greenhouse gases.

2. Specifications

Model Name			Unit	ATUW30GPLT1 ABUW30GM1T1 AVUW30GM1T1	ATUW36GNLT1
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.99	0.99
Power Supply Cable (included Earth)			No. × mm ²	3C × 2.5	3C × 2.5
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W × H × D	mm	950 x 834 x 330	950 x 834 x 330
	Shipping	W × H × D	mm	1,065 x 918 x 461	1,065 x 918 x 461
Weight	Net		kg	60.8	60.8
	Shipping		kg	67.9	67.9
Compressor	Type		-	Twin Rotary	Twin Rotary
	Model		Model × No.	GJT325MAA x 1	GJT325MAA x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W × No.	2,137 × 1	2,137 × 1
Refrigerant	Type		-	R410A	R410A
	GWP (Global Warming Potential)		-	-	-
	Precharged Amount		g	2,200	2,200
	t-CO ₂ eq.		-	-	-
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FVC68D	FVC68D
	Charged volume		cc × No.	950 × 1	950 × 1
Heat Exchanger	(Row × Column × FPI) × No.		-	(2 × 38 × 14) × 1	(2 × 38 × 14) × 1
Fan	Type		-	Axial	Axial
	Air Flow Rate	Rated	m ³ /min × No.	60 × 1	60 × 1
		Rated	ft ³ /min × No.	2,119 × 1	2,119 × 1
Fan Motor	Type		-	BLDC	BLDC
	Output		W × No.	124 × 1	124 × 1
Sound Pressure Level	Cooling	Rated	dB(A)	51	51
	Heating	Rated	dB(A)	53	53
Sound Power Level	Cooling	Rated	dB(A)	-	-
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
Piping Length		Rated	m	5	5
		Min./Max.	m	5/50	5/50
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

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 codes. 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.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - *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.
- This product contains Fluorinated greenhouse gases.

2. Specifications

Outdoor unit				ATUW36GYLT1	ATUW48GYLT1
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.98	0.98
Power Supply Cable (included Earth)			No. x mm ²	3C x 2.5	3C x 4.0
Casing Color			-	Warm Gray	Warm Gray
Dimensions		W x H x D	mm	950 x 834 x 330	950 x 834 x 330
		W x H x D	inch	37-13/32 x 32-27/32 x 13	37-13/32 x 32-27/32 x 13
Weight		Body	kg	60.0	88.0
		Shipping	kg	65.0	92.0
Compressor	Type		-	Inverter Scroll	Inverter Scroll
	Model		Model x No.	RJB036MBA x 1	RJA036MAA x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W x No.	3,198 x 1	3,198 x 1
Refrigerant	Type		-	R410A	R410A
	Precharged Amount		g	2,300	3,800
	t-CO ₂ eq.		-	-	-
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
Refrigerant Oil	Type		-	FVC68D	FVC68D
	Charged volume		cc x No.	1,000 x 1	1,000 x 1
Heat Exchanger	(Row x Column x Fins per inch) x No.			(2 x 38 x 14) x 1	(2 x 32 x 14) x 2
Fan	Type		-	Propeller	Propeller
	Air Flow Rate	Rated	m ³ /min x No.	70 x 1	60 x 2
	Air Flow Rate	Rated	ft ³ /min × No.	2,472 X 1	2,119 × 2
Fan Motor	Type			BLDC	BLDC
	Output		W x No.	124.2 x 1	124.2 x 2
Sound Pressure Level	Cooling	Rated	dB(A)	51	55
	Heating	Rated	dB(A)	53	57
Sound Power Level	Cooling	Rated	dB(A)	-	-
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm(inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm(inch)	Ø 15.88 (5/8)	Ø 19.05 (3/4)
Piping Length		Standard	m (ft)	7.5 (24.6)	7.5 (24.6)
		Max.	m (ft)	50 (164.0)	75 (246.0)
Maximum Height Difference	Outdoor Unit ~ Indoor Unit	Max.	m (ft)	30 (98.4)	30 (98.4)

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 codes. 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.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - *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.
- This product contains Fluorinated greenhouse gases.

2. Specifications

Model Name			Unit	ATUW48GMLT1 ABUW48GM3T1 AVUW48GM2T1	ATUW54GMLT1 ABUW54GM3T1 AVUW54GM2T1
Power Supply			V , Ø , Hz	220-240, 1, 50	220-240, 1, 50
Power Factor		Rated	-	0.99	0.99
Power Supply Cable (included Earth)			No. × mm²	3C × 6.0	3C × 6.0
Casing Color			-	Warm Gray	Warm Gray
Dimensions	Net	W × H × D	mm	950 x 1,380 x 330	950 x 1,380 x 330
	Shipping	W × H × D	mm	1,140 x 1,462 x 461	1,140 x 1,462 x 461
Weight	Net		kg	90.2	90.2
	Shipping		kg	101.7	101.7
Compressor	Type		-	LG Inverter Scroll	LG Inverter Scroll
	Model		Model × No.	RJA036MAA x 1	RJA036MAA x 1
	Motor type		-	BLDC	BLDC
	Motor Output		W × No.	3,200 x 1	3,200 x 1
Refrigerant	Type		-	R410A	R410A
	GWP (Global Warming Potential)		-	-	-
	Precharged Amount		g	3,800	3,800
	t-CO ₂ eq.		-	-	-
	Control		-	Electronic Expansion Valve	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5	7.5
	Additional Charging Volume		g/m	40	40
Refrigerant Oil	Type		-	FVC68D	FVC68D
	Charged volume		cc × No.	1,000 × 1	1,000 × 1
Heat Exchanger	(Row × Column × FPI) × No.		-	(2 × 32 × 14) × 2	(2 × 32 × 14) × 2
Fan	Type		-	Axial	Axial
	Air Flow Rate	Rated	m³/min × No.	60 × 2	60 × 2
		Rated	ft³/min × No.	2,119 × 2	2,119 × 2
Fan Motor	Type		-	BLDC	BLDC
	Output		W × No.	124 × 2	124 × 2
Sound Pressure Level	Cooling	Rated	dB(A)	55	55
	Heating	Rated	dB(A)	57	57
Sound Power Level	Cooling	Rated	dB(A)	-	-
	Heating	Rated	dB(A)	-	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 19.05 (3/4)	Ø 19.05 (3/4)
Piping Length	Rated		m	5	5
	Min./Max.		m	5/75	5/75
Maximum Height Difference (ODU ~ IDU)		Max.	m	30	30

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 codes. 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.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - *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.
- This product contains Fluorinated greenhouse gases.

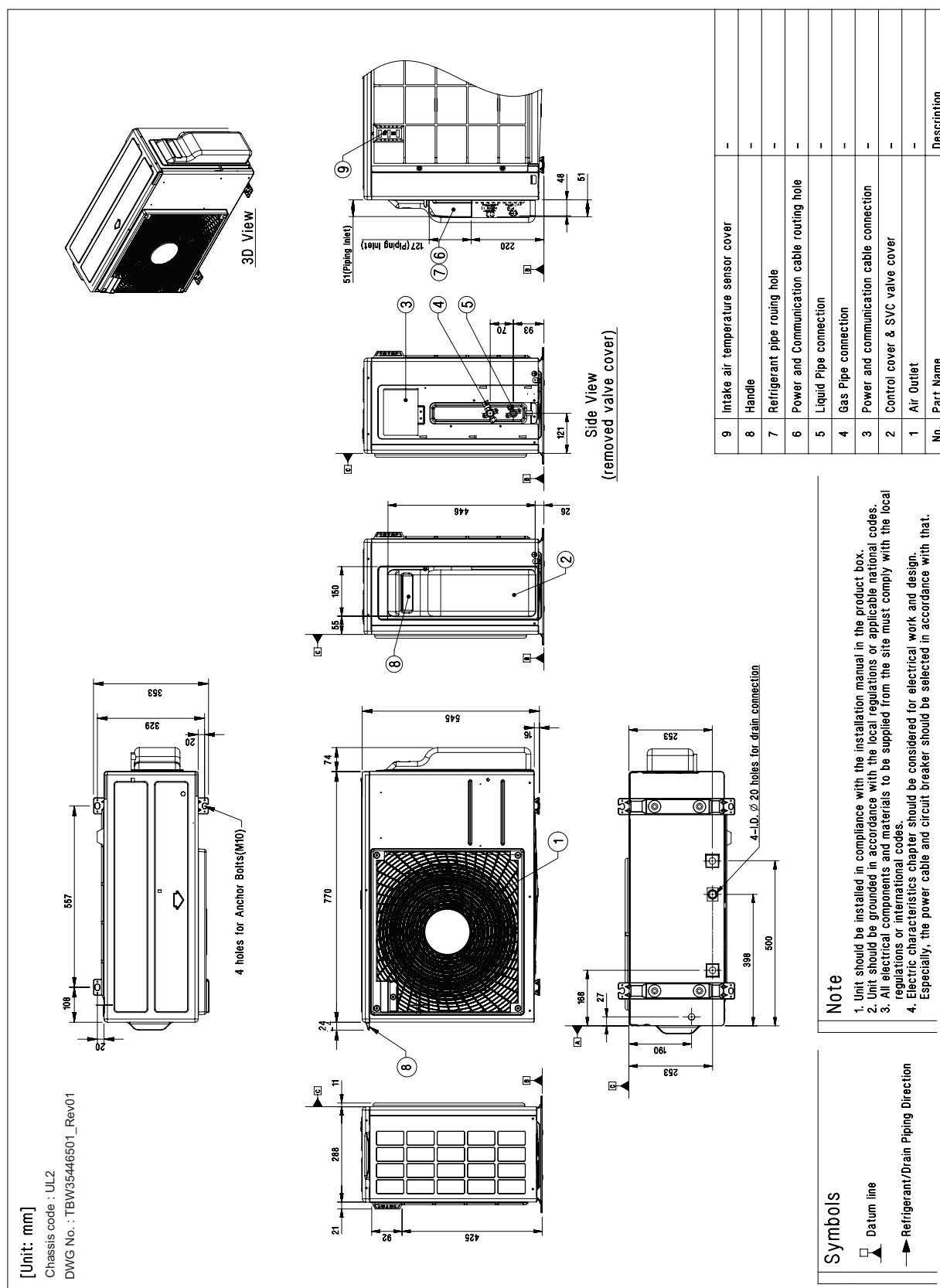
2. Specifications

Model Name			Unit	ABUW60GM3T1
Power Supply			V , Ø , Hz	220-240, 1, 50
Power Factor		Rated	-	0.99
Power Supply Cable (included Earth)			No. × mm²	3C × 6.0
Casing Color			-	Warm Gray
Dimensions	Net	W × H × D	mm	950 x 1,380 x 330
	Shipping	W × H × D	mm	1,140 x 1,462 x 461
Weight	Net		kg	90.2
	Shipping		kg	101.7
Compressor	Type		-	LG Inverter Scroll
	Model		Model × No.	RJA036MAA x 1
	Motor type		-	BLDC
	Motor Output		W × No.	3,200 x 1
Refrigerant	Type		-	R410A
	GWP (Global Warming Potential)		-	-
	Precharged Amount		g	3,800
	t-CO ₂ eq.		-	-
	Control		-	Electronic Expansion Valve
	Chargeless-Pipe Length		m	7.5
	Additional Charging Volume		g/m	40
Refrigerant Oil	Type		-	FVC68D
	Charged volume		cc × No.	1,000 × 1
Heat Exchanger	(Row × Column × FPI) × No.		-	(2 × 32 × 14) × 2
Fan	Type		-	Axial
	Air Flow Rate	Rated	m³/min × No.	60 × 2
		Rated	ft³/min × No.	2,119 × 2
Fan Motor	Type		-	BLDC
	Output		W × No.	124 × 2
Sound Pressure Level	Cooling	Rated	dB(A)	55
	Heating	Rated	dB(A)	57
Sound Power Level	Cooling	Rated	dB(A)	-
	Heating	Rated	dB(A)	-
Piping Connections	Liquid	Outer Dia.	mm (inch)	Ø 9.52 (3/8)
	Gas	Outer Dia.	mm (inch)	Ø 19.05 (3/4)
Piping Length		Rated	m	5
		Min./Max.	m	5/75
Maximum Height Difference (ODU ~ IDU)		Max.	m	30

Note

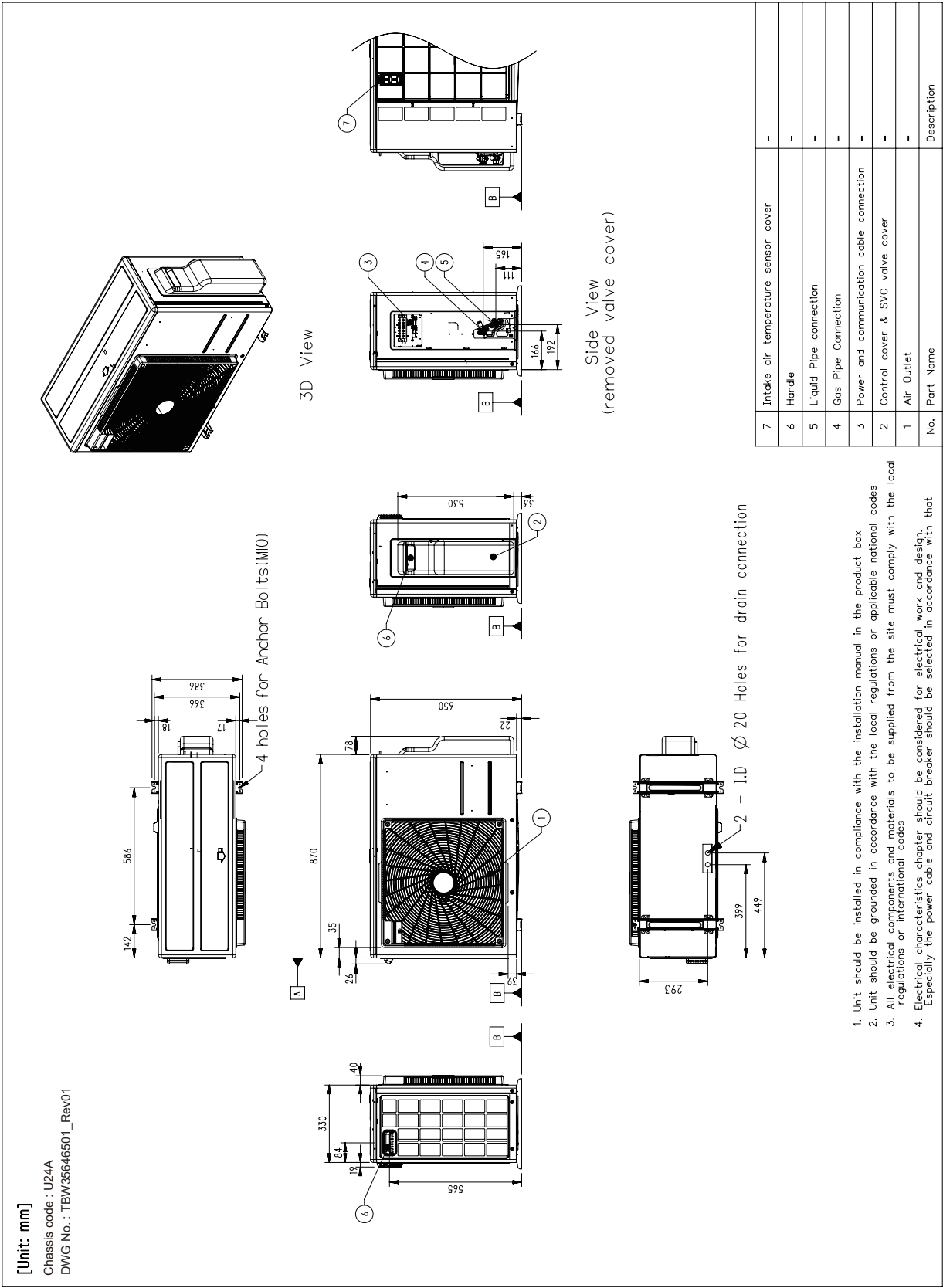
- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
- Power factor could vary less than ±1% according to the operating conditions.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard.
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.
- Performances are based on the following conditions :
 - *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.
- This product contains Fluorinated greenhouse gases.

[UL2 Chassis] ATUW18GPLT1, ABUW18GM1T1, AVUW18GM1T1



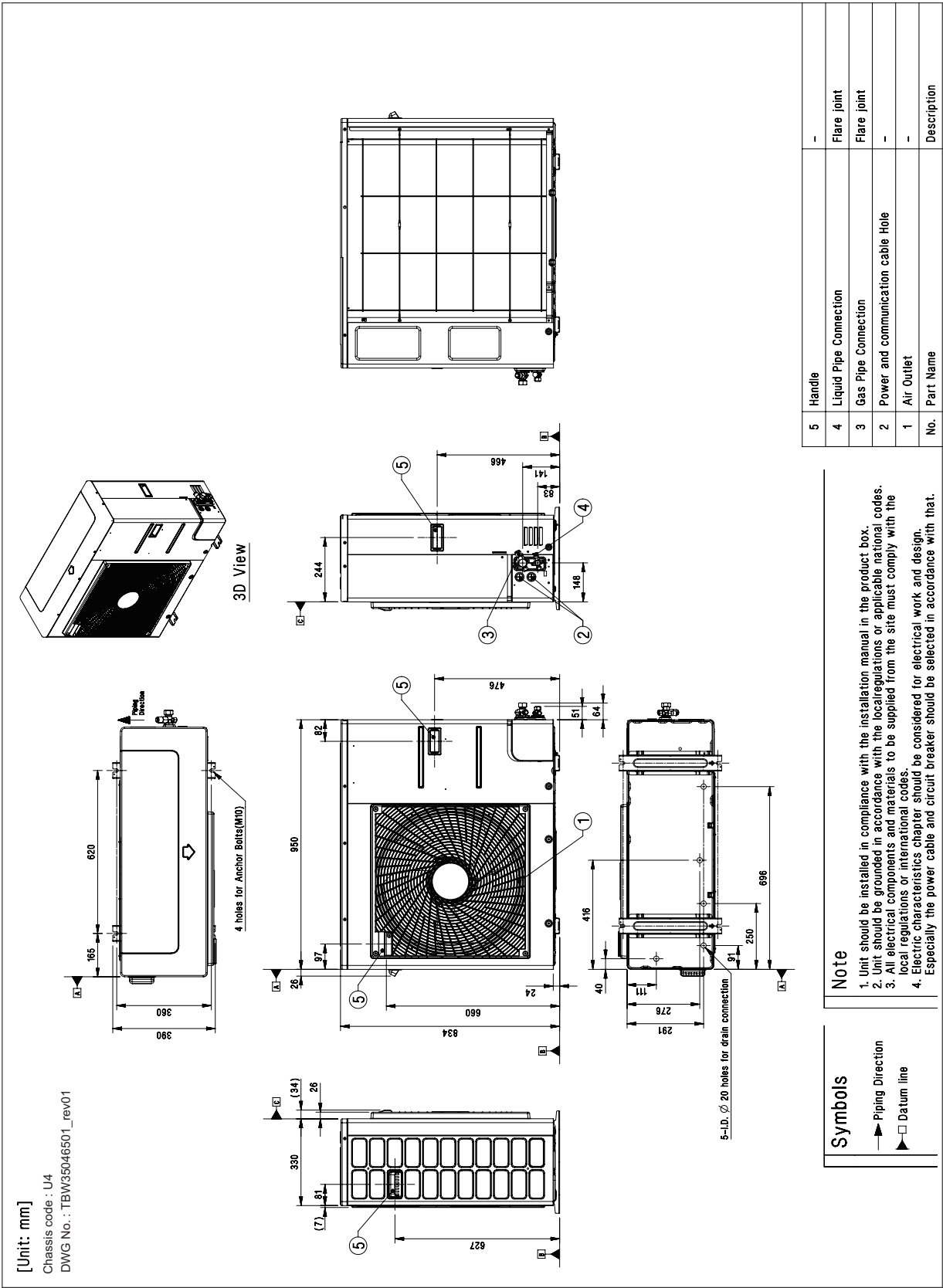
3. Dimensions

[U24A Chassis] ATUW24GPLT1, ABUW24GM1T1, AVUW24GM1T1



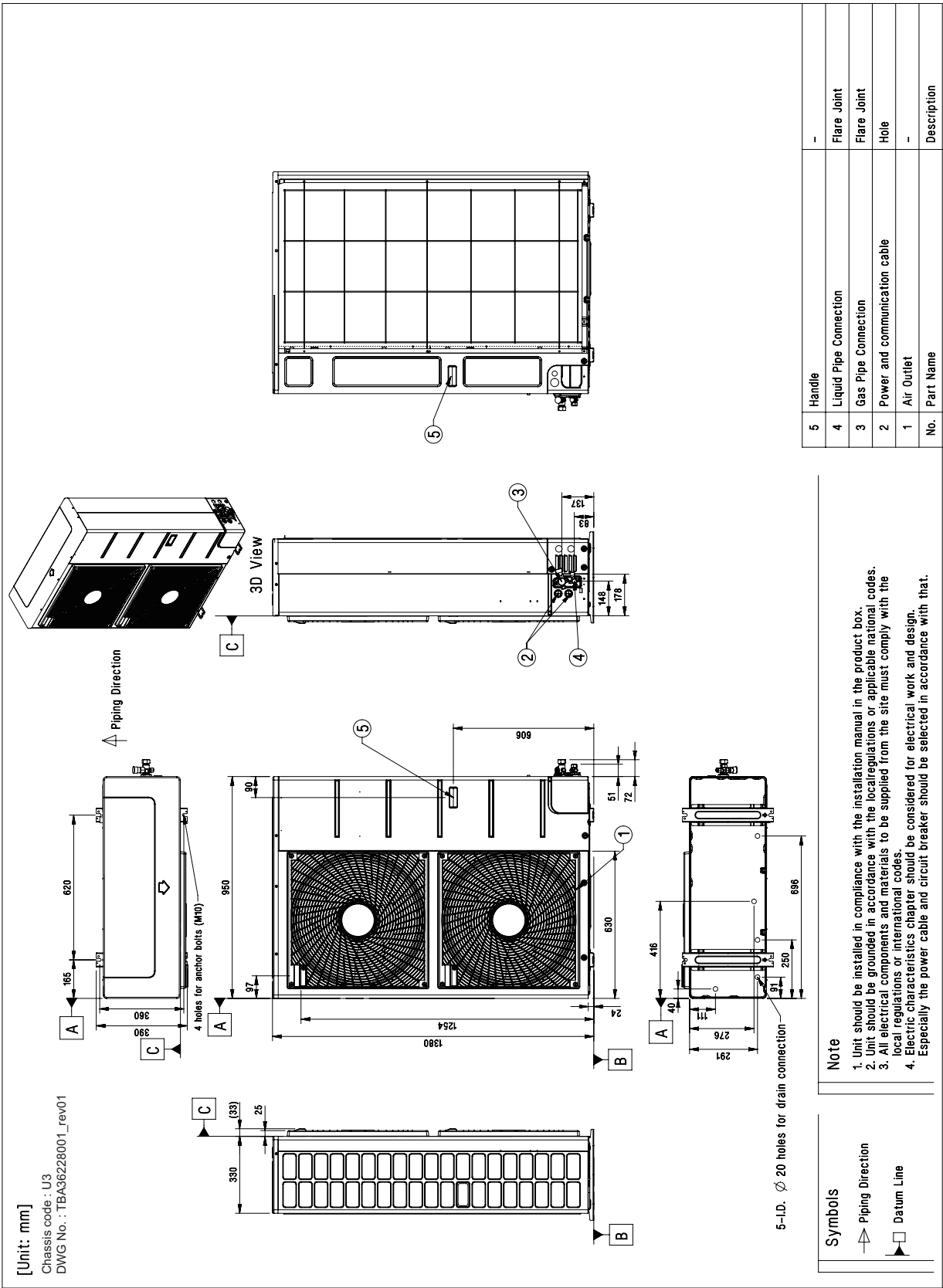
3. Dimensions

[U4 Chassis] ATUW30GPLT1, ATUW36GNLT1, ABUW30GM1T1, ABUW36GM3T1, AVUW30GM1T1, AVUW36GM2T1, ATUW36GYLT1



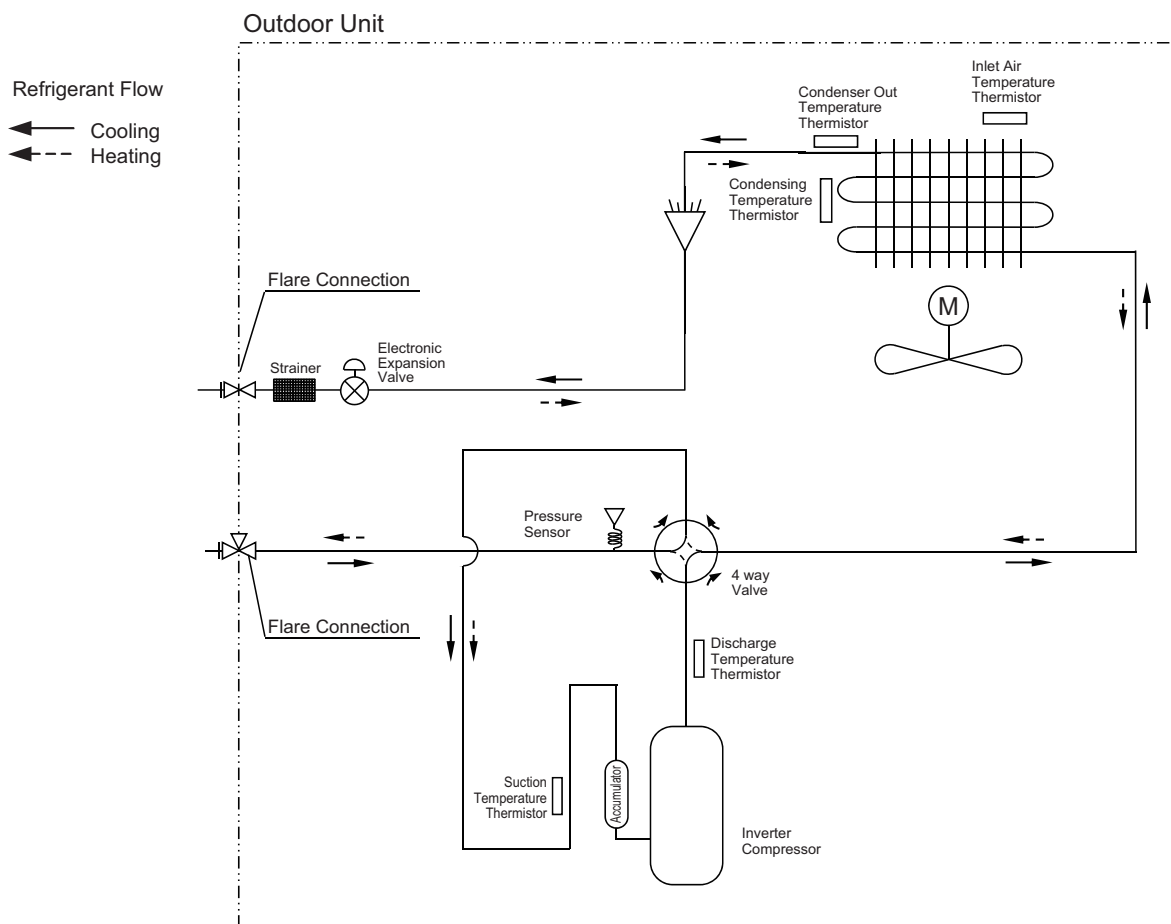
3. Dimensions

[U3 Chassis] ATUW48GMLT1, ATUW54GMLT1, ABUW48GM3T1, AVUW48GM2T1, ATUW48GYLT1, AVUW54GM2T1, ABUW54GM3T1, ABUW60GM3T1



4. Piping diagrams

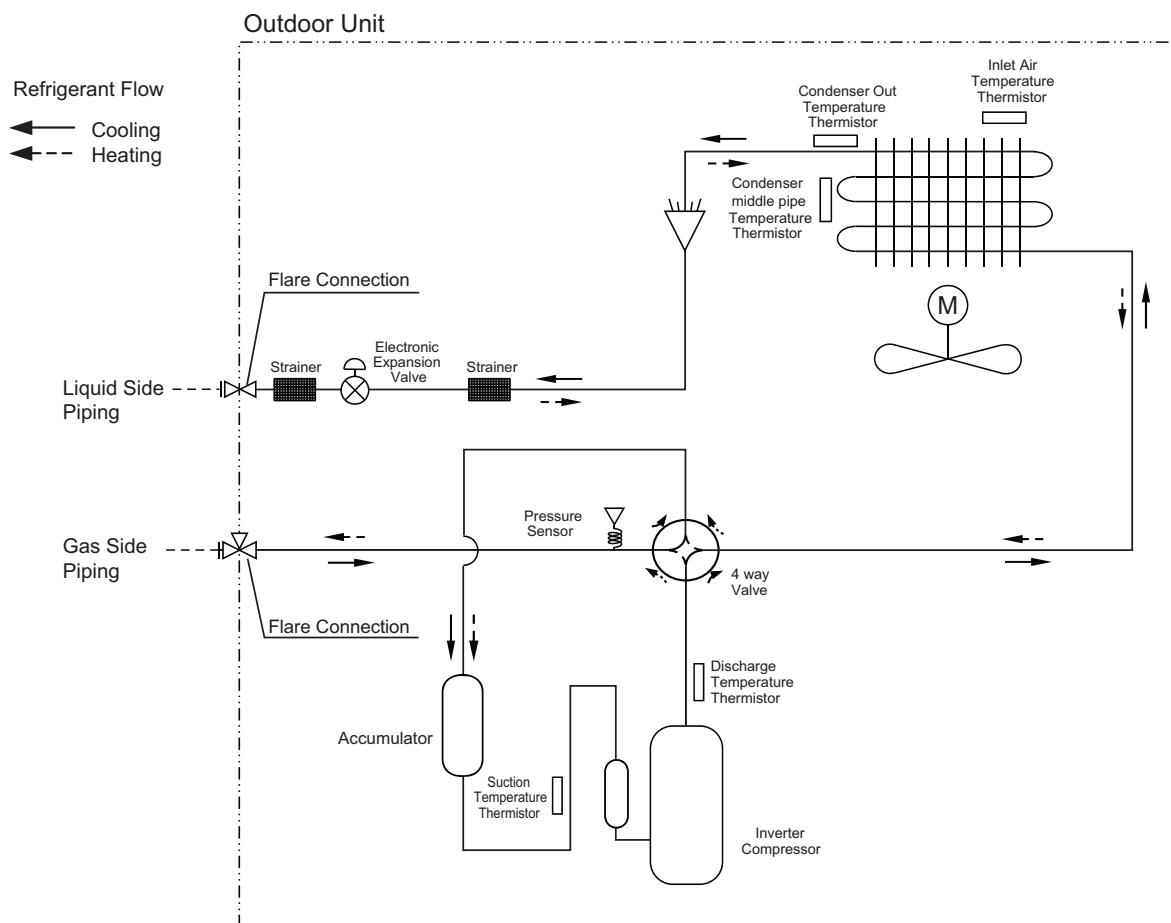
Models : 18k



Description	PCB Connector
	18k
Electronic Expansion Valve	CN_EEV1
Suction Temperature Thermistor	CN_TH2
Discharge Temperature Thermistor	
Condenser Out Temperature Thermistor	CN_TH1
Inlet Air Temperature Thermistor	
Condensing Temperature Thermistor	CN_TH3
Pressure sensor	CN_PRESS

4. Piping diagrams

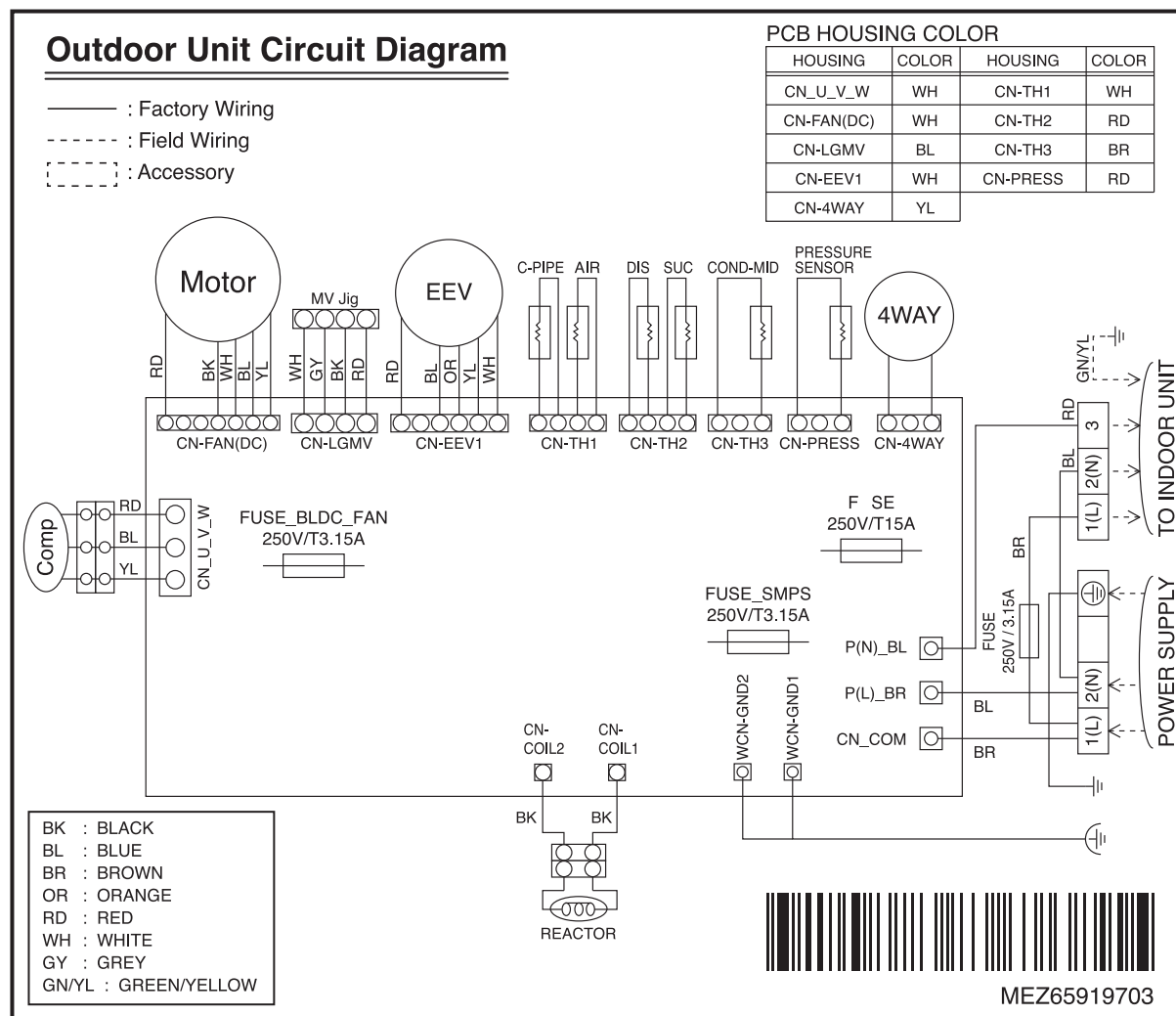
■ Models : 24 / 30 / 36 / 48 / 54 / 60k



Description	PCB Connector		
	24k	30/36k	48/54/60k
Electronic Expansion Valve	CN_EEV1	CN_EEV1	CN_EEV1
Suction Temperature Thermistor	CN_SUCTION	CN_SUCTION	CN_SUCTION
Discharge Temperature Thermistor	CN_DISCHARGE	CN_DISCHARGE	CN_DISCHA
Condenser Out Temperature Thermistor	CN_C_PIPE	CN_C_PIPE	CN_C_PIPE
Inlet Air Temperature Thermistor	CN_AIR	CN_AIR	CN_AIR
Condensing Temperature Thermistor	CN_MID	CN_MID	CN_MID
Pressure sensor	CN_H_PRESS	CN_H_PRESS	CN_H_PRESS

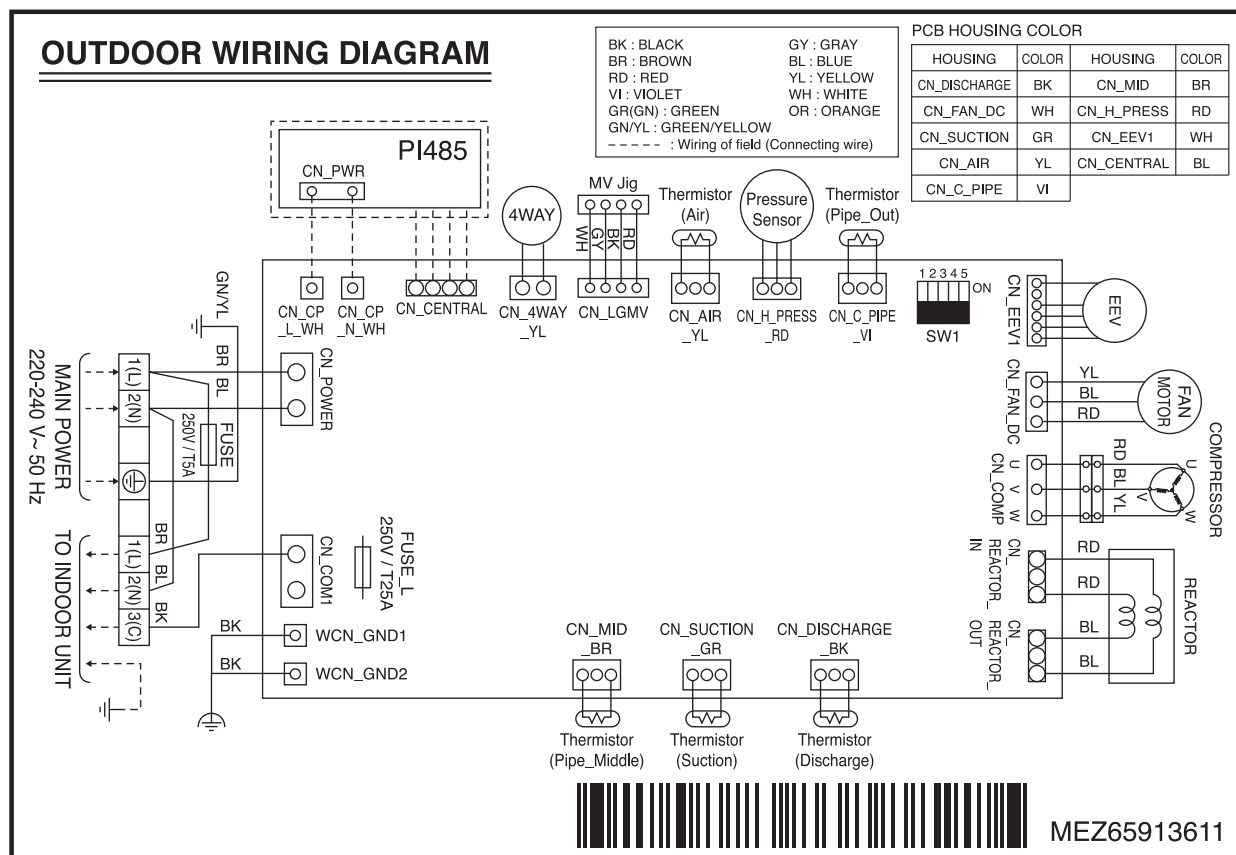
5. Wiring diagrams

[UL2 Chassis] ATUW18GPLT1, ABUW18GM1T1, AVUW18GM1T1



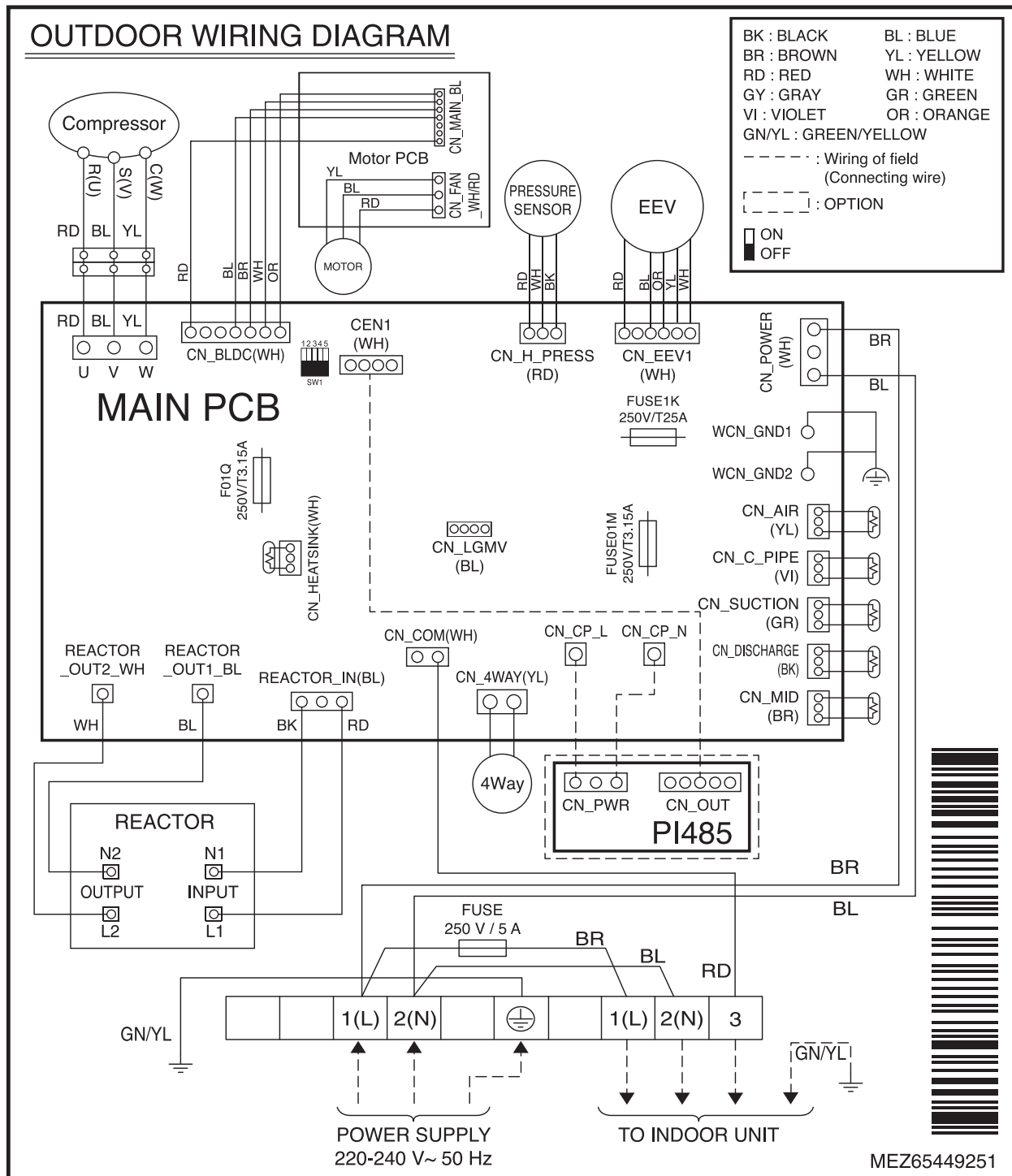
5. Wiring diagrams

[U24A Chassis] ATUW24GPLT1, ABUW24GM1T1, AVUW24GM1T1



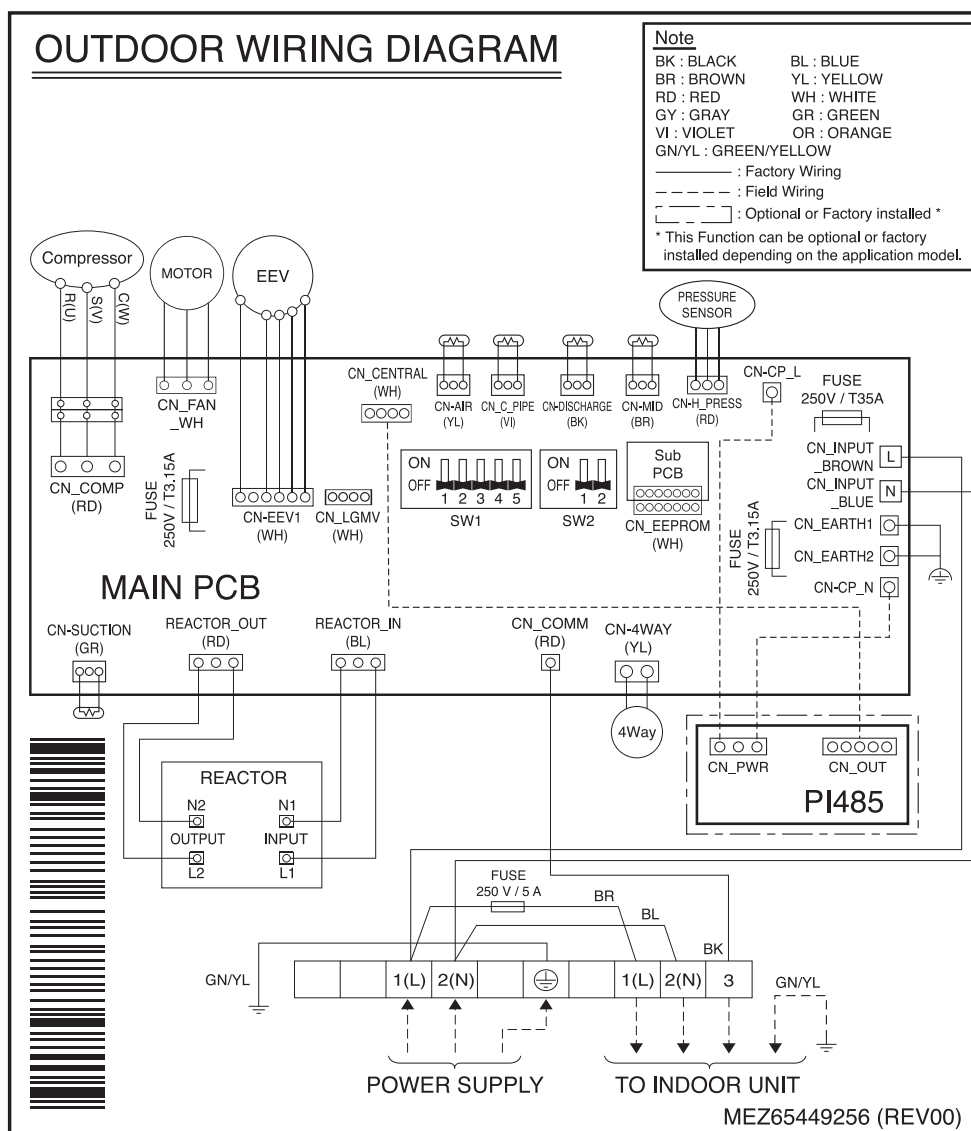
5. Wiring diagrams

[U4 Chassis] ATUW30GPLT1, ATUW36GNLT1, ABUW30GM1T1, ABUW36GM3T1
AVUW30GM1T1, AVUW36GM2T1



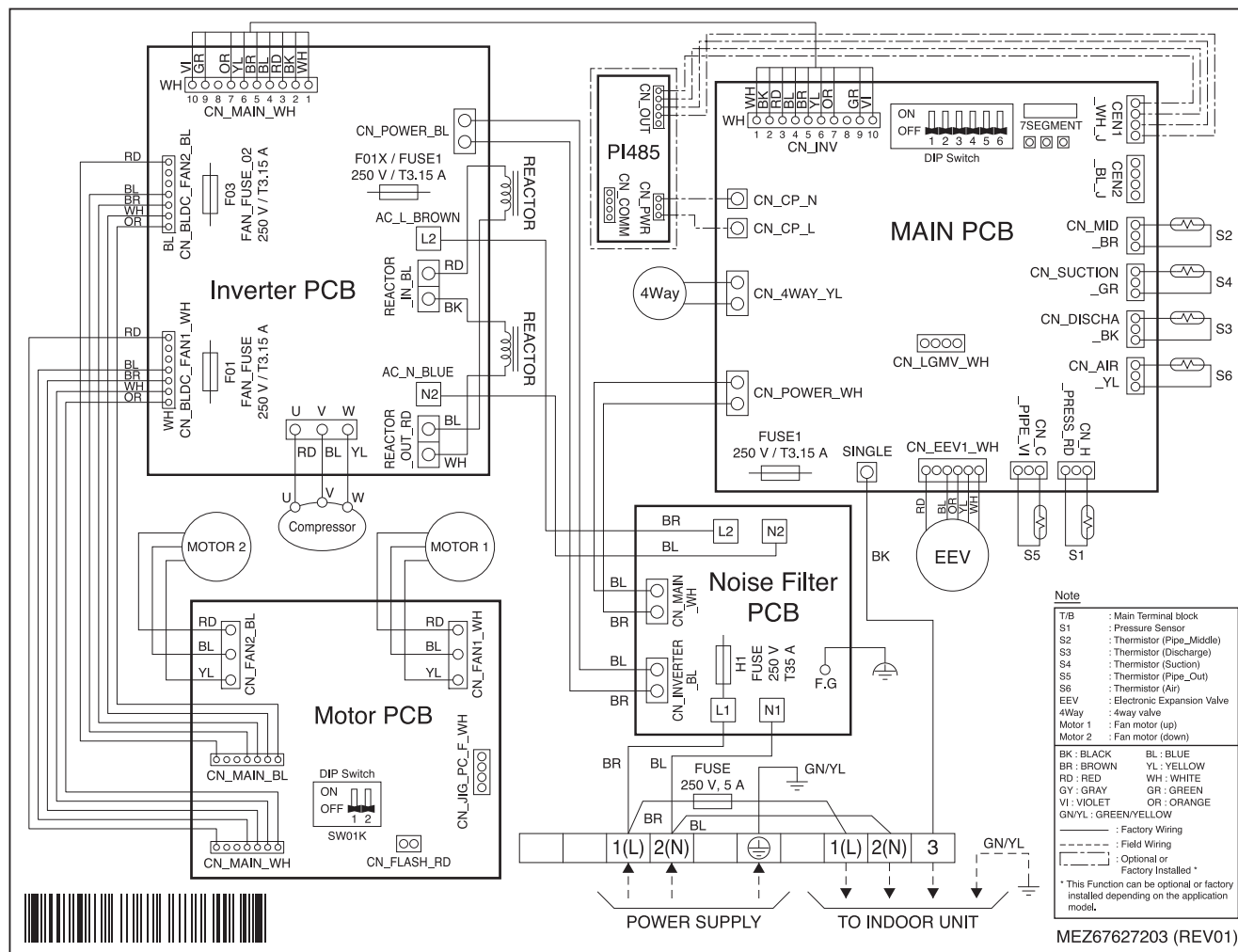
5. Wiring diagrams

[U4 Chassis] ATUW36GYLT1



5. Wiring diagrams

[U3 Chassis] ATUW48GMLT1, ATUW54GMLT1, ABUW48GM3T1, ABUW54GM3T1
ABUW60GM3T1, AVUW48GM2T1, AVUW54GM2T1, ATUW48GYLT1



6. Capacity tables

6.1 Ceiling Mounted cassette 4-way

[ATUW18GPLT1 + ATNW18GPLT1]

◆ Cooling

Outdoor Air Temp. °CDB	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	3.09	2.63	0.63	4.02	3.14	0.79	4.73	3.65	0.92	5.27	3.90	1.01	5.81	3.83	1.04	6.22	3.78	1.04
25.0	3.09	2.63	0.74	4.02	3.14	0.93	4.73	3.65	1.08	5.27	3.90	1.19	5.81	3.83	1.22	6.22	3.78	1.23
32.0	3.09	2.63	0.90	4.02	3.14	1.13	4.73	3.65	1.31	5.27	3.90	1.44	5.81	3.83	1.48	6.22	3.78	1.49
35.0	3.09	2.63	0.97	4.02	3.14	1.22	4.73	3.65	1.41	5.27	3.90	1.55	5.81	3.83	1.60	6.22	3.78	1.61
40.0	3.09	2.63	1.04	4.02	3.14	1.31	4.73	3.65	1.52	5.27	3.90	1.67	5.81	3.83	1.72	6.22	3.78	1.73
43.0	3.09	2.63	1.09	4.02	3.14	1.37	4.73	3.65	1.58	5.27	3.90	1.74	5.81	3.83	1.79	6.22	3.78	1.80
46.0	3.09	2.63	1.13	4.02	3.14	1.42	4.44	3.44	1.65	4.53	3.39	1.71	4.99	3.32	1.76	5.34	3.27	1.77
48.0	3.09	2.63	1.18	4.02	3.14	1.48	4.25	3.29	1.64	4.33	3.27	1.67	4.70	3.14	1.72	4.98	3.06	1.73

◆ Heating

Outdoor Air Temp. °CWB	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	4.80	1.30	4.77	1.43	4.74	1.55	4.72	1.68	4.70	1.80
0.0	5.32	1.55	5.30	1.68	5.27	1.80	5.06	1.70	4.85	1.60
6.0	5.83	1.65	5.55	1.58	5.27	1.50	5.06	1.43	4.85	1.35
10.0	5.83	1.55	5.55	1.43	5.27	1.30	5.06	1.24	4.85	1.19
15.0	5.83	1.30	5.55	1.18	5.27	1.05	5.06	1.02	4.85	0.98
18.0	5.83	1.15	5.55	1.03	5.27	0.90	5.06	0.88	4.85	0.86

[ATUW24GPLT1 + ATNW24GPLT1]

◆ Cooling

Outdoor Air Temp. °CDB	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.13	3.65	0.84	5.37	4.35	1.05	6.31	5.06	1.22	7.03	5.41	1.34	7.75	5.31	1.38	8.29	5.24	1.39
25.0	4.13	3.65	0.99	5.37	4.35	1.24	6.31	5.06	1.44	7.03	5.41	1.58	7.75	5.31	1.63	8.29	5.24	1.64
32.0	4.13	3.65	1.20	5.37	4.35	1.51	6.31	5.06	1.75	7.03	5.41	1.92	7.75	5.31	1.97	8.29	5.24	1.98
35.0	4.13	3.65	1.29	5.37	4.35	1.62	6.31	5.06	1.88	7.03	5.41	2.06	7.75	5.31	2.12	8.29	5.24	2.13
40.0	4.13	3.65	1.38	5.37	4.35	1.73	6.31	5.06	2.01	7.03	5.41	2.20	7.75	5.31	2.27	8.29	5.24	2.28
43.0	4.13	3.65	1.43	5.37	4.35	1.80	6.31	5.06	2.08	7.03	5.41	2.29	7.75	5.31	2.36	8.29	5.24	2.37
46.0	4.13	3.65	1.49	5.37	4.35	1.87	5.74	4.63	2.17	5.86	4.56	2.25	6.46	4.46	2.32	6.91	4.40	2.33
48.0	4.13	3.65	1.55	5.37	4.35	1.94	5.48	4.42	2.13	5.59	4.38	2.17	6.06	4.21	2.24	6.43	4.11	2.25

◆ Heating

Outdoor Air Temp. °CWB	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	6.40	1.78	6.36	1.95	6.33	2.12	6.30	2.29	6.26	2.46
0.0	7.10	2.12	7.07	2.29	7.03	2.46	6.75	2.32	6.47	2.18
6.0	7.78	2.26	7.41	2.15	7.03	2.05	6.75	1.95	6.47	1.85
10.0	7.78	2.12	7.41	1.95	7.03	1.78	6.75	1.70	6.47	1.62
15.0	7.78	1.78	7.41	1.61	7.03	1.44	6.75	1.39	6.47	1.34
18.0	7.78	1.57	7.41	1.40	7.03	1.23	6.75	1.20	6.47	1.17

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[ATUW30GPLT1 + ATNW30GPLT1]

◆ Cooling

Outdoor Air Temp. °CDB	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.81	4.37	0.98	6.26	5.21	1.23	7.36	6.06	1.43	8.20	6.48	1.57	9.04	6.36	1.61	9.67	6.28	1.62
25.0	4.81	4.37	1.16	6.26	5.21	1.45	7.36	6.06	1.68	8.20	6.48	1.85	9.04	6.36	1.90	9.67	6.28	1.91
32.0	4.81	4.37	1.40	6.26	5.21	1.76	7.36	6.06	2.04	8.20	6.48	2.24	9.04	6.36	2.31	9.67	6.28	2.32
35.0	4.81	4.37	1.51	6.26	5.21	1.90	7.36	6.06	2.20	8.20	6.48	2.41	9.04	6.36	2.48	9.67	6.28	2.50
40.0	4.81	4.37	1.63	6.26	5.21	2.05	7.36	6.06	2.38	8.20	6.48	2.61	9.04	6.36	2.68	9.67	6.28	2.70
43.0	4.81	4.37	1.71	6.26	5.21	2.14	7.36	6.06	2.48	8.20	6.48	2.72	9.04	6.36	2.81	9.67	6.28	2.82
46.0	4.81	4.37	1.78	6.26	5.21	2.24	7.36	6.06	2.59	7.38	5.89	3.02	8.13	5.77	3.11	8.71	5.68	3.13
48.0	4.81	4.37	1.86	6.26	5.21	2.34	6.93	5.75	2.71	7.07	5.69	2.90	7.67	5.47	2.98	8.13	5.33	3.00

◆ Heating

Outdoor Air Temp. °CWB	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	7.46	2.02	7.42	2.21	7.38	2.41	7.34	2.60	7.31	2.80
0.0	8.28	2.41	8.24	2.60	8.20	2.80	7.87	2.64	7.54	2.48
6.0	9.08	2.56	8.64	2.45	8.20	2.33	7.87	2.21	7.54	2.10
10.0	9.08	2.41	8.64	2.21	8.20	2.02	7.87	1.93	7.54	1.84
15.0	9.08	2.02	8.64	1.83	8.20	1.63	7.87	1.58	7.54	1.53
18.0	9.08	1.79	8.64	1.59	8.20	1.40	7.87	1.37	7.54	1.34

[ATUW36GNLT1 + ATNW36GNLT1]

◆ Cooling

Outdoor Air Temp. °CDB	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	5.86	5.25	1.19	7.63	6.27	1.50	8.97	7.28	1.73	9.99	7.79	1.90	11.01	7.65	1.96	11.79	7.55	1.97
25.0	5.86	5.25	1.41	7.63	6.27	1.77	8.97	7.28	2.05	9.99	7.79	2.25	11.01	7.65	2.31	11.79	7.55	2.33
32.0	5.86	5.25	1.71	7.63	6.27	2.14	8.97	7.28	2.48	9.99	7.79	2.72	11.01	7.65	2.81	11.79	7.55	2.82
35.0	5.86	5.25	1.84	7.63	6.27	2.31	8.97	7.28	2.67	9.99	7.79	2.93	11.01	7.65	3.02	11.79	7.55	3.04
40.0	5.86	5.25	1.99	7.63	6.27	2.49	8.97	7.28	2.89	9.99	7.79	3.17	11.01	7.65	3.26	11.79	7.55	3.28
43.0	5.86	5.25	2.08	7.63	6.27	2.61	8.97	7.28	3.02	9.99	7.79	3.31	11.01	7.65	3.41	11.79	7.55	3.43
46.0	5.86	5.25	2.17	7.63	6.27	2.72	8.32	6.80	3.15	8.49	6.70	3.44	9.36	6.55	3.54	10.02	6.46	3.56
48.0	5.86	5.25	2.27	7.63	6.27	2.85	7.95	6.50	3.30	8.12	6.45	3.36	8.80	6.20	3.47	9.33	6.04	3.49

◆ Heating

Outdoor Air Temp. °CWB	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	9.09	2.46	9.04	2.70	8.99	2.93	8.95	3.17	8.90	3.41
0.0	10.09	2.93	10.04	3.17	9.99	3.41	9.59	3.21	9.19	3.02
6.0	11.06	3.13	10.52	2.98	9.99	2.84	9.59	2.70	9.19	2.56
10.0	11.06	2.93	10.52	2.70	9.99	2.46	9.59	2.35	9.19	2.25
15.0	11.06	2.46	10.52	2.22	9.99	1.99	9.59	1.92	9.19	1.86
18.0	11.06	2.18	10.52	1.94	9.99	1.70	9.59	1.67	9.19	1.63

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[ATUW48GMLT1 + ATNW48GMLT1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	7.91	7.87	1.61	10.29	9.43	2.02	12.10	10.96	2.34	13.48	11.73	2.57	14.86	11.51	2.65	15.90	11.36	2.66
25.0	7.91	7.87	1.90	10.29	9.43	2.39	12.10	10.96	2.77	13.48	11.73	3.03	14.86	11.51	3.13	15.90	11.36	3.14
32.0	7.91	7.87	2.31	10.29	9.43	2.90	12.10	10.96	3.36	13.48	11.73	3.68	14.86	11.51	3.79	15.90	11.36	3.82
35.0	7.91	7.87	2.48	10.29	9.43	3.12	12.10	10.96	3.61	13.48	11.73	3.96	14.86	11.51	4.08	15.90	11.36	4.10
40.0	7.91	7.87	2.64	10.29	9.43	3.31	12.10	10.96	3.84	13.48	11.73	4.21	14.86	11.51	4.33	15.90	11.36	4.36
43.0	7.91	7.87	2.73	10.29	9.43	3.43	12.10	10.96	3.97	13.48	11.73	4.36	14.86	11.51	4.49	15.90	11.36	4.51
46.0	7.91	7.87	2.83	10.29	9.43	3.55	11.22	10.23	4.11	11.45	10.07	4.66	12.62	9.86	4.80	13.51	9.71	4.83
48.0	7.91	7.87	2.93	10.29	9.43	3.67	10.83	9.87	4.26	11.05	9.79	4.56	11.97	9.40	4.70	12.69	9.17	4.73

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	12.80	3.47	12.72	3.80	12.65	4.13	12.59	4.47	12.53	4.80
0.0	14.20	4.13	14.13	4.47	14.06	4.80	13.50	4.53	12.94	4.25
6.0	15.56	4.40	14.81	4.20	14.06	4.00	13.50	3.80	12.94	3.60
10.0	15.56	4.13	14.81	3.80	14.06	3.47	13.50	3.32	12.94	3.16
15.0	15.56	3.47	14.81	3.13	14.06	2.80	13.50	2.71	12.94	2.62
18.0	15.56	3.07	14.81	2.73	14.06	2.40	13.50	2.35	12.94	2.29

[ATUW54GMLT1 + ATNW54GMLT1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	9.29	9.24	2.19	12.08	11.45	2.75	14.20	13.31	3.19	15.82	14.24	3.50	17.44	13.97	3.61	18.66	13.79	3.63
25.0	9.29	9.24	2.59	12.08	11.45	3.25	14.20	13.31	3.77	15.82	14.24	4.13	17.44	13.97	4.26	18.66	13.79	4.28
32.0	9.29	9.24	3.14	12.08	11.45	3.94	14.20	13.31	4.57	15.82	14.24	5.01	17.44	13.97	5.16	18.66	13.79	5.19
35.0	9.29	9.24	3.38	12.08	11.45	4.24	14.20	13.31	4.91	15.82	14.24	5.39	17.44	13.97	5.55	18.66	13.79	5.58
40.0	9.29	9.24	3.75	12.08	11.45	4.71	14.20	13.31	5.45	15.82	14.24	5.98	17.44	13.97	6.16	18.66	13.79	6.20
43.0	9.29	9.24	3.97	12.08	11.45	4.99	13.80	13.02	5.78	14.08	12.81	6.34	15.52	12.53	6.53	16.61	12.35	6.57
46.0	9.29	9.24	4.21	12.08	11.45	5.19	12.09	11.41	5.29	12.34	11.35	5.40	13.60	11.08	5.56	14.56	10.90	5.59
48.0	9.29	9.24	4.46	11.36	10.89	5.05	11.59	11.05	5.16	11.83	10.96	5.26	12.82	10.50	5.42	13.59	10.22	5.45

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	14.93	4.41	14.85	4.84	14.77	5.26	14.70	5.68	14.62	6.11
0.0	16.58	5.26	16.49	5.68	16.41	6.11	15.75	5.76	15.10	5.41
6.0	18.17	5.60	17.29	5.35	16.41	5.09	15.75	4.84	15.10	4.58
10.0	18.17	5.26	17.29	4.84	16.41	4.41	15.75	4.22	15.10	4.03
15.0	18.17	4.41	17.29	3.99	16.41	3.56	15.75	3.45	15.10	3.33
18.0	18.17	3.90	17.29	3.48	16.41	3.05	15.75	2.99	15.10	2.92

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

6.2 Ceiling concealed duct - High static pressure

[ABUW18GM1T1 + ABNW18GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	3.09	3.02	0.63	4.02	3.60	0.79	4.73	4.19	0.92	5.27	4.48	1.01	5.81	4.40	1.04	6.22	4.34	1.04
25.0	3.09	3.02	0.74	4.02	3.60	0.93	4.73	4.19	1.08	5.27	4.48	1.19	5.81	4.40	1.22	6.22	4.34	1.23
32.0	3.09	3.02	0.90	4.02	3.60	1.13	4.73	4.19	1.31	5.27	4.48	1.44	5.81	4.40	1.48	6.22	4.34	1.49
35.0	3.09	3.02	0.97	4.02	3.60	1.22	4.73	4.19	1.41	5.27	4.48	1.55	5.81	4.40	1.60	6.22	4.34	1.61
40.0	3.09	3.02	1.04	4.02	3.60	1.31	4.73	4.19	1.52	5.27	4.48	1.67	5.81	4.40	1.72	6.22	4.34	1.73
43.0	3.09	3.02	1.09	4.02	3.60	1.37	4.73	4.19	1.58	5.27	4.48	1.74	5.81	4.40	1.79	6.22	4.34	1.80
46.0	3.09	3.02	1.13	4.02	3.60	1.42	4.44	3.96	1.65	4.53	3.89	1.72	4.99	3.81	1.77	5.34	3.75	1.78
48.0	3.09	3.02	1.18	4.02	3.60	1.48	4.26	3.79	1.65	4.35	3.76	1.68	4.71	3.62	1.73	5.00	3.52	1.74

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	4.80	1.30	4.77	1.43	4.74	1.55	4.72	1.68	4.70	1.80
0.0	5.32	1.55	5.30	1.68	5.27	1.80	5.06	1.70	4.85	1.60
6.0	5.83	1.65	5.55	1.58	5.27	1.50	5.06	1.43	4.85	1.35
10.0	5.83	1.55	5.55	1.43	5.27	1.30	5.06	1.24	4.85	1.19
15.0	5.83	1.30	5.55	1.18	5.27	1.05	5.06	1.02	4.85	0.98
18.0	5.83	1.15	5.55	1.03	5.27	0.90	5.06	0.88	4.85	0.86

[ABUW24GM1T1 + ABNW24GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.13	4.03	0.84	5.37	4.81	1.05	6.31	5.59	1.22	7.03	5.98	1.34	7.75	5.86	1.38	8.29	5.79	1.39
25.0	4.13	4.03	0.99	5.37	4.81	1.24	6.31	5.59	1.44	7.03	5.98	1.58	7.75	5.86	1.63	8.29	5.79	1.64
32.0	4.13	4.03	1.20	5.37	4.81	1.51	6.31	5.59	1.75	7.03	5.98	1.92	7.75	5.86	1.97	8.29	5.79	1.98
35.0	4.13	4.03	1.29	5.37	4.81	1.62	6.31	5.59	1.88	7.03	5.98	2.06	7.75	5.86	2.12	8.29	5.79	2.13
40.0	4.13	4.03	1.38	5.37	4.81	1.73	6.31	5.59	2.01	7.03	5.98	2.20	7.75	5.86	2.27	8.29	5.79	2.28
43.0	4.13	4.03	1.43	5.37	4.81	1.80	6.31	5.59	2.08	7.03	5.98	2.29	7.75	5.86	2.36	8.29	5.79	2.37
46.0	4.13	4.03	1.49	5.37	4.81	1.87	5.74	5.12	2.17	5.86	5.04	2.32	6.46	4.93	2.39	6.91	4.86	2.40
48.0	4.13	4.03	1.55	5.37	4.81	1.94	5.50	4.90	2.22	5.61	4.86	2.27	6.08	4.67	2.33	6.45	4.55	2.35

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	6.40	1.78	6.36	1.95	6.33	2.12	6.30	2.29	6.26	2.46
0.0	7.10	2.12	7.07	2.29	7.03	2.46	6.75	2.32	6.47	2.18
6.0	7.78	2.26	7.41	2.15	7.03	2.05	6.75	1.95	6.47	1.85
10.0	7.78	2.12	7.41	1.95	7.03	1.78	6.75	1.70	6.47	1.62
15.0	7.78	1.78	7.41	1.61	7.03	1.44	6.75	1.39	6.47	1.34
18.0	7.78	1.57	7.41	1.40	7.03	1.23	6.75	1.20	6.47	1.17

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[ABUW30GM1T1 + ABNW30GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.81	4.79	0.98	6.26	5.74	1.23	7.36	6.67	1.43	8.20	7.13	1.57	9.04	7.00	1.61	9.67	6.91	1.62
25.0	4.81	4.79	1.16	6.26	5.74	1.45	7.36	6.67	1.68	8.20	7.13	1.85	9.04	7.00	1.90	9.67	6.91	1.91
32.0	4.81	4.79	1.40	6.26	5.74	1.76	7.36	6.67	2.04	8.20	7.13	2.24	9.04	7.00	2.31	9.67	6.91	2.32
35.0	4.81	4.79	1.51	6.26	5.74	1.90	7.36	6.67	2.20	8.20	7.13	2.41	9.04	7.00	2.48	9.67	6.91	2.50
40.0	4.81	4.79	1.63	6.26	5.74	2.05	7.36	6.67	2.38	8.20	7.13	2.61	9.04	7.00	2.68	9.67	6.91	2.70
43.0	4.81	4.79	1.71	6.26	5.74	2.14	7.36	6.67	2.48	8.20	7.13	2.72	9.04	7.00	2.81	9.67	6.91	2.82
46.0	4.81	4.79	1.78	6.26	5.74	2.24	6.91	6.30	2.59	7.05	6.20	2.74	7.77	6.07	2.82	8.32	5.98	2.84
48.0	4.81	4.79	1.86	6.26	5.74	2.34	6.63	6.04	2.63	6.76	5.99	2.68	7.33	5.76	2.76	7.77	5.61	2.78

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	7.46	2.21	7.42	2.42	7.38	2.64	7.34	2.85	7.31	3.06
0.0	8.28	2.64	8.24	2.85	8.20	3.06	7.87	2.89	7.54	2.71
6.0	9.08	2.81	8.64	2.68	8.20	2.55	7.87	2.42	7.54	2.30
10.0	9.08	2.64	8.64	2.42	8.20	2.21	7.87	2.11	7.54	2.02
15.0	9.08	2.21	8.64	2.00	8.20	1.79	7.87	1.73	7.54	1.67
18.0	9.08	1.96	8.64	1.74	8.20	1.53	7.87	1.50	7.54	1.46

[ABUW36GM3T1 + ABNW36GM3T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	5.86	5.83	1.19	7.63	7.07	1.50	8.97	8.22	1.73	9.99	8.79	1.90	11.01	8.63	1.96	11.79	8.52	1.97
25.0	5.86	5.83	1.41	7.63	7.07	1.77	8.97	8.22	2.05	9.99	8.79	2.25	11.01	8.63	2.31	11.79	8.52	2.33
32.0	5.86	5.83	1.71	7.63	7.07	2.14	8.97	8.22	2.48	9.99	8.79	2.72	11.01	8.63	2.81	11.79	8.52	2.82
35.0	5.86	5.83	1.84	7.63	7.07	2.31	8.97	8.22	2.67	9.99	8.79	2.93	11.01	8.63	3.02	11.79	8.52	3.04
40.0	5.86	5.83	1.99	7.63	7.07	2.49	8.97	8.22	2.89	9.99	8.79	3.17	11.01	8.63	3.26	11.79	8.52	3.28
43.0	5.86	5.83	2.08	7.63	7.07	2.61	8.97	8.22	3.02	9.99	8.79	3.31	11.01	8.63	3.41	11.79	8.52	3.43
46.0	5.86	5.83	2.17	7.63	7.07	2.72	8.32	7.67	3.15	8.49	7.55	3.24	9.36	7.39	3.34	10.02	7.28	3.36
48.0	5.86	5.83	2.27	7.63	7.07	2.85	7.95	7.34	3.11	8.12	7.28	3.17	8.80	6.99	3.27	9.33	6.82	3.28

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	8.54	2.13	8.49	2.34	8.44	2.54	8.40	2.75	8.36	2.95
0.0	9.47	2.54	9.43	2.75	9.38	2.95	9.00	2.78	8.63	2.62
6.0	10.38	2.71	9.88	2.58	9.38	2.46	9.00	2.34	8.63	2.21
10.0	10.38	2.54	9.88	2.34	9.38	2.13	9.00	2.04	8.63	1.95
15.0	10.38	2.13	9.88	1.93	9.38	1.72	9.00	1.67	8.63	1.61
18.0	10.38	1.89	9.88	1.68	9.38	1.48	9.00	1.44	8.63	1.41

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[ABUW48GM3T1 + ABNW48GM3T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	7.91	7.87	1.61	10.29	9.76	2.02	12.10	11.34	2.34	13.48	12.13	2.57	14.86	11.90	2.65	15.90	11.75	2.66
25.0	7.91	7.87	1.90	10.29	9.76	2.39	12.10	11.34	2.77	13.48	12.13	3.03	14.86	11.90	3.13	15.90	11.75	3.14
32.0	7.91	7.87	2.31	10.29	9.76	2.90	12.10	11.34	3.36	13.48	12.13	3.68	14.86	11.90	3.79	15.90	11.75	3.82
35.0	7.91	7.87	2.48	10.29	9.76	3.12	12.10	11.34	3.61	13.48	12.13	3.96	14.86	11.90	4.08	15.90	11.75	4.10
40.0	7.91	7.87	2.64	10.29	9.76	3.31	12.10	11.34	3.84	13.48	12.13	4.21	14.86	11.90	4.33	15.90	11.75	4.36
43.0	7.91	7.87	2.73	10.29	9.76	3.43	12.10	11.34	3.97	13.48	12.13	4.36	14.86	11.90	4.49	15.90	11.75	4.51
46.0	7.91	7.87	2.83	10.29	9.76	3.55	11.36	10.71	4.11	11.59	10.55	4.27	12.77	10.32	4.40	13.67	10.17	4.42
48.0	7.91	7.87	2.93	10.29	9.76	3.67	10.93	10.31	4.09	11.15	10.22	4.17	12.09	9.82	4.30	12.81	9.57	4.32

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	12.80	3.47	12.72	3.80	12.65	4.13	12.59	4.47	12.53	4.80
0.0	14.20	4.13	14.13	4.47	14.06	4.80	13.50	4.53	12.94	4.25
6.0	15.56	4.40	14.81	4.20	14.06	4.00	13.50	3.80	12.94	3.60
10.0	15.56	4.13	14.81	3.80	14.06	3.47	13.50	3.32	12.94	3.16
15.0	15.56	3.47	14.81	3.13	14.06	2.80	13.50	2.71	12.94	2.62
18.0	15.56	3.07	14.81	2.73	14.06	2.40	13.50	2.35	12.94	2.29

[ABUW54GM3T1 + ABNW54GM3T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	9.29	9.24	2.19	12.08	11.83	2.75	14.20	13.75	3.19	15.82	14.71	3.50	17.44	14.44	3.61	18.66	14.25	3.63
25.0	9.29	9.24	2.59	12.08	11.83	3.25	14.20	13.75	3.77	15.82	14.71	4.13	17.44	14.44	4.26	18.66	14.25	4.28
32.0	9.29	9.24	3.14	12.08	11.83	3.94	14.20	13.75	4.57	15.82	14.71	5.01	17.44	14.44	5.16	18.66	14.25	5.19
35.0	9.29	9.24	3.38	12.08	11.83	4.24	14.20	13.75	4.91	15.82	14.71	5.39	17.44	14.44	5.55	18.66	14.25	5.58
40.0	9.29	9.24	3.69	12.08	11.83	4.63	14.20	13.75	5.36	15.82	14.71	5.88	17.44	14.44	6.06	18.66	14.25	6.10
43.0	9.29	9.24	3.87	12.08	11.83	4.86	14.20	13.75	5.63	14.56	13.68	6.18	16.04	13.39	6.37	17.17	13.20	6.40
46.0	9.29	9.24	4.07	12.08	11.83	4.87	12.41	12.09	4.97	12.66	12.03	5.07	13.95	11.74	5.22	14.94	11.55	5.25
48.0	9.29	9.24	4.27	11.59	11.48	4.74	11.82	11.70	4.84	12.07	11.55	4.93	13.09	11.07	5.08	13.88	10.78	5.11

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	14.93	4.00	14.85	4.38	14.77	4.76	14.70	5.15	14.62	5.53
0.0	16.58	4.76	16.49	5.15	16.41	5.53	15.75	5.22	15.10	4.90
6.0	18.17	5.07	17.29	4.84	16.41	4.61	15.75	4.38	15.10	4.15
10.0	18.17	4.76	17.29	4.38	16.41	4.00	15.75	3.82	15.10	3.65
15.0	18.17	4.00	17.29	3.61	16.41	3.23	15.75	3.12	15.10	3.02
18.0	18.17	3.53	17.29	3.15	16.41	2.77	15.75	2.70	15.10	2.64

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[ABUW60GM3T1 + ABNW60GM3T1]

◆ Cooling

Outdoor Air Temp. °CDB	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	9.29	9.24	2.19	12.08	11.83	2.75	14.20	13.75	3.19	15.82	14.71	3.50	17.44	14.44	3.61	18.66	14.25	3.63
25.0	9.29	9.24	2.59	12.08	11.83	3.25	14.20	13.75	3.77	15.82	14.71	4.13	17.44	14.44	4.26	18.66	14.25	4.28
32.0	9.29	9.24	3.14	12.08	11.83	3.94	14.20	13.75	4.57	15.82	14.71	5.01	17.44	14.44	5.16	18.66	14.25	5.19
35.0	9.29	9.24	3.38	12.08	11.83	4.24	14.20	13.75	4.91	15.82	14.71	5.39	17.44	14.44	5.55	18.66	14.25	5.58
40.0	9.29	9.24	3.69	12.08	11.83	4.63	14.20	13.75	5.36	15.82	14.71	5.88	17.44	14.44	6.06	18.66	14.25	6.10
43.0	9.29	9.24	3.87	12.08	11.83	4.86	14.20	13.75	5.63	14.56	13.68	6.18	16.04	13.39	6.37	17.17	13.20	6.40
46.0	9.29	9.24	4.07	12.08	11.83	4.87	12.41	12.09	4.97	12.66	12.03	5.07	13.95	11.74	5.22	14.94	11.55	5.25
48.0	9.29	9.24	4.27	11.59	11.48	4.74	11.82	11.70	4.84	12.07	11.55	4.93	13.09	11.07	5.08	13.88	10.78	5.11

◆ Heating

Outdoor Air Temp. °CWB	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	14.93	4.00	14.85	4.38	14.77	4.76	14.70	5.15	14.62	5.53
0.0	16.58	4.76	16.49	5.15	16.41	5.53	15.75	5.22	15.10	4.90
6.0	18.17	5.07	17.29	4.84	16.41	4.61	15.75	4.38	15.10	4.15
10.0	18.17	4.76	17.29	4.38	16.41	4.00	15.75	3.82	15.10	3.65
15.0	18.17	4.00	17.29	3.61	16.41	3.23	15.75	3.12	15.10	3.02
18.0	18.17	3.53	17.29	3.15	16.41	2.77	15.75	2.70	15.10	2.64

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

6.3 Ceiling Suspended Unit

[AVUW18GM1T1 + AVNW18GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	3.09	2.59	0.63	4.02	3.09	0.79	4.73	3.60	0.92	5.27	3.85	1.01	5.81	3.77	1.04	6.22	3.73	1.04
25.0	3.09	2.59	0.74	4.02	3.09	0.93	4.73	3.60	1.08	5.27	3.85	1.19	5.81	3.77	1.22	6.22	3.73	1.23
32.0	3.09	2.59	0.90	4.02	3.09	1.13	4.73	3.60	1.31	5.27	3.85	1.44	5.81	3.77	1.48	6.22	3.73	1.49
35.0	3.09	2.59	0.97	4.02	3.09	1.22	4.73	3.60	1.41	5.27	3.85	1.55	5.81	3.77	1.60	6.22	3.73	1.61
40.0	3.09	2.59	1.04	4.02	3.09	1.31	4.73	3.60	1.52	5.27	3.85	1.67	5.81	3.77	1.72	6.22	3.73	1.73
43.0	3.09	2.59	1.09	4.02	3.09	1.37	4.73	3.60	1.58	5.27	3.85	1.74	5.81	3.77	1.79	6.22	3.73	1.80
46.0	3.09	2.59	1.13	4.02	3.09	1.42	4.28	3.28	1.65	4.37	3.23	1.73	4.82	3.16	1.78	5.16	3.11	1.79
48.0	3.09	2.59	1.18	4.02	3.09	1.48	4.09	3.13	1.66	4.17	3.10	1.69	4.53	2.98	1.74	4.80	2.91	1.75

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	5.06	1.40	5.03	1.54	5.00	1.67	4.98	1.81	4.95	1.94
0.0	5.62	1.67	5.59	1.81	5.56	1.94	5.34	1.83	5.12	1.72
6.0	6.16	1.78	5.86	1.70	5.56	1.62	5.34	1.54	5.12	1.46
10.0	6.16	1.67	5.86	1.54	5.56	1.40	5.34	1.34	5.12	1.28
15.0	6.16	1.40	5.86	1.27	5.56	1.13	5.34	1.10	5.12	1.06
18.0	6.16	1.24	5.86	1.11	5.56	0.97	5.34	0.95	5.12	0.93

[AVUW24GM1T1 + AVNW24GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.13	3.65	0.84	5.37	4.35	1.05	6.31	5.06	1.22	7.03	5.41	1.34	7.75	5.31	1.38	8.29	5.24	1.39
25.0	4.13	3.65	0.99	5.37	4.35	1.24	6.31	5.06	1.44	7.03	5.41	1.58	7.75	5.31	1.63	8.29	5.24	1.64
32.0	4.13	3.65	1.20	5.37	4.35	1.51	6.31	5.06	1.75	7.03	5.41	1.92	7.75	5.31	1.97	8.29	5.24	1.98
35.0	4.13	3.65	1.29	5.37	4.35	1.62	6.31	5.06	1.88	7.03	5.41	2.06	7.75	5.31	2.12	8.29	5.24	2.13
40.0	4.13	3.65	1.38	5.37	4.35	1.73	6.31	5.06	2.01	7.03	5.41	2.20	7.75	5.31	2.27	8.29	5.24	2.28
43.0	4.13	3.65	1.43	5.37	4.35	1.80	6.31	5.06	2.08	7.03	5.41	2.29	7.75	5.31	2.36	8.29	5.24	2.37
46.0	4.13	3.65	1.49	5.37	4.35	1.87	5.92	4.78	2.17	6.04	4.70	2.38	6.66	4.60	2.45	7.13	4.53	2.47
48.0	4.13	3.65	1.55	5.37	4.35	1.94	5.68	4.58	2.25	5.80	4.55	2.33	6.28	4.37	2.40	6.66	4.26	2.41

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	6.40	1.78	6.36	1.95	6.33	2.12	6.30	2.29	6.26	2.46
0.0	7.10	2.12	7.07	2.29	7.03	2.46	6.75	2.32	6.47	2.18
6.0	7.78	2.26	7.41	2.15	7.03	2.05	6.75	1.95	6.47	1.85
10.0	7.78	2.12	7.41	1.95	7.03	1.78	6.75	1.70	6.47	1.62
15.0	7.78	1.78	7.41	1.61	7.03	1.44	6.75	1.39	6.47	1.34
18.0	7.78	1.57	7.41	1.40	7.03	1.23	6.75	1.20	6.47	1.17

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[AVUW30GM1T1 + AVNW30GM1T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	4.81	4.70	0.98	6.26	5.61	1.23	7.36	6.52	1.43	8.20	6.97	1.57	9.04	6.84	1.61	9.67	6.75	1.62
25.0	4.81	4.70	1.16	6.26	5.61	1.45	7.36	6.52	1.68	8.20	6.97	1.85	9.04	6.84	1.90	9.67	6.75	1.91
32.0	4.81	4.70	1.40	6.26	5.61	1.76	7.36	6.52	2.04	8.20	6.97	2.24	9.04	6.84	2.31	9.67	6.75	2.32
35.0	4.81	4.70	1.51	6.26	5.61	1.90	7.36	6.52	2.20	8.20	6.97	2.41	9.04	6.84	2.48	9.67	6.75	2.50
40.0	4.81	4.70	1.63	6.26	5.61	2.05	7.36	6.52	2.38	8.20	6.97	2.61	9.04	6.84	2.68	9.67	6.75	2.70
43.0	4.81	4.70	1.71	6.26	5.61	2.14	7.36	6.52	2.48	8.20	6.97	2.72	9.04	6.84	2.81	9.67	6.75	2.82
46.0	4.81	4.70	1.78	6.26	5.61	2.24	6.91	6.16	2.59	7.05	6.06	2.85	7.77	5.93	2.94	8.32	5.84	2.95
48.0	4.81	4.70	1.86	6.26	5.61	2.34	6.63	5.91	2.71	6.76	5.86	2.79	7.33	5.63	2.87	7.77	5.49	2.89

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	7.46	2.02	7.42	2.21	7.38	2.41	7.34	2.60	7.31	2.80
0.0	8.28	2.41	8.24	2.60	8.20	2.80	7.87	2.64	7.54	2.48
6.0	9.08	2.56	8.64	2.45	8.20	2.33	7.87	2.21	7.54	2.10
10.0	9.08	2.41	8.64	2.21	8.20	2.02	7.87	1.93	7.54	1.84
15.0	9.08	2.02	8.64	1.83	8.20	1.63	7.87	1.58	7.54	1.53
18.0	9.08	1.79	8.64	1.59	8.20	1.40	7.87	1.37	7.54	1.34

[AVUW36GM2T1 + AVNW36GM2T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	5.57	5.44	1.14	7.25	6.49	1.43	8.52	7.54	1.65	9.49	8.07	1.81	10.46	7.92	1.87	11.20	7.81	1.88
25.0	5.57	5.44	1.34	7.25	6.49	1.68	8.52	7.54	1.95	9.49	8.07	2.14	10.46	7.92	2.20	11.20	7.81	2.22
32.0	5.57	5.44	1.63	7.25	6.49	2.04	8.52	7.54	2.37	9.49	8.07	2.59	10.46	7.92	2.67	11.20	7.81	2.69
35.0	5.57	5.44	1.75	7.25	6.49	2.20	8.52	7.54	2.54	9.49	8.07	2.79	10.46	7.92	2.87	11.20	7.81	2.89
40.0	5.57	5.44	1.89	7.25	6.49	2.37	8.52	7.54	2.75	9.49	8.07	3.02	10.46	7.92	3.11	11.20	7.81	3.13
43.0	5.57	5.44	1.98	7.25	6.49	2.48	8.52	7.54	2.87	9.49	8.07	3.15	10.46	7.92	3.25	11.20	7.81	3.27
46.0	5.57	5.44	2.07	7.25	6.49	2.59	8.00	7.12	3.00	8.16	7.01	3.23	8.99	6.86	3.33	9.63	6.76	3.35
48.0	5.57	5.44	2.16	7.25	6.49	2.71	7.67	6.83	3.10	7.83	6.78	3.16	8.49	6.51	3.26	9.00	6.35	3.28

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	8.64	2.34	8.59	2.57	8.54	2.79	8.50	3.02	8.46	3.24
0.0	9.59	2.79	9.54	3.02	9.49	3.24	9.11	3.06	8.73	2.87
6.0	10.51	2.97	10.00	2.84	9.49	2.70	9.11	2.57	8.73	2.43
10.0	10.51	2.79	10.00	2.57	9.49	2.34	9.11	2.24	8.73	2.14
15.0	10.51	2.34	10.00	2.12	9.49	1.89	9.11	1.83	8.73	1.77
18.0	10.51	2.07	10.00	1.85	9.49	1.62	9.11	1.58	8.73	1.55

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

[AVUW48GM2T1 + AVNW48GM2T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	7.91	7.87	1.61	10.29	9.43	2.02	12.10	10.96	2.34	13.48	11.73	2.57	14.86	11.51	2.65	15.90	11.36	2.66
25.0	7.91	7.87	1.90	10.29	9.43	2.39	12.10	10.96	2.77	13.48	11.73	3.03	14.86	11.51	3.13	15.90	11.36	3.14
32.0	7.91	7.87	2.31	10.29	9.43	2.90	12.10	10.96	3.36	13.48	11.73	3.68	14.86	11.51	3.79	15.90	11.36	3.82
35.0	7.91	7.87	2.48	10.29	9.43	3.12	12.10	10.96	3.61	13.48	11.73	3.96	14.86	11.51	4.08	15.90	11.36	4.10
40.0	7.91	7.87	2.66	10.29	9.43	3.34	12.10	10.96	3.87	13.48	11.73	4.24	14.86	11.51	4.37	15.90	11.36	4.40
43.0	7.91	7.87	2.77	10.29	9.43	3.47	12.10	10.96	4.02	12.74	11.20	4.41	14.04	10.96	4.55	15.03	10.80	4.57
46.0	7.91	7.87	2.88	10.29	9.43	3.61	10.30	9.39	4.02	10.51	9.34	4.10	11.58	9.12	4.22	12.40	8.97	4.25
48.0	7.91	7.87	2.99	9.80	9.08	3.76	10.00	9.26	3.93	10.21	9.14	4.01	11.06	8.76	4.13	11.72	8.52	4.15

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	12.80	3.47	12.72	3.80	12.65	4.13	12.59	4.47	12.53	4.80
0.0	14.20	4.13	14.13	4.47	14.06	4.80	13.50	4.53	12.94	4.25
6.0	15.56	4.40	14.81	4.20	14.06	4.00	13.50	3.80	12.94	3.60
10.0	15.56	4.13	14.81	3.80	14.06	3.47	13.50	3.32	12.94	3.16
15.0	15.56	3.47	14.81	3.13	14.06	2.80	13.50	2.71	12.94	2.62
18.0	15.56	3.07	14.81	2.73	14.06	2.40	13.50	2.35	12.94	2.29

[AVUW54GM2T1 + AVNW54GM2T1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	9.29	8.74	2.19	12.08	10.43	2.75	14.20	12.13	3.19	15.82	12.97	3.50	17.44	12.73	3.61	18.66	12.57	3.63
25.0	9.29	8.74	2.59	12.08	10.43	3.25	14.20	12.13	3.77	15.82	12.97	4.13	17.44	12.73	4.26	18.66	12.57	4.28
32.0	9.29	8.74	3.14	12.08	10.43	3.94	14.20	12.13	4.57	15.82	12.97	5.01	17.44	12.73	5.16	18.66	12.57	5.19
35.0	9.29	8.74	3.38	12.08	10.43	4.24	14.20	12.13	4.91	15.82	12.97	5.39	17.44	12.73	5.55	18.66	12.57	5.58
40.0	9.29	8.74	3.69	12.08	10.43	4.63	14.20	12.13	5.36	15.82	12.97	5.88	17.44	12.73	6.06	18.66	12.57	6.10
43.0	9.29	8.74	3.87	12.08	10.43	4.86	14.20	12.13	5.63	14.56	12.06	6.18	16.04	11.81	6.37	17.17	11.63	6.40
46.0	9.29	8.74	4.07	12.08	10.43	4.80	12.41	10.66	4.90	12.66	10.61	5.00	13.95	10.35	5.15	14.94	10.19	5.18
48.0	9.29	8.74	4.27	11.59	10.12	4.68	11.82	10.32	4.77	12.07	10.19	4.87	13.09	9.76	5.02	13.88	9.51	5.04

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	14.93	4.41	14.85	4.84	14.77	5.26	14.70	5.68	14.62	6.11
0.0	16.58	5.26	16.49	5.68	16.41	6.11	15.75	5.76	15.10	5.41
6.0	18.17	5.60	17.29	5.35	16.41	5.09	15.75	4.84	15.10	4.58
10.0	18.17	5.26	17.29	4.84	16.41	4.41	15.75	4.22	15.10	4.03
15.0	18.17	4.41	17.29	3.99	16.41	3.56	15.75	3.45	15.10	3.33
18.0	18.17	3.90	17.29	3.48	16.41	3.05	15.75	2.99	15.10	2.92

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

6. Capacity tables

6.4 Ceiling Mounted Cassette Round

[ATUW36GYLT1 + ATNW36GYLT1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	6.02	5.53	1.29	7.83	6.60	1.63	9.20	7.67	1.88	10.25	8.20	2.07	11.30	8.05	2.13	12.09	7.94	2.14
25.0	6.02	5.53	1.53	7.83	6.60	1.92	9.20	7.67	2.22	10.25	8.20	2.44	11.30	8.05	2.51	12.09	7.94	2.52
32.0	6.02	5.53	1.85	7.83	6.60	2.33	9.20	7.67	2.70	10.25	8.20	2.96	11.30	8.05	3.05	12.09	7.94	3.06
35.0	6.02	5.53	1.99	7.83	6.60	2.50	9.20	7.67	2.90	10.25	8.20	3.18	11.30	8.05	3.28	12.09	7.94	3.29
40.0	6.02	5.53	2.06	7.83	6.60	2.58	9.20	7.67	2.99	10.25	8.20	3.28	11.30	8.05	3.38	12.09	7.94	3.40
43.0	6.02	5.53	2.09	7.83	6.60	2.63	9.20	7.67	3.04	10.25	8.20	3.34	11.30	8.05	3.44	12.09	7.94	3.46
46.0	6.02	5.53	2.13	7.83	6.60	2.68	8.04	6.74	3.10	8.20	6.63	3.45	9.04	6.49	3.55	9.67	6.40	3.57
48.0	6.02	5.53	2.17	7.63	6.50	2.72	7.78	6.63	3.16	7.94	6.47	3.23	8.61	6.22	3.33	9.12	6.06	3.35

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	10.01	2.69	9.96	2.95	9.90	3.20	9.85	3.46	9.80	3.72
0.0	11.11	3.20	11.06	3.46	11.00	3.72	10.56	3.51	10.12	3.30
6.0	12.18	3.41	11.59	3.26	11.00	3.10	10.56	2.95	10.12	2.79
10.0	12.18	3.20	11.59	2.95	11.00	2.69	10.56	2.57	10.12	2.45
15.0	12.18	2.69	11.59	2.43	11.00	2.17	10.56	2.10	10.12	2.03
18.0	12.18	2.38	11.59	2.12	11.00	1.86	10.56	1.82	10.12	1.78

[ATUW48GYLT1 + ATNW48GYLT1]

◆ Cooling

Outdoor Air Temp.	Indoor Air Temperature : °CDB / °CWB																	
	20.0 / 14.0			22.0 / 16.0			25.0 / 18.0			27.0 / 19.0			30.0 / 22.0			32.0 / 24.0		
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
20.0	8.60	7.31	1.78	11.19	8.72	2.23	13.15	10.13	2.58	14.65	10.84	2.83	16.15	10.64	2.92	17.28	10.50	2.93
25.0	8.60	7.31	2.09	11.19	8.72	2.63	13.15	10.13	3.05	14.65	10.84	3.34	16.15	10.64	3.44	17.28	10.50	3.46
32.0	8.60	7.31	2.54	11.19	8.72	3.19	13.15	10.13	3.70	14.65	10.84	4.05	16.15	10.64	4.18	17.28	10.50	4.20
35.0	8.60	7.31	2.73	11.19	8.72	3.43	13.15	10.13	3.97	14.65	10.84	4.36	16.15	10.64	4.49	17.28	10.50	4.52
40.0	8.60	7.31	2.90	11.19	8.72	3.65	13.15	10.13	4.22	14.65	10.84	4.63	16.15	10.64	4.77	17.28	10.50	4.80
43.0	8.60	7.31	3.01	11.19	8.72	3.77	13.15	10.13	4.37	14.65	10.84	4.80	16.15	10.64	4.94	17.28	10.50	4.97
46.0	8.60	7.31	3.11	11.19	8.72	3.91	11.19	8.68	4.53	11.42	8.54	4.81	12.59	8.36	4.95	13.47	8.24	4.98
48.0	8.60	7.31	3.22	11.19	8.72	4.04	11.19	8.68	4.58	11.46	8.64	4.68	12.39	8.28	4.82	13.11	8.06	4.84

◆ Heating

Outdoor Air Temp.	Indoor Air Temperature : °CDB									
	16.0		18.0		20.0		22.0		24.0	
°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-5.0	15.20	4.59	15.11	5.04	15.03	5.48	14.96	5.92	14.88	6.36
0.0	16.87	5.48	16.78	5.92	16.70	6.36	16.03	6.00	15.36	5.64
6.0	18.49	5.83	17.59	5.57	16.70	5.30	16.03	5.04	15.36	4.77
10.0	18.49	5.48	17.59	5.04	16.70	4.59	16.03	4.39	15.36	4.19
15.0	18.49	4.59	17.59	4.15	16.70	3.71	16.03	3.59	15.36	3.47
18.0	18.49	4.06	17.59	3.62	16.70	3.18	16.03	3.11	15.36	3.04

Note

1. DB : Dry bulb temperature(°C), WB : Wet bulb temperature(°C)
2. TC : Total capacity(kW), SHC : Sensible Heating Capacity(kW)
3. PI : Power Input (kW, Compressor + indoor fan motor + outdoor fan motor)
4. All capacities are net. A deduction (cooling mode) or an addition (heating mode) of Capacity due to operating heat of indoor unit motor is reflected.
5. Direct interpolation is permissible. Do not extrapolate.
6. Rated capacities and power inputs are based on standard temperature and piping conditions, and it can be found on specifications table. Except for rated value, the performance is not guaranteed.
7. In accordance with the test standard(or nations), the rating will vary slightly.

7. Capacity coefficient factor

7.1 Rate of change in capacity due to the main piping length

■ Rate of change in cooling capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75
Rate of Capacity Change (%)	18k	100	99.8	99.3	98.8	97.8	-	-	-	-	-
	24k	100	99.8	99.3	98.8	97.8	91.1	88.4	-	-	-
	30k	100	99.3	97.9	96.6	93.8	91.1	88.4	-	-	-
	36k	100	99.3	97.9	96.6	93.8	91.1	88.4	-	-	-
	48k	100	99.3	97.9	96.6	93.8	91.1	88.4	85.7	83.0	81.65
	54/60k	100	99.3	97.9	96.6	93.8	91.1	88.4	85.7	83.0	81.65

■ Rate of change in Heating capacity

Piping length(m)		5	10	15	20	30	40	50	60	70	75
Rate of Capacity Change (%)	18k	100	99.8	99.4	99	98.3	-	-	-	-	-
	24k	100	99.8	99.4	99	98.3	96.6	95.6	-	-	-
	30k	100	99.7	99.2	98.7	97.7	96.6	95.6	-	-	-
	36k	100	99.7	99.2	98.7	97.7	96.6	95.6	-	-	-
	48k	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.6	93.1
	54/60k	100	99.7	99.2	98.7	97.7	96.6	95.6	94.6	93.6	93.1

7.2 Calculation of actual system capacity

1. Outdoor unit standard rated capacity

Q_{rated} . [from specification table]

2. Outdoor unit capacity at T_i , T_o temperature.

$Q_{(T_i, T_o)}$ [from capacity table]

3. Outdoor unit capacity coefficient factor

$F_{(T_i, T_o)} = Q_{(T_i, T_o)} / Q_{rated}$.

4. Piping correction factor

F_{piping} for piping length [from capacity coefficient factor table]

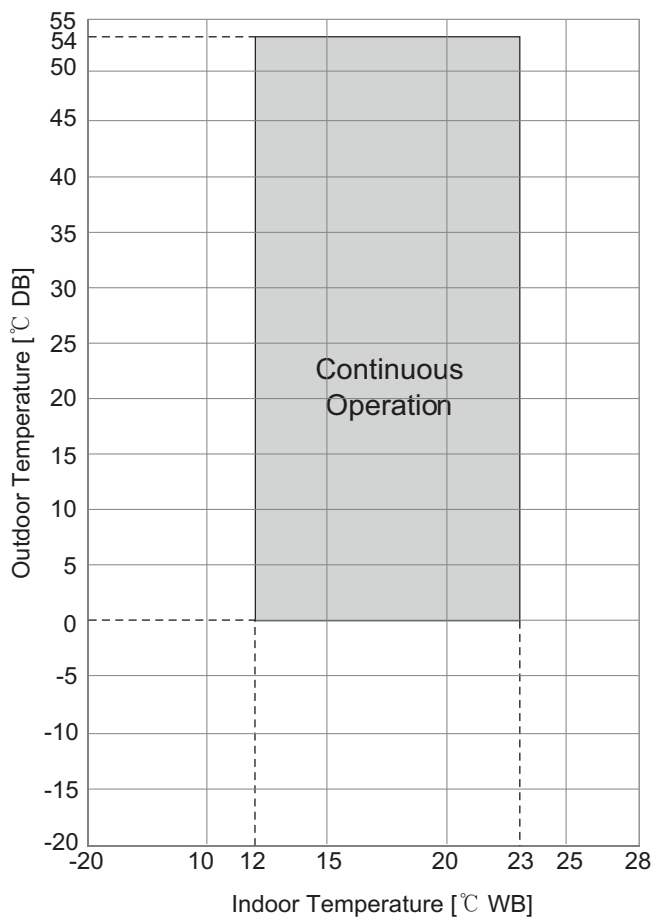
5. Indoor Unit actual capacity

$Q_{actual} = Q_{rated} \times F_{(T_i, T_o)} \times F_{piping}$

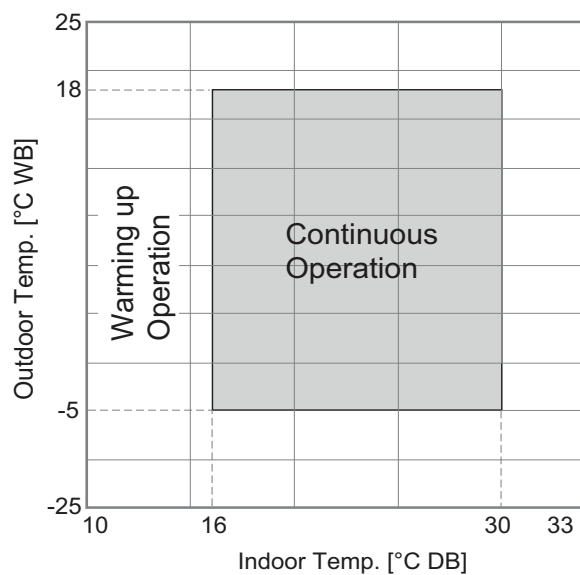
8. Operation range

◆ ATUW18GPLT1 / ABUW18GM1T1 / AVUW18GM1T1 / ATUW24GPLT1 / ATUW30GPLT
 ATUW36GNLT1 / ABUW24GM1T1 / ABUW30GM1T1 / ABUW36GM3T1 / AVUW24GM1T1
 AVUW30GM1T1 / AVUW36GM2T1 / ATUW48GMLT1 / ABUW48GM3T1 / AVUW48GM2T1
 ABUW54GM3T1 / AVUW54GM2T1 / ATUW54GMLT1 / ABUW60GM3T1

Cooling



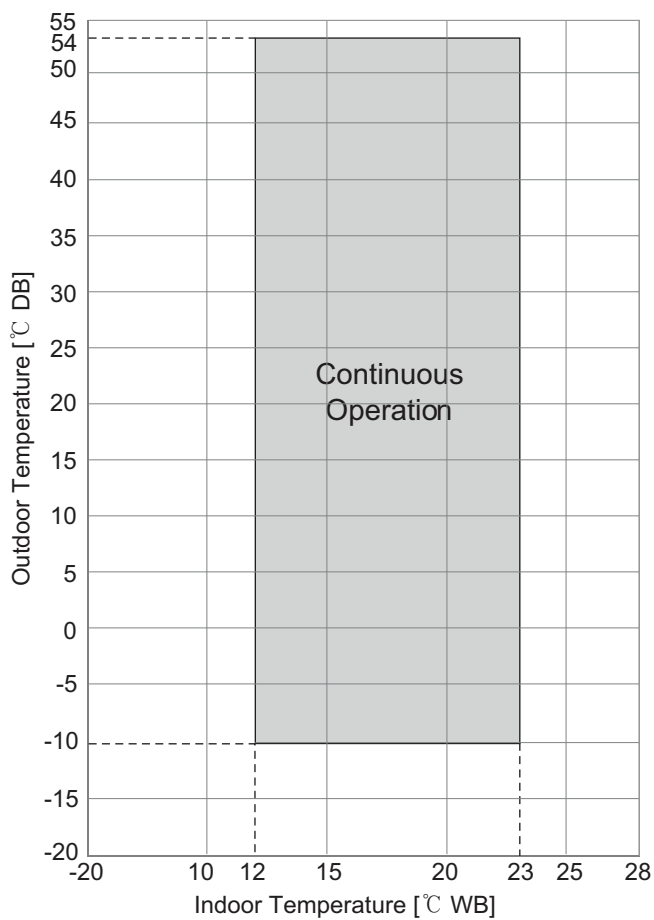
Heating



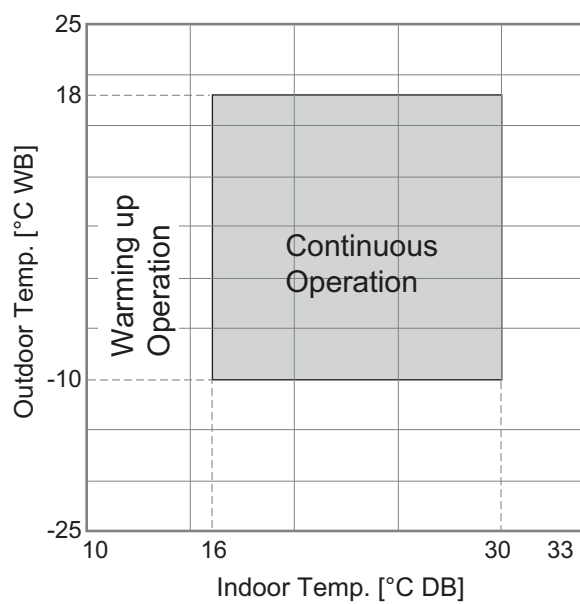
8. Operation range

◆ ATUW36GYLT1 / ATUW48GYLT1

Cooling



Heating



9. Electric characteristics

■ Wiring of Main Power Supply and Equipment Capacity

1. The power supply work is needed only to the outdoor unit. The power supply to the indoor unit or the BD unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
 2. Bear in mind ambient conditions (ambient temperature, direct sunlight, rain liquid, etc.) when proceeding with the wiring and connections
 3. The wire size is the minimum value for metal conduit wiring. The power cord size should be 1 rank thicker taking into account the line voltage drops. Make sure the power-supply voltage does not drop more than 10%.
 4. Specific wiring requirements should adhere to the wiring regulations of the region.
 5. Power supply cords of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord.
 6. Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.
-

WARNING

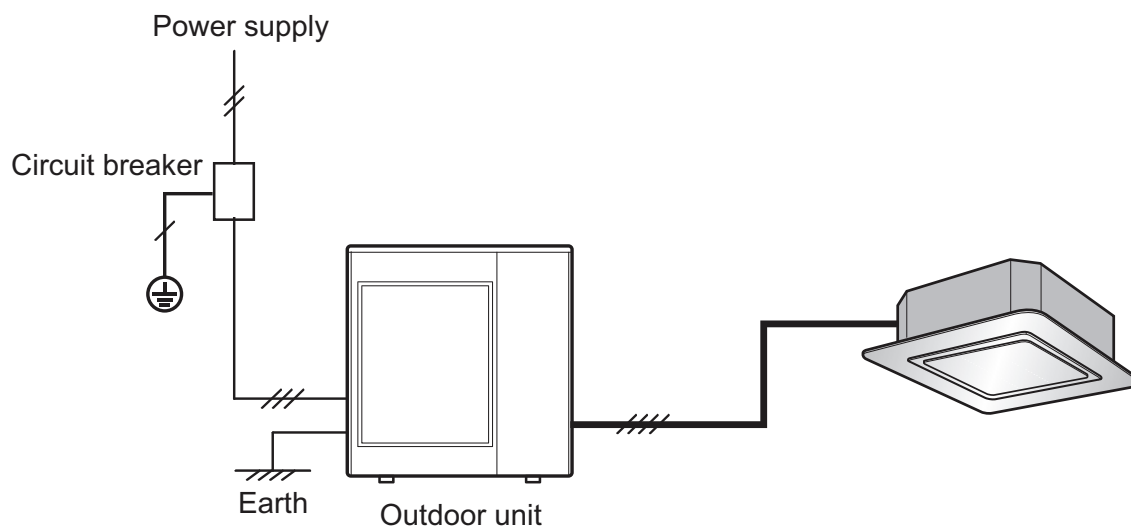
- Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.
 - Make sure to use specified wires for connections so that no external force is imparted to terminal connections. If connections are not fixed firmly, it may cause heating or fire.
 - Make sure to use the appropriate type of overcurrent protection switch. Note that generated overcurrent may include some amount of direct current.
-

CAUTION

- All installation site must require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.
 - Do not use anything other than breaker and fuse with correct capacity. Using fuse and wire or copper wire with too large capacity may cause a malfunction of unit or fire.
-

9. Electric characteristics

[Field Wiring (Single Phase, 2 Wiring Type)]



※ This figure is representative example for field wiring. Actual appearance of outdoor and indoor units could be different with installed product.

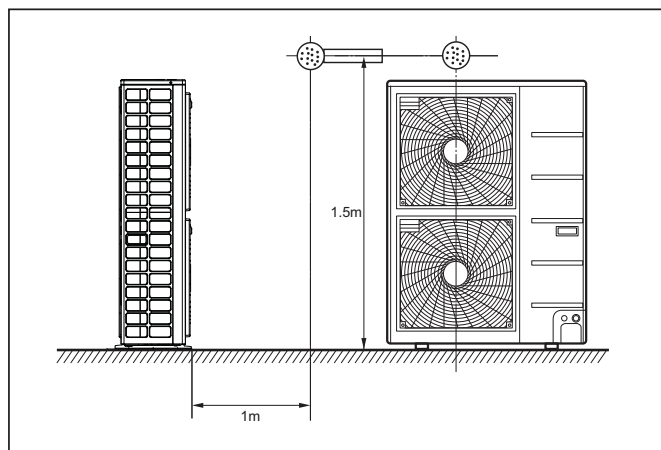
9. Electric characteristics

Outdoor Unit	Combined Indoor Unit		Unit		Power		Comp		OFM		IFM	
Model names	Model Name	No. of Unit	Phase Hz Volts	Voltage range	MCA	MFA	MSC	RLA	kW	FLA	kW	FLA
ATUW18GPLT1	ATNW18GPLT1	1	1 phase 50 Hz 220-240	Min. : 187 Max. : 276	12.10	15	-	9.0	0.043	0.25	0.050	0.60
ABUW18GM1T1	ABNW18GM1T1				13.10	15	-	9.0	0.043	0.25	0.137	1.60
AVUW18GV1T1	AVNW18GV1T1				12.50	15	-	9.0	0.043	0.25	0.086	1.00
ATUW24GPLT1	ATNW24GPLT1				15.93	20	-	12.0	0.085	0.33	0.050	0.60
ABUW24GM1T1	ABNW24GM1T1				16.93	20	-	12.0	0.085	0.33	0.137	1.60
AVUW24GV1T1	AVNW24GV1T1				16.33	20	-	12.0	0.085	0.33	0.086	1.00
ATUW30GPLT1	ATNW30GPLT1				22.43	25	-	17.0	0.124	0.58	0.050	0.60
ABUW30GM1T1	ABNW30GM1T1				23.43	25	-	17.0	0.124	0.58	0.137	1.60
AVUW30GV1T1	AVNW30GV1T1				22.83	25	-	17.0	0.124	0.58	0.086	1.00
ATUW36GNLT1	ATNW36GNLT1				23.30	25	-	17.0	0.124	0.58	0.146	1.47
ABUW36GM3T1	ABNW36GM3T1				23.73	25	-	17.0	0.124	0.58	0.154	1.90
AVUW36GV2T1	AVNW36GV2T1				23.30	25	-	17.0	0.124	0.58	0.125	1.47
ATUW36GYLT1	ATNW36GYLT1				23.20	25	-	17.0	0.136	0.51	0.146	1.47
ATUW48GMLT1	ATNW48GMLT1				34.44	40	-	25.6	0.248	1.16	0.136	1.28
ABUW48GM3T1	ABNW48GM3T1				35.66	40	-	25.6	0.248	1.16	0.400	2.50
AVUW48GM2T1	AVNW48GM2T1				34.63	40	-	25.6	0.248	1.16	0.125	1.47
ATUW48GYLT1	ATNW48GYLT1				34.30	40	-	25.6	0.124 x 2	0.51 x 2	0.136	1.28
ATUW54GMLT1	ATNW54GMLT1				34.44	40	-	25.6	0.248	1.16	0.136	1.28
ABUW54GM3T1	ABNW54GM3T1				35.66	40	-	25.6	0.248	1.16	0.400	2.50
AVUW54GM2T1	AVNW54GM2T1				34.63	40	-	25.6	0.248	1.16	0.125	1.47
ABUW60GM3T1	ABNW60GM3T1				35.66	40	-	25.6	0.248	1.16	0.400	2.50
Note 1. Voltage supplied to the unit terminals should be within the minimum and maximum range. 2. Maximum allowable voltage unbalance between phase is 2%. 3. MSC means the Max. current during the starting of compressor. 4. MSC and RLA are measured as the compressor only test condition. 5. OFM and IFM are measured as the air conditioner unit test condition. 6. Select the wire size based on the MCA. 7. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].					Symbols MCA : Minimum Circuit Amperes (A) MFA : Maximum Fuse Amperes (A) MSC : Maximum Starting Current (A) RLA : Rated Load Amperes (A) OFM : Outdoor Fan Motor IFM : Indoor Fan Motor kW : Fan Motor rated output (kW) FLA : Full Load Amperes (A)							

10. Sound levels

10.1 Sound pressure level

■ Overall



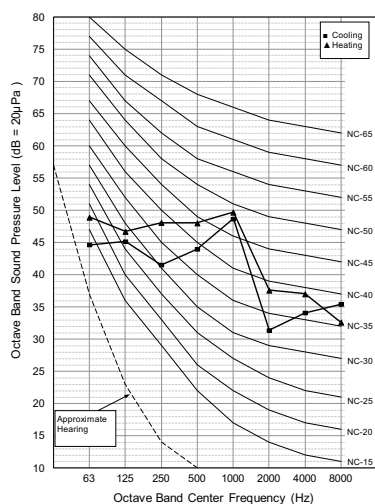
Note

1. Data is valid at free field condition.
2. Reference acoustic pressure 0dB = 20μPa.
3. Data is valid at nominal operation condition. Refer to the Model Specifications for nominal conditions (Power source and Ambient temperature, etc)
4. 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.)
5. 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.
6. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Therefore, these values can be increased owing to ambient conditions during operation.

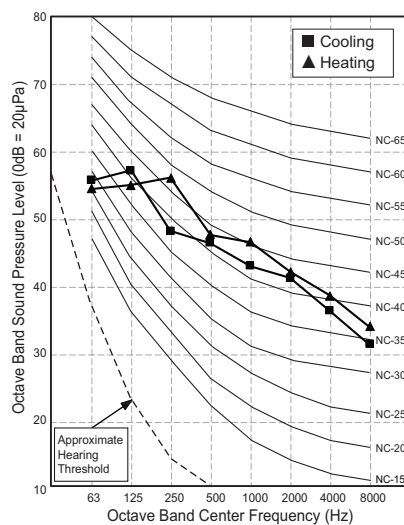
Model	Sound Pressure Level [dB(A)]	
	Cooling	Heating
ATUW18GPLT1 / ABUW18GM1T1 / AVUW18GM1T1	49	52
ATUW24GPLT1 / ABUW24GM1T1 / AVUW24GM1T1	50	52
ATUW30GPLT1 / ABUW30GM1T1 / AVUW30GM1T1	51	53
ATUW36GNLT1 / ABUW36GM3T1 / AVUW36GM2T1 / ATUW36GYLT1	51	53
ATUW48GMLT1 / ABUW48GM3T1 / AVUW48GM2T1 / ATUW48GYLT1	55	57
ATUW54GMLT1 / ABUW54GM3T1 / ABUW60GM3T1 / AVUW54GM2T1	55	57

10. Sound levels

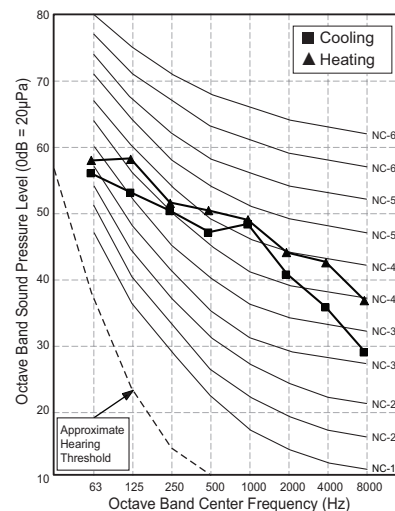
**ATUW18GPLT1
ABUW18GM1T1 / AVUW18GM1T1**



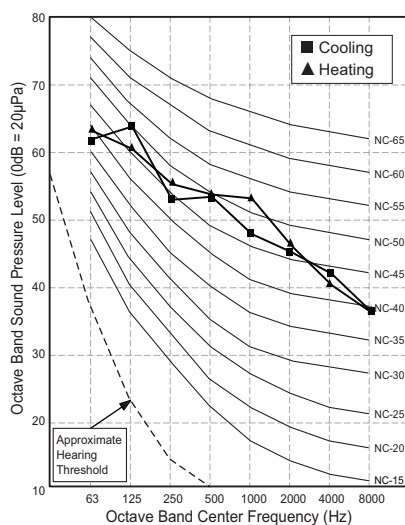
**ATUW24GPLT1
ABUW24GM1T1 / AVUW24GM1T1**



**ATUW30GPLT1 / ABUW30GM1T1
AVUW30GM1T1 ATUW36GNLT1
ABUW36GM3T1 / AVUW36GM2T1
ATUW36GYLT1**



**ATUW48GYLT1 / ATUW48GMLT1
ABUW48GM3T1 / AVU48GM2T
ATUW54GMLT1 / AVUW54GM2T1
ABUW60GM3T1**



MULTI/SINGLE CAC

Installation of Outdoor Units

- 1. Select the Best Location**
- 2. Installation Space**
- 3. Installation of Outdoor Unit**
- 4. Refrigerant piping system**
- 5. Installation guide at the seaside**
- 6. Seasonal wind and caution in winter**

1. Select the Best Location

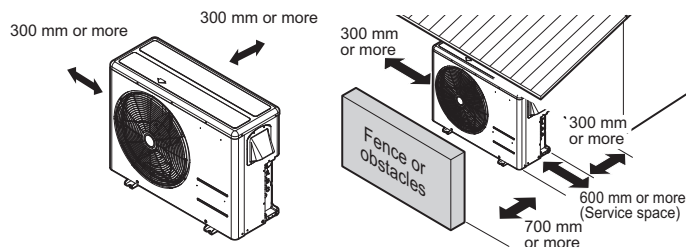
Select space for installing outdoor unit, which will meet the following conditions:

- No direct thermal radiation from other heat sources
- No possibility of annoying neighbors by noise from unit
- No exposition to strong wind
- With strength which bears weight of unit
- Note that drain flows out of unit when heating (Heat pump model)
- With space for air passage and service work shown next
- Because of the possibility of fire, do not install unit to the space where generation, inflow, stagnation, and leakage of combustible gas is expected.
- Avoid unit installation in a place where acidic solution and spray (sulfur) are often used.
- Do not use unit under any special environment where oil, steam and sulfuric gas exist.
- It is recommended to fence round the outdoor unit in order to prevent any person or animal from accessing the outdoor unit.
- If installation site is area of heavy snowfall, then the following directions should be observed.
 - Make the foundation as high as possible.
 - Fit a snow protection hood.
- Select installation location considering following conditions to avoid bad condition when additionally performing defrost operation. (Heat pump model)
 1. Install the outdoor unit at a place well ventilated and having a lot of sunshine in case of installing the product at a place with a high humidity in winter (near beach, coast, lake, etc).
(Ex) Rooftop where sunshine always shines.
 2. Performance of heating will be reduced and pre-heat time of the indoor unit may be lengthened in case of installing the outdoor unit in winter at following location:
 - 1) Shade position with a narrow space
 - 2) Location with much moisture in neighboring floor.
 - 3) Location with much humidity around.
 - 4) Location where liquid gathers since the floor is not even.

2. Installation Space

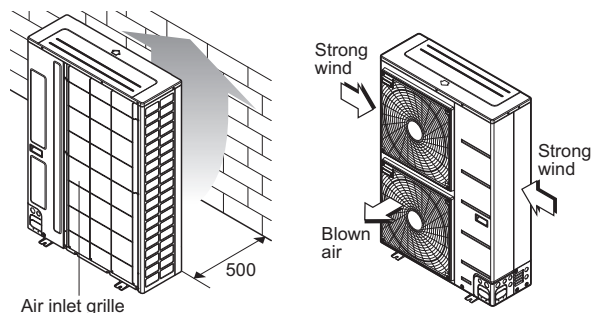
2.1 Clearance around outdoor units

- Ensure that the space around the back is or more more than 300 mm on the opposite to the PCB side and secure 600 mm space near the compressor and PCB side of the air conditioner for service.



※ Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

- Install the unit so that its discharge port faces to the wall of the building. Keep a distance 500mm or more between the unit and the wall surface.
- Supposing the wind direction during the operation season of the air conditioner, install the unit so that the discharge port is set at right angle to the wind direction.



Turn the air outlet side toward the building's wall, fence or windbreak screen.

Set the outlet side at a right angle to the direction of the wind.

※ Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

2. Installation Space

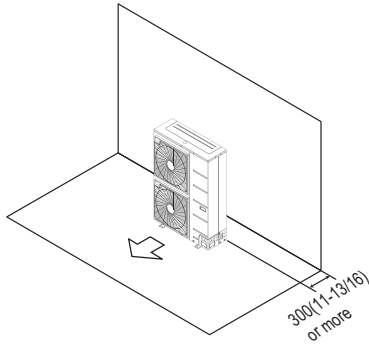
[Unit : mm(inch)]

■ Where there is an obstacle on the air intake side:

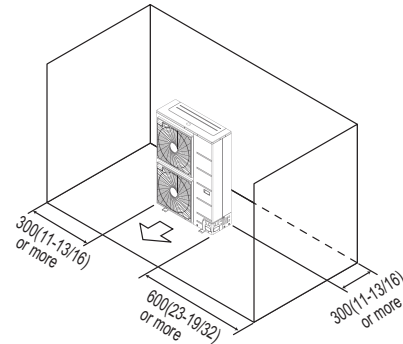
◆ No obstacle above

[Unit : mm(inch)]

- Obstacle on the suction side only



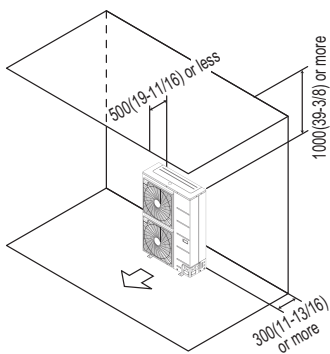
- Obstacle on the both sides



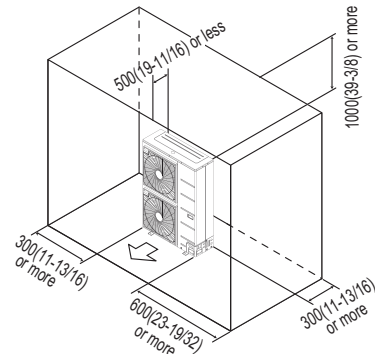
◆ Obstacle above, too

[Unit : mm(inch)]

- Obstacle on the air intake side, too



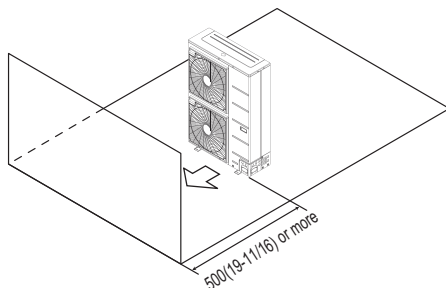
- Obstacle on the air intake side, and both sides



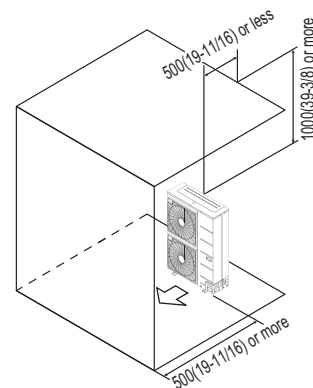
■ Where there is an obstacle on the discharge side:

[Unit : mm(inch)]

- No obstacle above



- Obstacle above, too



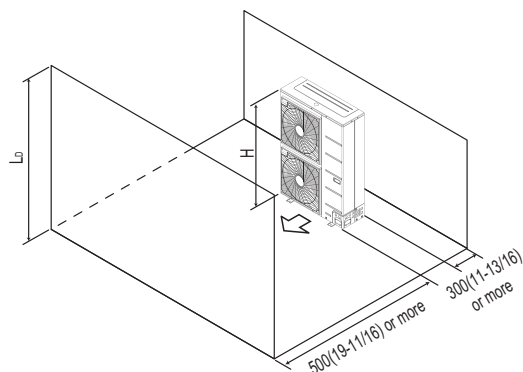
2. Installation Space

■ Where there are obstacles on both suction and discharge sides:

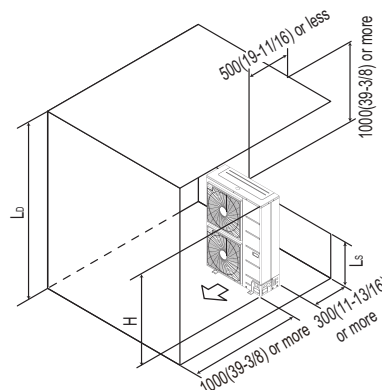
◆ Where the obstacles on the discharge side is higher than the unit:

[Unit : mm(inch)]

- No obstacle above



- Obstacle above, too



The relations between H, A and L are as follows:

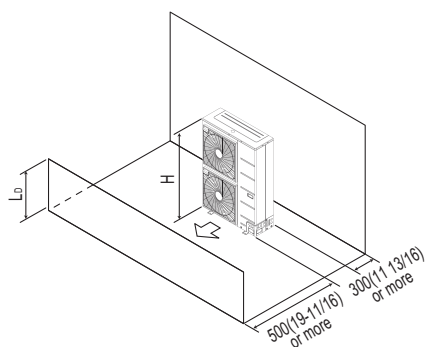
	L	A[mm(inch)]
$L \leq H$	$0 < L \leq 1/2H$	750(29 1/32)
	$1/2H < L$	1 000(39 3/8)
$H < L$	Set the stand as: $L \leq H$	

Close the bottom of the installation frame to prevent the discharged air from being bypassed.

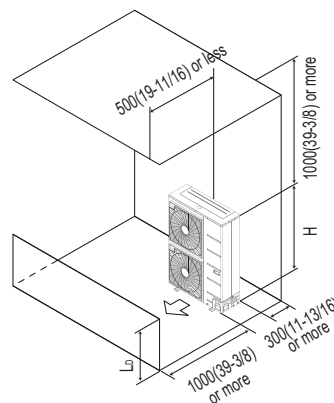
◆ Where the obstacles on the discharge side is lower than the unit:

[Unit : mm(inch)]

- No obstacle above



- Obstacle above, too
'L' should be lower than 'H'.
Close the bottom of the installation frame to prevent the discharged air from being bypassed.

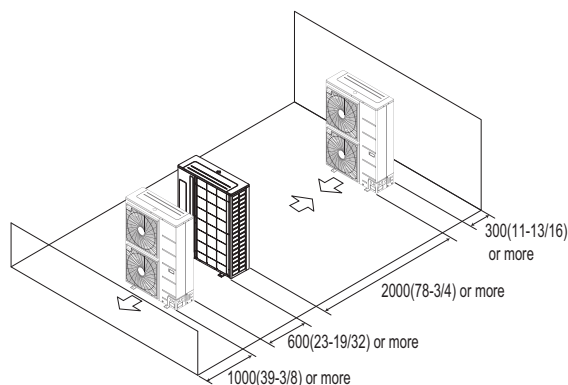


2. Installation Space

■ Series installation

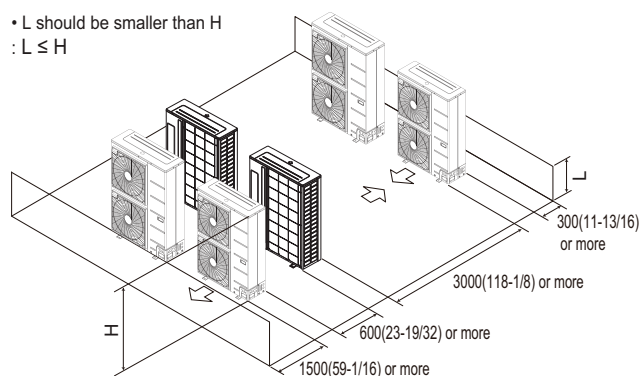
[Unit : mm(inch)]

• One row of stand alone installation



• Rows of collective installation (2 or more)

- L should be smaller than H
: $L \leq H$



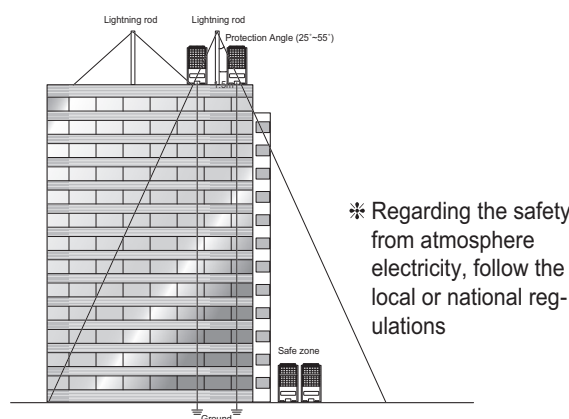
2.2 Air guide work

In case of out door unit is located outdoor cabin of apartment or flats, then the efficiency can drop and system pressure increases thus finally damaging the compressor or other components in the system by heat short circuit.

[Example]



2.3 Lightning safety zone



1. To protect outdoor unit from lightning, it should be placed within lightning safety zone.

◆ Safety zone

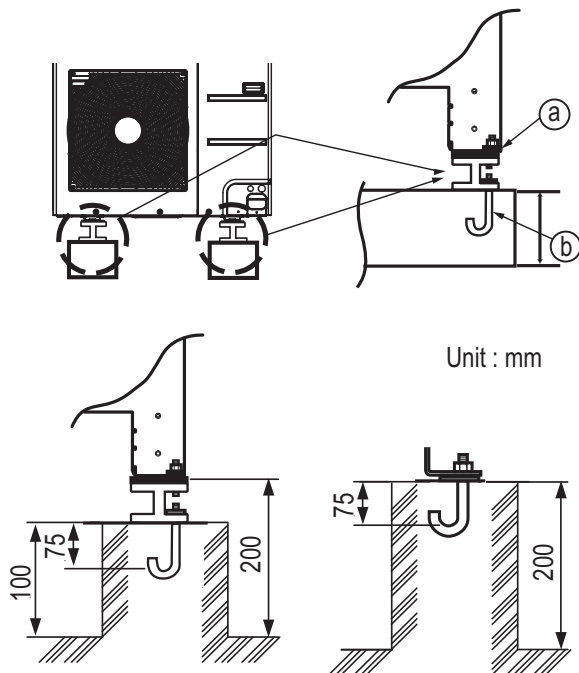
Building Height [m]	20	30	45	60
Protection Angle [°]	55	45	35	25

2. Power cable and communication cable should be 1.5m away from lightning rod.
3. High resistance grounded system should be performed against induced lightning or indirect stroke.
4. If the building has no lightning protection, outdoor may be damage from lightning. This should be informed to customer or building owner in advance.

3. Installation of Outdoor Unit

3.1 Foundation for Installation

- Fix the unit tightly with bolts as shown below so that unit will not fall down due to earthquake or gust.
- Use the H-beam support as a base support.
- Noise and vibration may occur from the floor or wall since vibration is transferred through the installation part depending on installation status. Thus, use anti-vibration materials (cushion pad) fully (The base pad shall be more than 200mm).



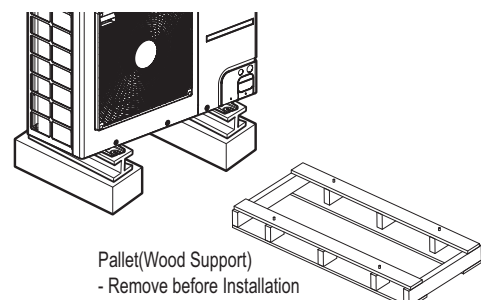
- (a) The corner part must be fixed firmly. Otherwise, the support for the installation may be bent.
- (b) Get and use M10 Anchor bolt.
- (c) Put Cushion Pad between the outdoor unit and ground support for the vibration protection in wide area.
- (d) Space for pipes and wiring (Pipes and wirings for bottom side)
- (e) H-beam support
- (f) Concrete support
- * Outdoor unit is representative. Actual appearance of outdoor unit may be different but clearances will stay the same.

⚠ WARNING

- Install where it can sufficiently support the weight of the outdoor unit.
If the support strength is not enough, the outdoor unit may drop and hurt people.
- Install where the outdoor unit may not fall in strong wind or earthquake.
If there is a fault in the supporting conditions, the outdoor unit may fall and hurt people.
- Please take extra cautions on the supporting strength of the ground, water outlet treatment (treatment of the water flowing out of the outdoor unit in operation) of heat pump unit, and the passages of the pipe and wiring, when making the ground support.
- Do not use tube or pipe for water outlet in the Base pan. Use drainage instead for water outlet.
The tube or pipe may freeze and the water may not be drained. (Heat pump model)

⚠ WARNING

- Be sure to remove the Pallet (Wood Support) of the bottom side of the outdoor unit Base Pan before fixing the bolt. It may cause the unstable state of the outdoor settlement, and may cause freezing of the heat exchanger resulting in abnormal operations.
- Be sure to remove the Pallet (Wood Support) of the bottom side of the outdoor unit before welding. Not removing Pallet (Wood Support) causes hazard of fire during welding.

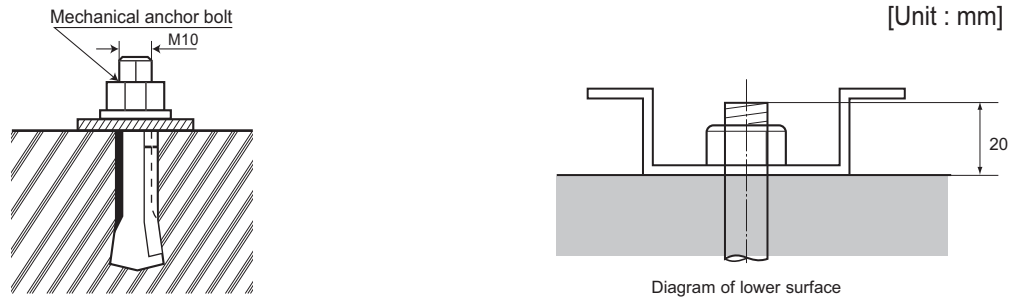


3. Installation of Outdoor Unit

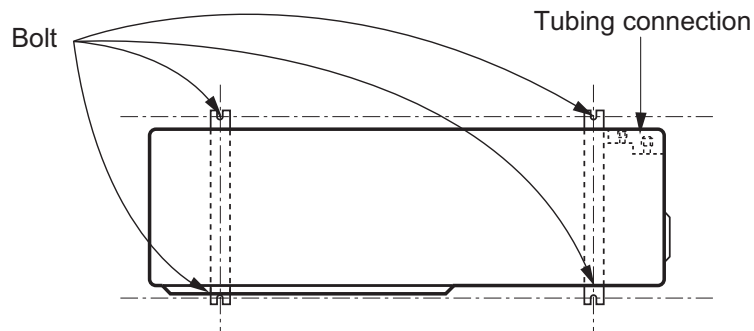
3.2 Settlement of the outdoor unit

- Anchor the outdoor unit with a bolt and nut tightly and horizontally on a concrete or rigid mount.
- When installing on the wall, roof or rooftop, anchor the mounting base securely with a nail or wire assuming the influence of wind and earthquake.
- In the case when the vibration of the unit is conveyed to the house, secure the unit with an anti-vibration rubber.

◆ Bolt construction work



◆ Settlement draw of outdoor units



⚠ CAUTION

- The ingredients of foundation : Cement : Sand : Gravel for the concrete should 1 : 2 : 4 ratio
- The foundation surface should be finished with mortar.
- The edges of foundation should be rounded.
- A drain passage should be made around the foundation to thoroughly drain water away from the equipment installation area. (Heat pump model)
- If installing the outdoor units on the roof, the roof's strength have to be checked.
- Care should be taken for weather - proofing
- Blocking all gaps of outdoor unit, for passing piping and wiring, using sealing material (Field supply)
(Animals and bugs might enter in the machine.)

4. Refrigerant piping system

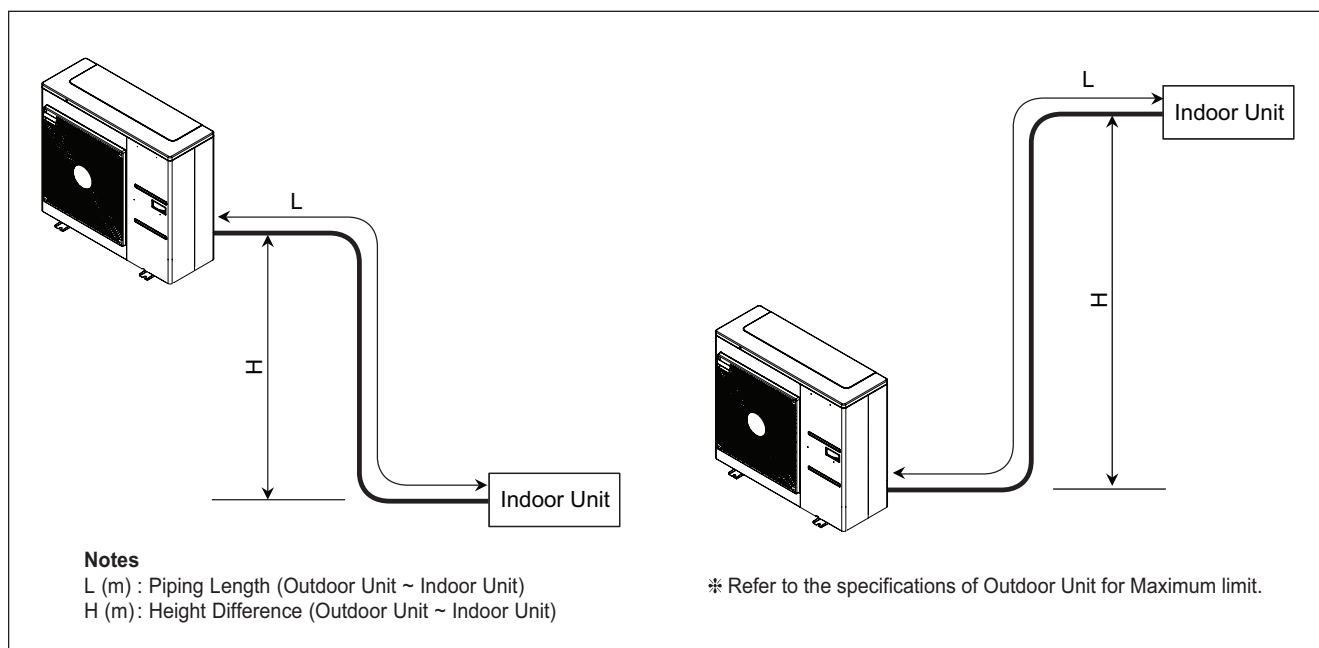
4.1 Piping System between outdoor unit / indoor unit

■ Single type

⚠ CAUTION

- Please check the product type. Piping installation and refrigerant charge varies depending on the type of product.

For more information, please refer to the installation manual.



◆ Refrigerant additional charge calculation method

$$\text{Additional Refrigerant} = (L - A) \times a$$

L (m) : Installed Piping Length (Outdoor Unit ~ Indoor Unit)

A (m) : Charge-less piping length

a (g/m) : Additional charging volume

* Refer to the specifications for detail information of A, a.

* If total additional charge value after calculation comes out to be negative, then do not consider additional charge.

⚠ CAUTION

- Capacity is based on standard length and maximum allowance length is on the basis of reliability.
- Improper refrigerant charge may result in abnormal cycle.

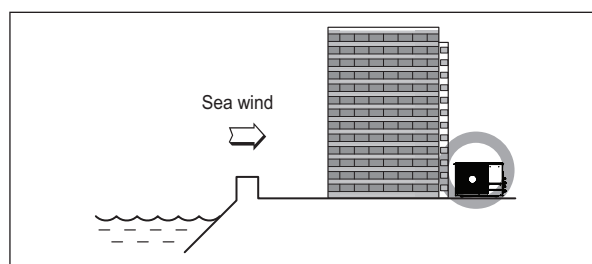
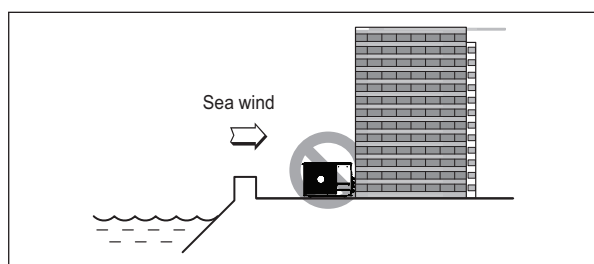
5. Installation guide at the seaside

⚠ CAUTION

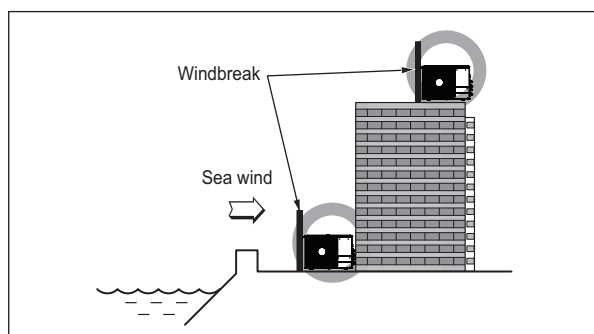
1. Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.
3. If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.

■ Selecting the location(Outdoor Unit)

1. If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



2. In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be kept more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

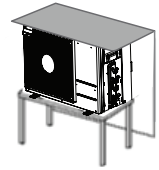
3. Select a well-drained place.

Note

Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water

6. Seasonal wind and cautions in winter

- Sufficient measures are required in a snow area or severe cold area in winter so that product can be operated well.
- Get ready for seasonal wind or snow in winter even in other areas.
- Install a suction and discharge duct not to let in snow or rain.
- Install the outdoor unit not to come in contact with snow directly. If snow piles up and freezes on the air suction hole, the system may malfunction. If it is installed at snowy area, attach the hood to the system.
- Install the outdoor unit at the higher installation console by 50cm than the average snowfall (annual average snowfall) if it is installed at the area with much snowfall.
- Where snow accumulated on the upper part of the Outdoor Unit by more than 10cm, always remove snow for operation.



Note

1. The height of H frame must be more than 2 times the snowfall and its width shall not exceed the width of the product. (If width of the frame is wider than that of the product, snow may accumulate)
 2. Don't install the suction hole and discharge hole of the Outdoor Unit facing the seasonal wind.
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Air Conditioner

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