MULTI V™ Indoor unit

R410A/R32(50Hz/60Hz)
0CVP0-09D(Replaces 0CVP0-09C)

LG TOTAL HVAC SOLUTION PROVIDER

ENGINEERING PRODUCT DATA BOOK

LG Life's Good

P/No. : MFL55028429

MULTI V™

Indoor Unit

Ceiling Mounted Cassette (Dual Vane 4-Way)

1. List of functions

◆ List of function

Category	Functions	ARNU24GTBB4, ARNU28GTBB4, ARNU30GTBB4, ARNU36GTAB4, ARNU42GTAB4, ARNU48GTAB4
Air flow	Air supply outlet	4
	Airflow direction control (left & right)	X
	Airflow direction control (up & down)	Auto
	Auto swing (left & right)	X
	Auto swing (up & down)	O
	Airflow steps (fan/cool/heat)	4 / 5 / 4
	Chaos wind(auto wind)	X
	Jet cool/heat	O / O
	Swirl wind	O
	Refresh Mode***	O
	Smart Mode***	O
	Indirect Wind	O
	Direct wind	O
Air purification	Deodorization filter	X
	Pre-Filter(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(Heat recovery / Heat pump)
	Auto cleaning	O
	Auto operation(artificial intelligence)	O(Cooling only)
	Auto Restart	O
	Child lock*	O
	Forced operation	O
	Group control*	O
	Sleep mode	O
	Timer(on/off)	O
	Timer(weekly)*	O
	Two thermistor control*	O
Special Functions	Wi-Fi	O (Accessory)
	Comfort Coolng (Humidity Control)	O
Wireless Remote Controller		O (Accessory)
Wired Remote Controller		O (Accessory)
Network Solution(LGAP)		O

Note

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

1. List of functions

◆ Accessory Compatibility List

Category		Product	Remark	ARNU24GTBB4 ARNU28GTBB4 ARNU30GTBB4 ARNU36GTAB4 ARNU42GTAB4 ARNU48GTAB4
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
		PDRYCB320	For 3rd Party Thermostat (Analog Input)	O
		PDRYCB500	For Modbus	O
Gateway	IDU PI485	PHNFP14A0	Without case	X
		PSNFP14A0	With case	X
ETC	Remote temperature sensor	PQRSTA0	-	O
	Zone controller	ABZCA	-	X
	CO_2 Sensor	PES-C0RV0	For ERV, ERV DX Indoor units	X
	Group control wire	PZCWRCG3	0.25m	O
	2-Remo Control Wire	PZCWRC2	0.25m	O
	Extension Wire	PZCWRC1	10m	O
	Wi-Fi Controller*	PWFMDD200	-	O
	Air Purification Kit	PTAHMP0	-	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))

1. List of functions

◆ Panel(Accessory)

Model Name			PT-AAGW0	PT-AFGW0
Description		-	Standard Panel	Premium Panel
Exterior Color		-	White	White
RAL		-	9003	9003
Dual Vane		-	O	O
Dimensions (W x H x D)	Net	mm	950 x 35 x 950	950 x 35 x 950
	Shipping	mm	1,006 x 102 x 1,006	1,006 x 117 x 1,006
Weight	Net	kg	7.1	7.5
	Shipping	kg	9.3	9.4
Function	PM1.0 Sensor	-	X	O
Accessory	Air Purification Kit	-	X	PTAHMP0
	Floor Detection Sensor*	-	PTFSMA0**	PTFSMA0**
	Human Detection Sensor*	-	PTVSAA0	PTVSAA0

Note
- * : This functions need to connect to the RS3 wired remote controller(Standard III).
- ** : This function will be launched on Oct, 2020.
- Accessory : Ordered and purchased separately the accessory package referring to the model name provided and install at field.

2. Specifications

Model Name		Unit	ARNU24GTBB4	ARNU28GTBB4
Power Supply	#1	V, Φ, Hz	220-230-240, 1, 50/60	220-230-240, 1, 50/60
	Running Current by Voltage	A	0.34 / 0.32 / 0.31	0.37 / 0.36 / 0.34
Cooling Capacity	Rated	kW	7.1	8.2
		Btu/h	24,200	28,000
Heating Capacity	Rated	kW	8.0	9.2
		Btu/h	27,300	31,500
Power Input	H/M/L	W	32 / 27 / 20	37 / 30 / 22
Running Current	H/M/L	A	0.31 / 0.26 / 0.21	0.34 / 0.28 / 0.22
Fan	Type	-	3D Turbo Fan	3D Turbo Fan
	Air Flow Rate(H/M/L)	㎥/min	18 / 17 / 15	19 / 17 / 15
Fan Motor	Type	-	Brushless DC	Brushless DC
	Drive	-	Direct	Direct
	Output	W	51	51
		No.	1	1
Heat Exchanger	Rows x Columns x FPI	-	3 x 8 x 21	3 x 8 x 21
	No.	-	1	1
	Face Area	㎡	0.33	0.33
Dimensions	Net(W x H x D)	mm	840 x 204 x 840	840 x 204 x 840
	Shipping(W x H x D)	mm	922 x 276 x 917	922 x 276 x 917
Weight	Net	kg	21.0	21.0
	Shipping	kg	26.0	26.0
Exterior	Color	-	White	White
	RAL Code	-	RAL 9003	RAL 9003
Air Filter	Type	-	Long life	Long life
Temperature Control	-	-	Microprocessor, Thermostat for cooling and heating	
Sound Absorbing / Thermal Insulation Material		-	Foamed polystrene	Foamed polystrene
Protection Divice	-	-	Fuse	Fuse
Refrigerant	Type	-	R410A / R32	R410A / R32
	Additional Charging amount	kg(each)	0.32 / 0.26	0.32 / 0.26
	Control Type	-	EEV	EEV
Drain Pipe	O.D / I.D	mm(inch)	32/25	32/25
Piping Connection	Liquid	mm(inch)	Φ9.52 (3/8)	Φ9.52 (3/8)
	Gas	mm(inch)	Φ15.88 (5/8)	Φ15.88 (5/8)
	Connection Type(Liquid)	-	Flare	Flare
	Connection Type(Gas)	-	Flare	Flare
Sound Pressure Level (H / M / L)		dB(A)	39.0 / 37.0 / 35.0	40.0 / 38.0 / 35.0
Sound Power Level (H / M / L)		dB(A)	46.0 / 44.0 / 42.0	50.0 / 46.0 / 43.0
Connecting Cable	Power Supply Cable(H07RN-F)	mm² × cores	2.5 x 3	2.5 x 3
	Communication Cable(VCTF-SB)	mm² × cores	1.0~1.5 x 2	1.0~1.5 x 2

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 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.
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.
5. Refrigerant information (type, additional charging amount, etc.) must be applied by refrigerant type of the combined outdoor unit.
   Adapt after checking the specifications of outdoor unit.
6. Air flow rate could be different in accordance with ‘High ceiling operation’ mode setting value.

2. Specifications

Model Name		Unit	ARNU30GTBB4	ARNU36GTAB4
Power Supply	#1	V, Φ, Hz	220-230-240, 1, 50/60	220-230-240, 1, 50/60
	Running Current by Voltage	A	0.47 / 0.45 / 0.43	0.68 / 0.65 / 0.62
Cooling Capacity	Rated	kW	9.0	10.6
		Btu/h	30,700	36,200
Heating Capacity	Rated	kW	10.0	11.9
		Btu/h	34,100	40,600
Power Input	H/M/L	W	48 / 36 / 25	69 / 49 / 37
Running Current	H/M/L	A	0.43 / 0.34 / 0.25	0.62 / 0.46 / 0.36
Fan	Type	-	3D Turbo Fan	3D Turbo Fan
	Air Flow Rate(H/M/L)	㎥/min	21 / 19 / 16	29 / 26 / 22
Fan Motor	Type	-	Brushless DC	Brushless DC
	Drive	-	Direct	Direct
	Output	W	51	135
		No.	1	1
Heat Exchanger	Rows x Columns x FPI	-	3 x 8 x 21	3 x 12 x 21
	No.	-	1	1
	Face Area	㎡	0.33	0.50
Dimensions	Net(W x H x D)	mm	840 x 204 x 840	840 x 288 x 840
	Shipping(W x H x D)	mm	922 x 276 x 917	922 x 360 x 917
Weight	Net	kg	21.0	26.0
	Shipping	kg	26.0	31.5
Exterior	Color	-	White	White
	RAL Code	-	RAL 9003	RAL 9003
Air Filter	Type	-	Long life	Long life
Temperature Control	-	-	Microprocessor, Thermostat for cooling and heating	
Sound Absorbing / Thermal Insulation Material		-	Foamed polystrene	Foamed polystrene
Protection Divice	-	-	Fuse	Fuse
Refrigerant	Type	-	R410A / R32	R410A / R32
	Additional Charging amount	kg(each)	0.32 / 0.26	0.49 / 0.41
	Control Type	-	EEV	EEV
Drain Pipe	O.D / I.D	mm(inch)	32/25	32/25
Piping Connection	Liquid	mm(inch)	Φ9.52 (3/8)	Φ9.52 (3/8)
	Gas	mm(inch)	Φ15.88 (5/8)	Φ15.88 (5/8)
	Connection Type(Liquid)	-	Flare	Flare
	Connection Type(Gas)	-	Flare	Flare
Sound Pressure Level (H / M / L)		dB(A)	43.0 / 40.0 / 36.0	43.0 / 40.0 / 37.0
Sound Power Level (H / M / L)		dB(A)	53.0 / 50.0 / 45.0	54.0 / 51.0 / 47.0
Connecting Cable	Power Supply Cable(H07RN-F)	mm² × cores	2.5 x 3	2.5 x 3
	Communication Cable(VCTF-SB)	mm² × cores	1.0~1.5 x 2	1.0~1.5 x 2

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 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.
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.
5. Refrigerant information (type, additional charging amount, etc.) must be applied by refrigerant type of the combined outdoor unit.
   Adapt after checking the specifications of outdoor unit.
6. Air flow rate could be different in accordance with ‘High ceiling operation’ mode setting value.

2. Specifications

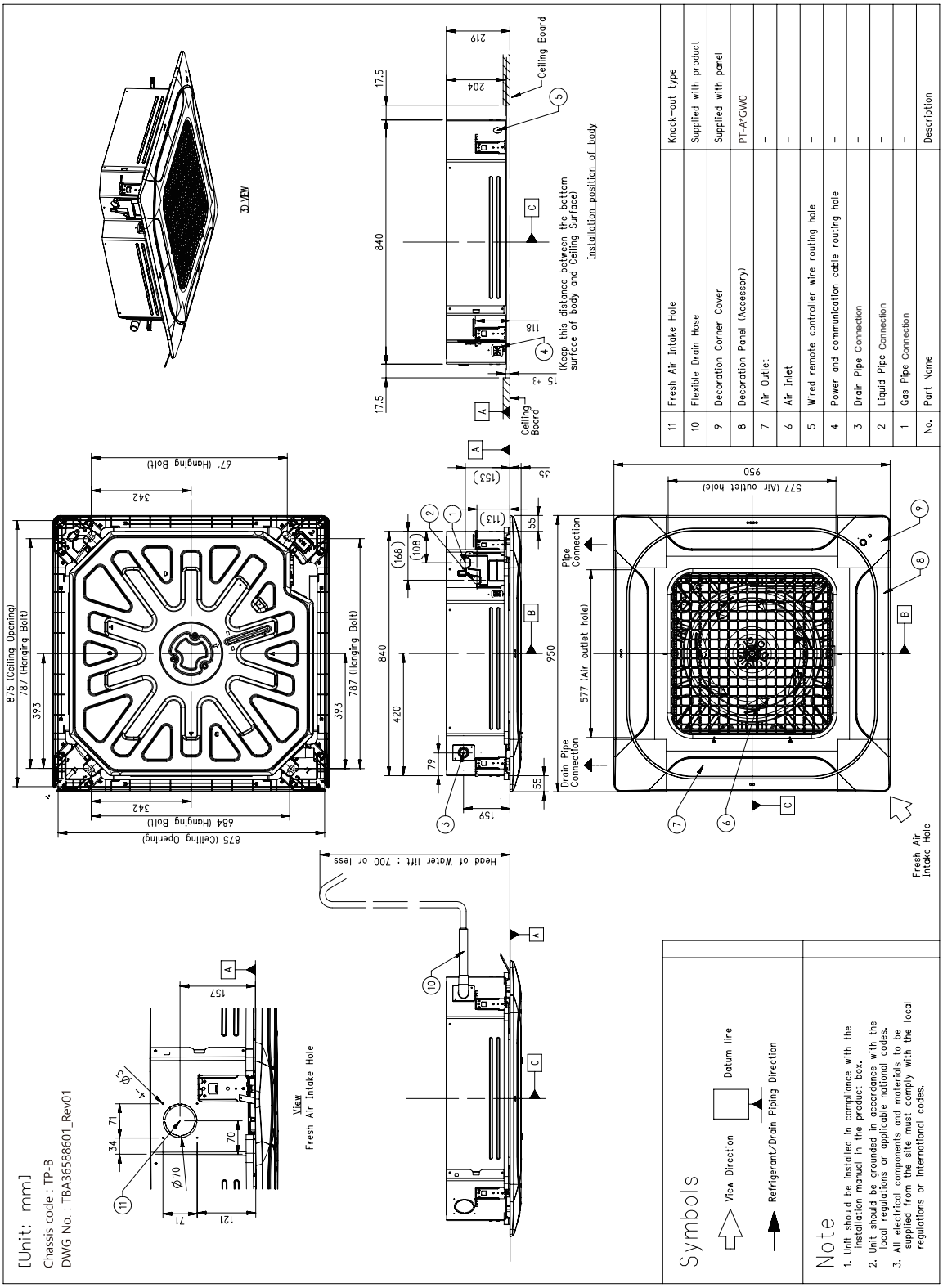
Model Name		Unit	ARNU42GTAB4	ARNU48GTAB4
Power Supply	#1	V, Φ, Hz	220-230-240, 1, 50/60	220-230-240, 1, 50/60
	Running Current by Voltage	A	0.93 / 0.89 / 0.85	1.04 / 0.99 / 0.95
Cooling Capacity	Rated	kW	12.3	14.1
		Btu/h	42,000	48,100
Heating Capacity	Rated	kW	13.8	15.9
		Btu/h	47,000	54,200
Power Input	H/M/L	W	97 / 69 / 49	110 / 76 / 61
Running Current	H/M/L	A	0.85 / 0.62 / 0.46	0.95 / 0.69 / 0.56
Fan	Type	-	3D Turbo Fan	3D Turbo Fan
	Air Flow Rate(H/M/L)	㎥/min	33 / 29 / 26	34 / 30 / 28
Fan Motor	Type	-	Brushless DC	Brushless DC
	Drive	-	Direct	Direct
	Output	W	135	135
		No.	1	1
Heat Exchanger	Rows x Columns x FPI	-	3 x 12 x 21	3 x 12 x 21
	No.	-	1	1
	Face Area	㎡	0.50	0.50
Dimensions	Net(W x H x D)	mm	840 x 288 x 840	840 x 288 x 840
	Shipping(W x H x D)	mm	922 x 360 x 917	922 x 360 x 917
Weight	Net	kg	26.0	26.0
	Shipping	kg	31.5	31.5
Exterior	Color	-	White	White
	RAL Code	-	RAL 9003	RAL 9003
Air Filter	Type	-	Long life	Long life
Temperature Control	-	-	Microprocessor, Thermostat for cooling and heating	
Sound Absorbing / Thermal Insulation Material		-	Foamed polystrene	Foamed polystrene
Protection Divice	-	-	Fuse	Fuse
Refrigerant	Type	-	R410A / R32	R410A / R32
	Additional Charging amount	kg(each)	0.49 / 0.41	0.49 / 0.41
	Control Type	-	EEV	EEV
Drain Pipe	O.D / I.D	mm(inch)	32/25	32/25
Piping Connection	Liquid	mm(inch)	Φ9.52 (3/8)	Φ9.52 (3/8)
	Gas	mm(inch)	Φ15.88 (5/8)	Φ15.88 (5/8)
	Connection Type(Liquid)	-	Flare	Flare
	Connection Type(Gas)	-	Flare	Flare
Sound Pressure Level (H / M / L)		dB(A)	47.0 / 43.0 / 40.0	48.0 / 44.0 / 42.0
Sound Power Level (H / M / L)		dB(A)	56.0 / 53.0 / 49.0	58.0 / 54.0 / 53.0
Connecting Cable	Power Supply Cable(H07RN-F)	mm² × cores	2.5 x 3	2.5 x 3
	Communication Cable(VCTF-SB)	mm² × cores	1.0~1.5 x 2	1.0~1.5 x 2

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 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.
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.
5. Refrigerant information (type, additional charging amount, etc.) must be applied by refrigerant type of the combined outdoor unit.
   Adapt after checking the specifications of outdoor unit.
6. Air flow rate could be different in accordance with ‘High ceiling operation’ mode setting value.

3. Dimensions

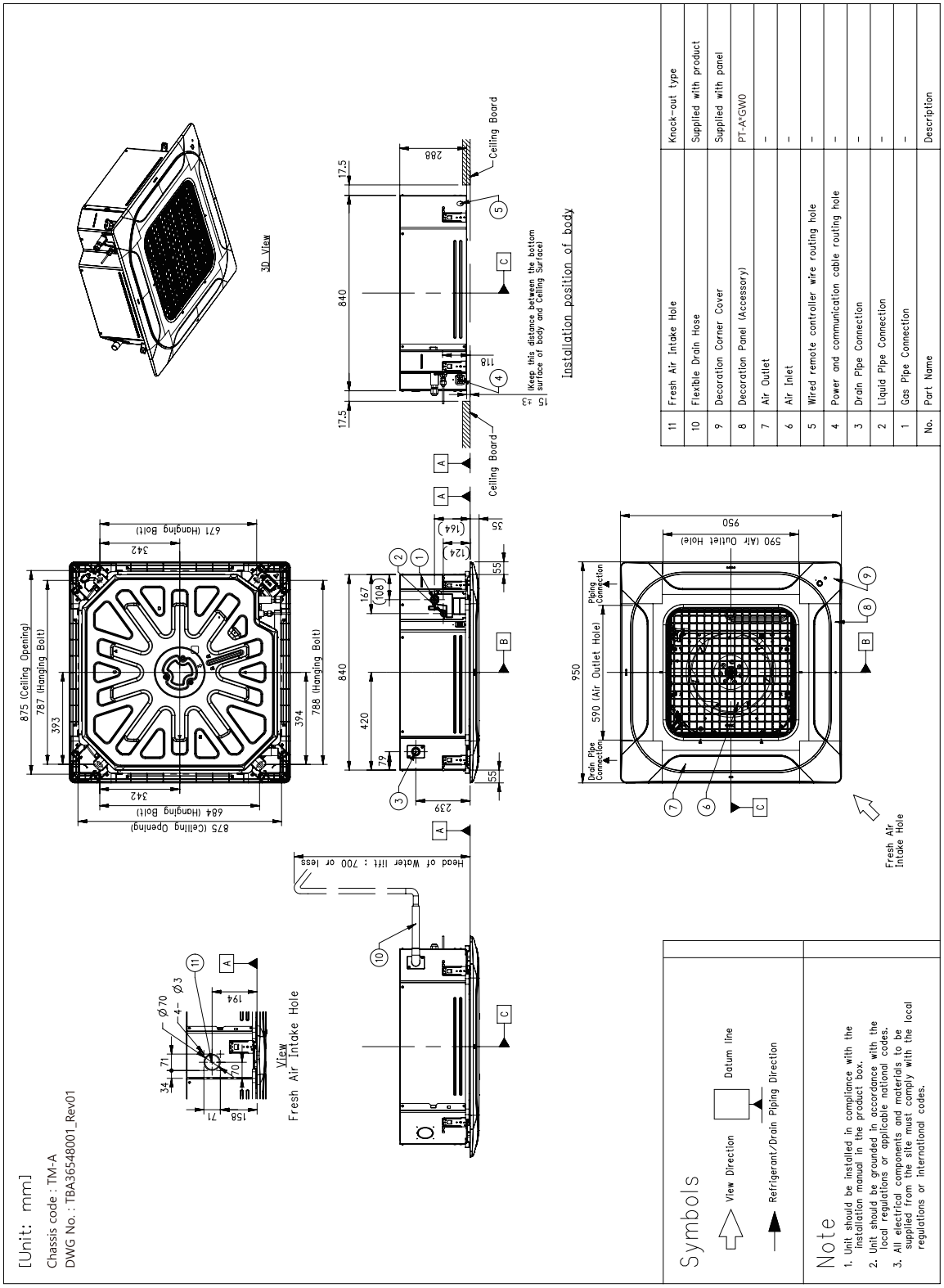
ARNU24GTBB4, ARNU28GTBB4, ARNU30GTBB4



No.	Part Name	Description
11	Fresh Air Intake Hole	Knock-out type
10	Flexible Drain Hose	Supplied with product
9	Decoration Corner Cover	Supplied with panel
8	Decoration Panel (Accessory)	PT-A*GW0
7	Air Outlet	-
6	Air Inlet	-
5	Wired remote controller wire routing hole	-
4	Power and communication cable routing hole	-
3	Drain Pipe Connection	-
2	Liquid Pipe Connection	-
1	Gas Pipe Connection	-

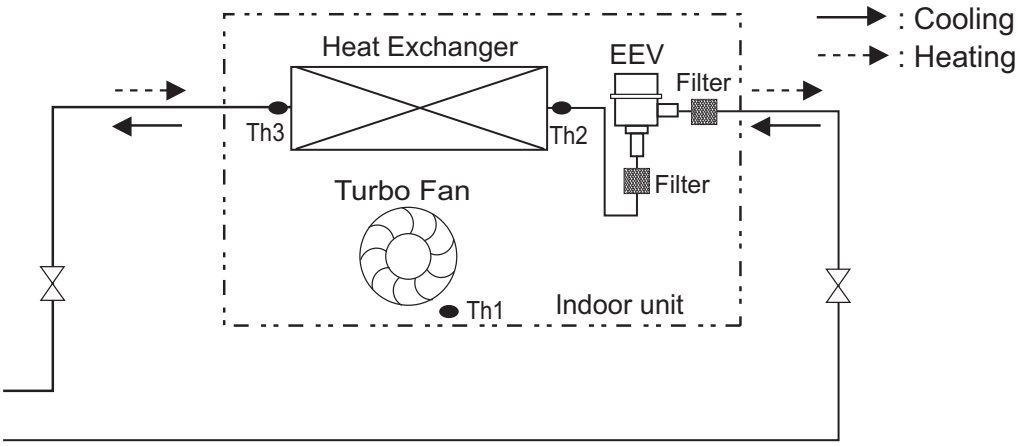
3. Dimensions

ARNU36GTAB4, ARNU42GTAB4, ARNU48GTAB4



No.	Part Name	Description
11	Fresh Air Intake Hole	Knock-out type
10	Flexible Drain Hose	Supplied with product
9	Decoration Corner Cover	Supplied with panel
8	Decoration Panel (Accessory)	PT-A*GW0
7	Air Outlet	–
6	Air Inlet	–
5	Wired remote controller wire routing hole	–
4	Power and communication cable routing hole	–
3	Drain Pipe Connection	–
2	Liquid Pipe Connection	–
1	Gas Pipe Connection	–

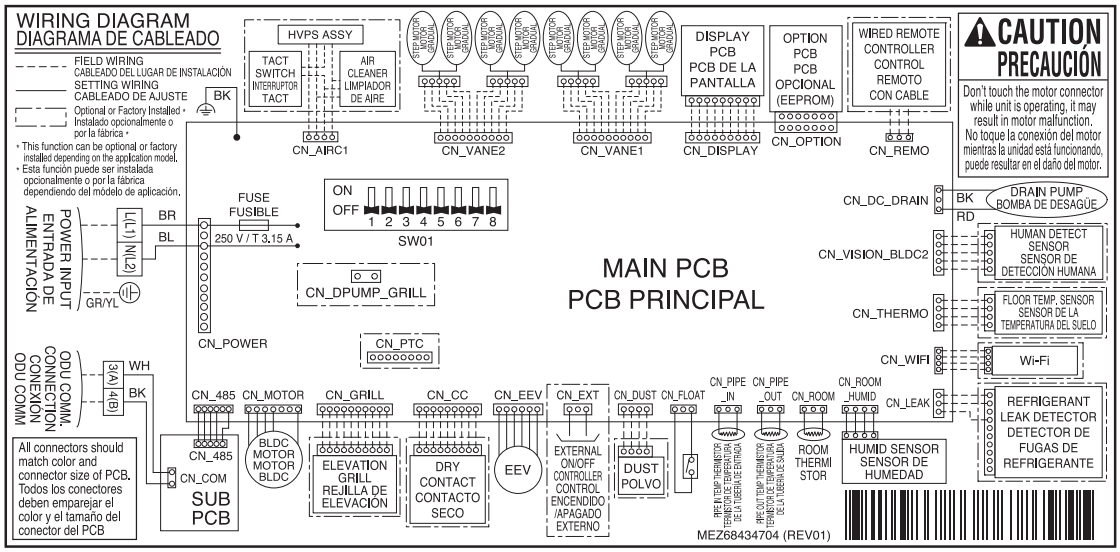
4. Piping Diagrams



LOC.	Description
Th1	Room thermistor
Th2	Pipe in thermistor
Th3	Pipe out thermistor

5. Wiring Diagrams

■ Model : ARNU24GTBB4, ARNU28GTBB4, ARNU30GTBB4, ARNU36GTAB4, ARNU42GTAB4, ARNU48GTAB4



6. Capacity Tables

■ Cooling Capacity

Nominal Capacity (kBtu/h) [Capacity Index (kW)]	Indoor air temp. (DB/WB, °C)													
	20		23		26		27		28		30		32	
	14		16		18		19		20		22		24	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
24 [7.1]	4.8	4.2	5.7	4.6	6.6	5.0	7.1	5.1	7.6	5.3	8.2	5.3	8.3	4.9
28 [8.2]	5.5	4.9	6.6	5.4	7.7	5.8	8.2	5.9	8.7	6.1	9.4	6.4	9.6	5.6
30 [9.0]	6.1	5.3	7.2	5.8	8.4	6.3	9.0	6.5	9.6	6.7	10.4	6.7	10.5	6.2
36 [10.6]	7.2	6.3	8.5	6.9	9.9	7.5	10.6	7.6	11.3	7.9	11.4	7.4	11.7	6.8
42 [12.3]	8.3	7.3	9.9	8.0	11.5	8.7	12.3	8.9	13.1	9.1	13.3	8.6	13.5	7.9
48 [14.1]	9.5	8.3	11.3	9.2	13.2	10.0	14.1	10.2	15.0	10.5	15.2	9.9	15.5	9.1

Note

1. TC: Total Capacity(kW), SHC: Sensible Heat Capacity(kW)
2. Capacity tables show the average value of conditions which may occur.
3. Refer to Capacity tables and correction factor in the outdoor unit PDB for the actual performance data of each indoor unit and outdoor unit combination.

■ Heating Capacity

Nominal Capacity (kBtu/h) [Capacity Index (kW)]	Indoor air temp. (DB, °C)					
	16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC
24 [7.1]	9.0	8.5	8.0	7.7	7.5	7.0
28 [8.2]	10.4	9.9	9.2	8.9	8.6	8.0
30 [9.0]	11.3	10.6	10.0	9.7	9.4	8.7
36 [10.6]	13.4	12.7	11.9	11.5	11.1	10.4
42 [12.3]	15.6	14.7	13.8	13.4	12.9	12.0
48 [14.1]	17.9	16.9	15.9	15.4	14.9	13.9

Note

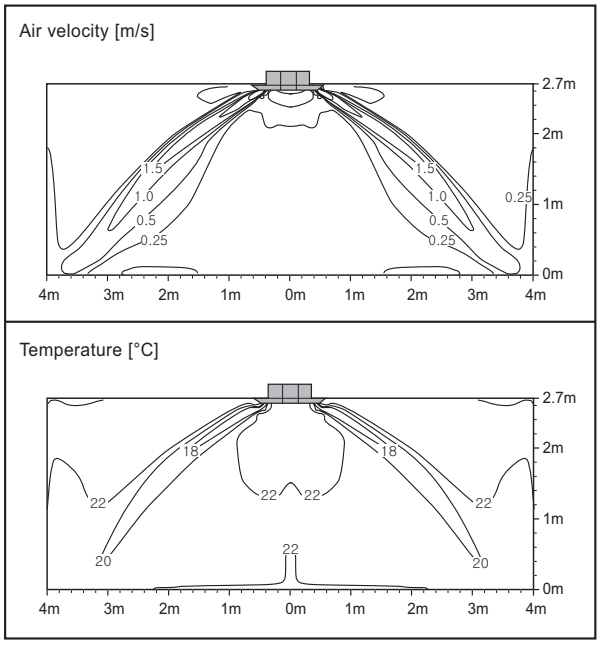
1. TC: Total Capacity(kW)
2. Capacity tables show the average value of conditions which may occur.
3. Refer to Capacity tables and correction factor in the outdoor unit PDB for the actual performance data of each indoor unit and outdoor unit combination.

7. Air flow and temperature distributions (reference data)

■ Model : ARNU24GTBB4

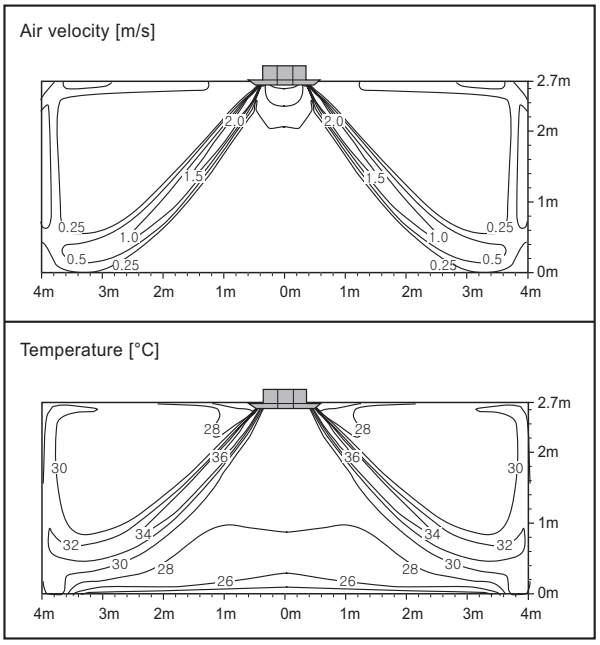
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

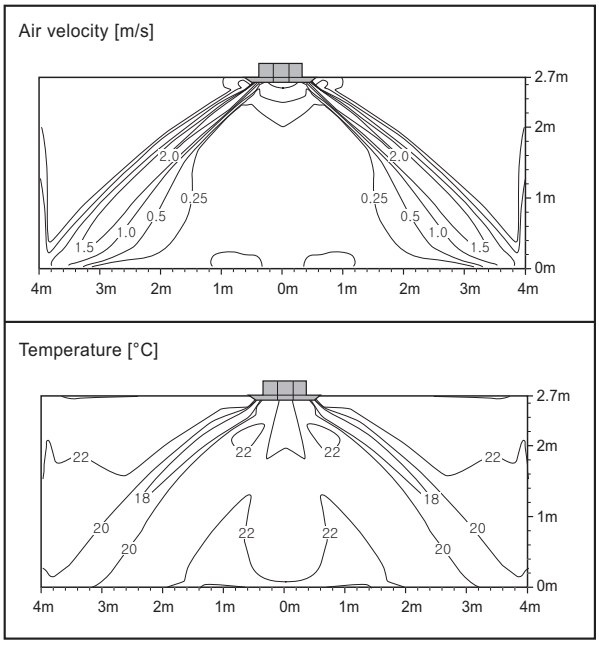
Discharge angle: Outer - 36°, Inner - 70°



■ Model : ARNU28GTBB4

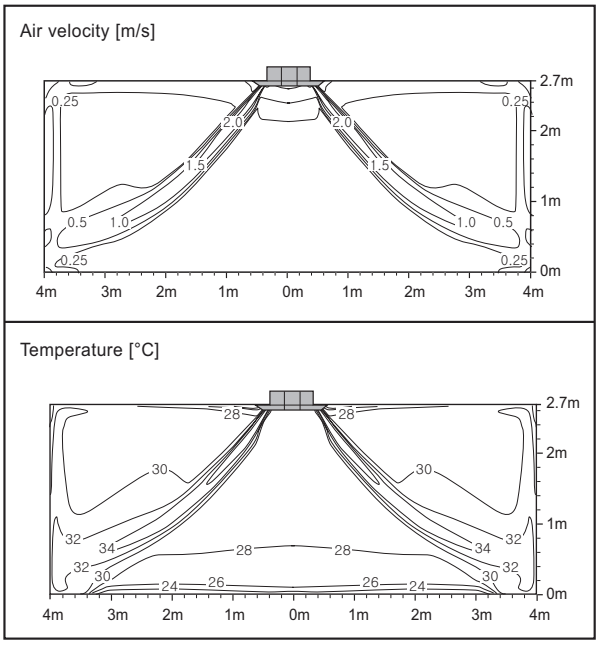
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

Discharge angle: Outer - 36°, Inner - 70°



Note

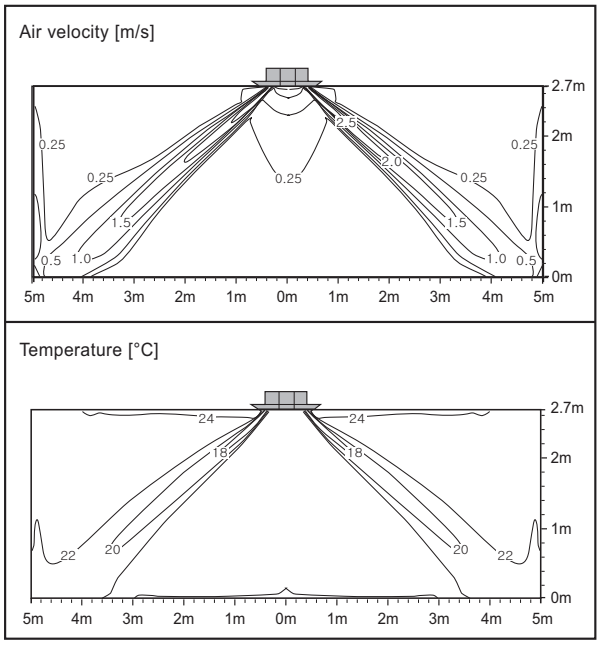
- These figures are accordance with normal certain condition and environment.
  (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

7. Air flow and temperature distributions (reference data)

■ Model : ARNU30GTBB4

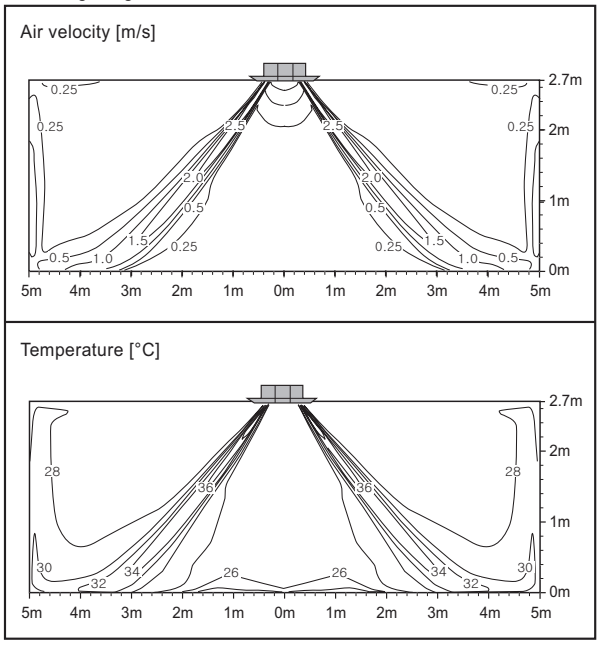
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

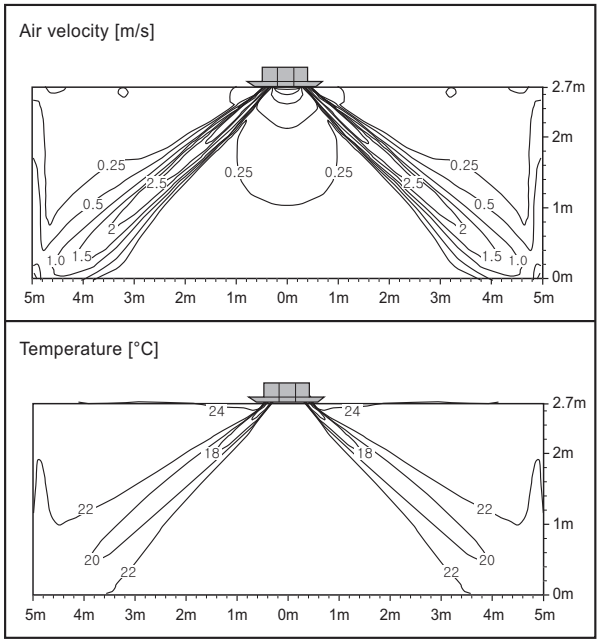
Discharge angle: Outer - 36°, Inner - 70°



■ Model : ARNU36GTAB4

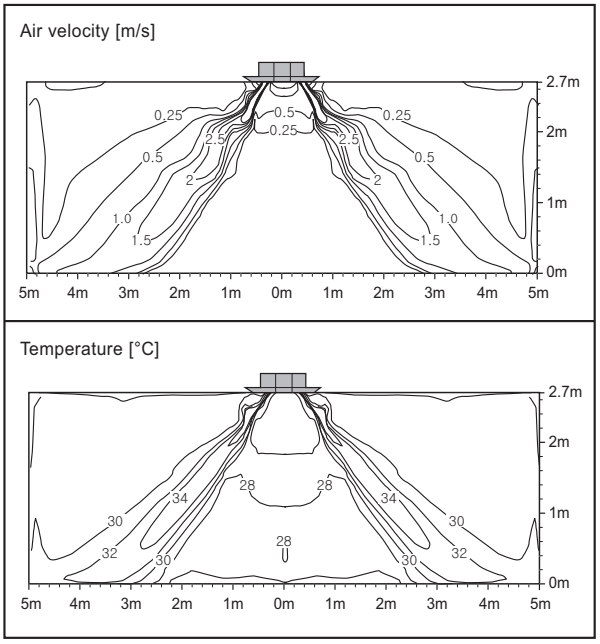
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

Discharge angle: Outer - 36°, Inner - 70°



Note

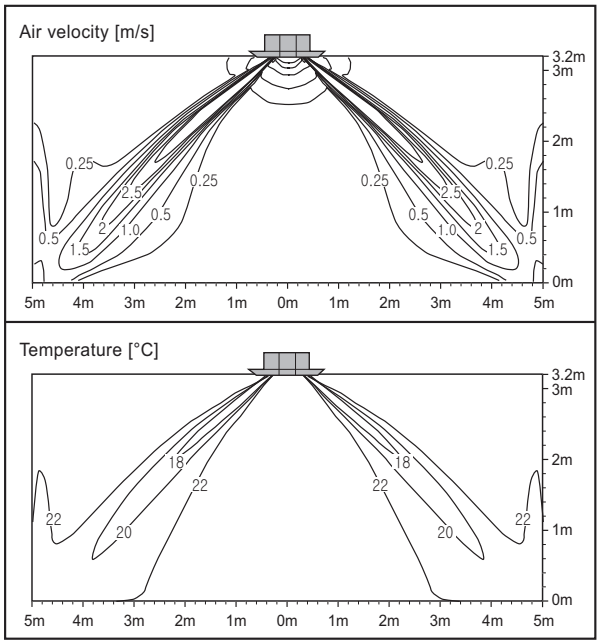
- These figures are accordance with normal certain condition and environment.
  (Airflow step is 'High', Air discharge angle is fixed as indicated angle.)
- Indoor airflow distribution under actual installation or operating conditions depends on ambient temperature, ceiling height, product installation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

7. Air flow and temperature distributions (reference data)

■ Model : ARNU42GTAB4

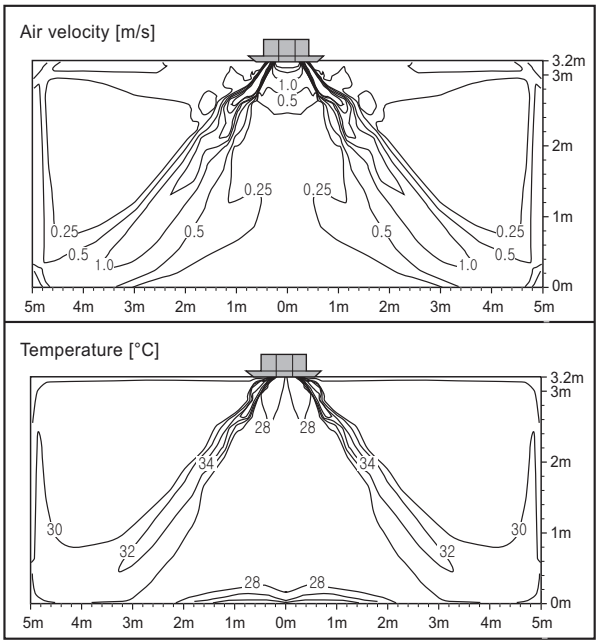
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

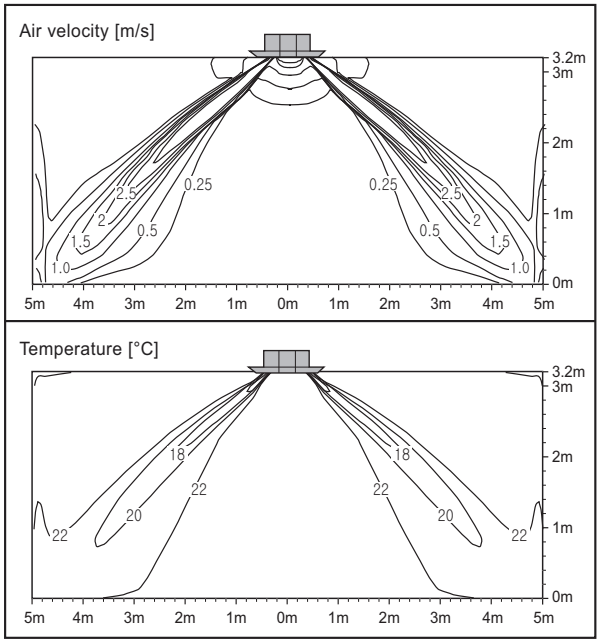
Discharge angle: Outer - 36°, Inner - 70°



■ Model : ARNU48GTAB4

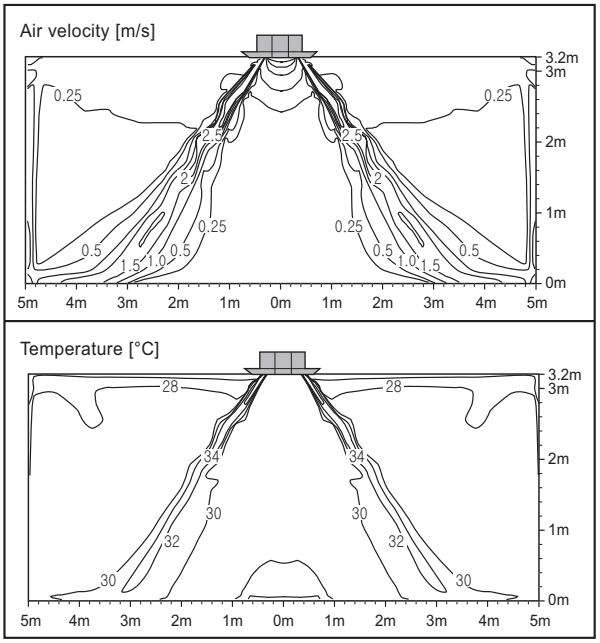
Cooling

Discharge angle: Outer - 30°, Inner - 67°



Heating

Discharge angle: Outer - 36°, Inner - 70°



Note

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

8. Electric Characteristics

Units					Power Supply	IFM		PI	
Model	Type	Hz	Volts	Voltage Range	MCA	kW	FLA	Cooling	Heating
ARNU24GTBB4	TP-B	50	220-240	Max:264 Min:198	1.23	0.051	0.98	63	63
ARNU28GTBB4	TP-B				1.23	0.051	0.98	63	63
ARNU30GTBB4	TP-B				1.23	0.051	0.98	63	63
ARNU36GTAB4	TM-A				2.29	0.135	1.83	223	223
ARNU42GTAB4	TM-A				2.29	0.135	1.83	223	223
ARNU48GTAB4	TM-A				2.29	0.135	1.83	223	223
ARNU24GTBB4	TP-B	60	220	Max:242 Min:198	1.23	0.051	0.98	63	63
ARNU28GTBB4	TP-B				1.23	0.051	0.98	63	63
ARNU30GTBB4	TP-B				1.23	0.051	0.98	63	63
ARNU36GTAB4	TM-A				2.29	0.135	1.83	223	223
ARNU42GTAB4	TM-A				2.29	0.135	1.83	223	223
ARNU48GTAB4	TM-A				2.29	0.135	1.83	223	223

Symbols

MCA : Minimum Circuit Amperes (A)

MFA : Maximum Fuse Amperes (A)

kW : Fan Motor Rated Output (kW)

FLA : Full Load Amperes (A)

IFM : Indoor Fan Motor

PI : Maximum Power Input (W)

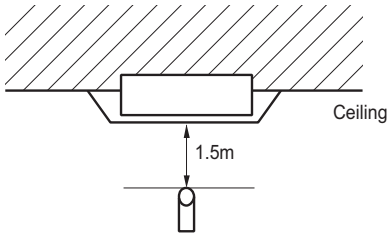
Note

1. Voltage range
   Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above the listed range limits.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA/MFA
   MCA=1.25 x FLA
   MFA = 1.1 x MCA, MFA≤ 4 x FLA
   (If MFA is smaller than minimum standard value, Use minimum standard value in region for selecting circuit breaker.)
4. Select wire size based on the MCA
5. Instead of fuse, use Circuit Breaker.

9. Sound levels

9.1 Sound pressure level

■ Overall



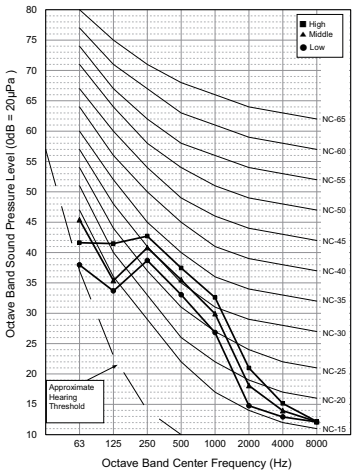
* Measuring place : Anechoic chamber

Note

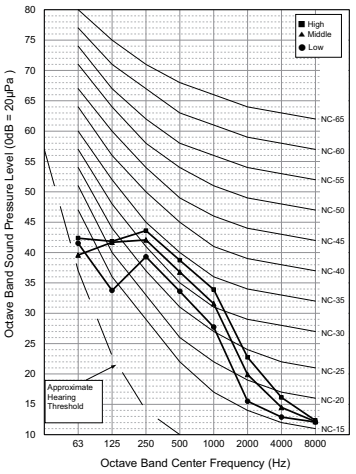
1. Sound measured at some distance away from the center of the unit.
2. Data is valid at free field condition.
3. Reference accoustic pressure 0dB = 20μPa.
4. Data is valid at nominal operation condition.
   Refer to the Model Specifications for nominal conditions(Power source and Ambient temperature, 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 in 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
ARNU24GTBB4	39	37	35
ARNU28GTBB4	40	38	35
ARNU30GTBB4	43	40	36
ARNU36GTAB4	43	40	37
ARNU42GTAB4	47	43	40
ARNU48GTAB4	48	44	42

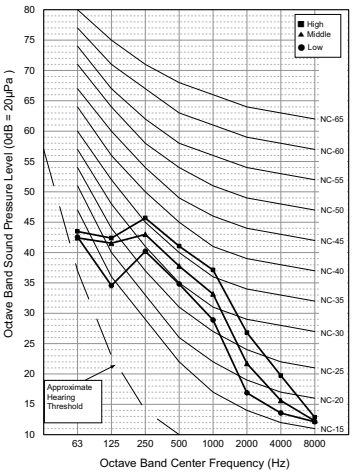
ARNU24GTBB4



ARNU28GTBB4

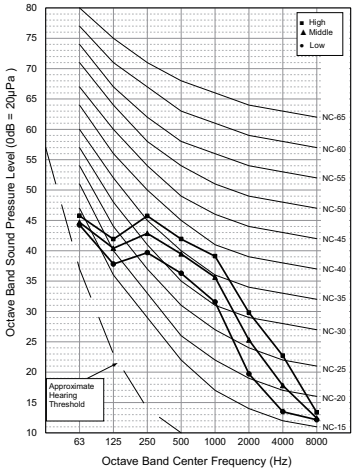


ARNU30GTBB4

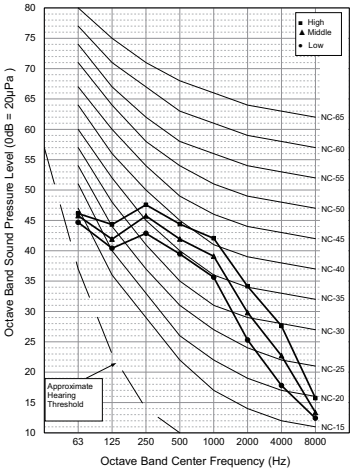


9. Sound levels

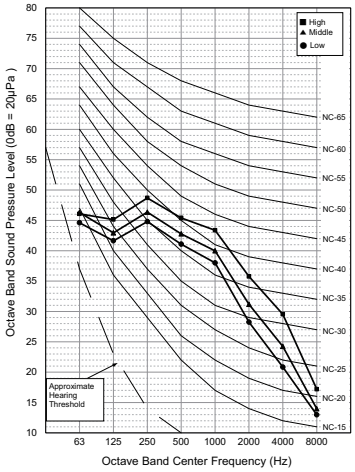
ARNU36GTAB4



ARNU42GTAB4



ARNU48GTAB4



9. Sound levels

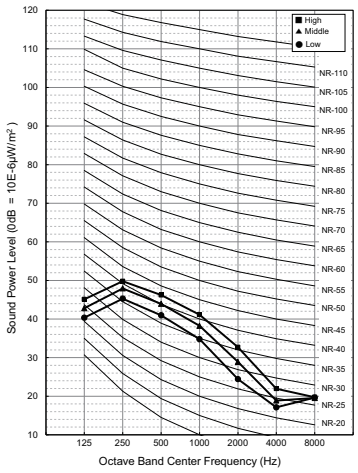
9.2 Sound power level

Note

- Data is valid at diffuse field condition
- Data is valid at nominal operating condition
- Sound level can be increased in static pressure mode or used air guide.
- Sound power level is measured on the rated condition in the reverberation rooms.
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment in installed.
- Reference acoustic intensity 0dB = 10E-6μW/m^2
- Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

Model	Sound Power Levels [dB(A)]		
	H	M	L
ARNU24GTBB4	46	44	42
ARNU28GTBB4	50	46	43
ARNU30GTBB4	53	50	45
ARNU36GTAB4	54	51	47
ARNU42GTAB4	56	53	49
ARNU48GTAB4	58	54	53

ARNU24GTBB4



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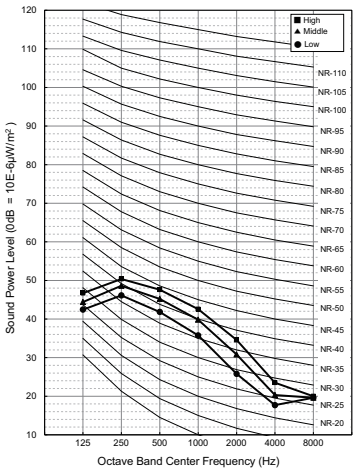
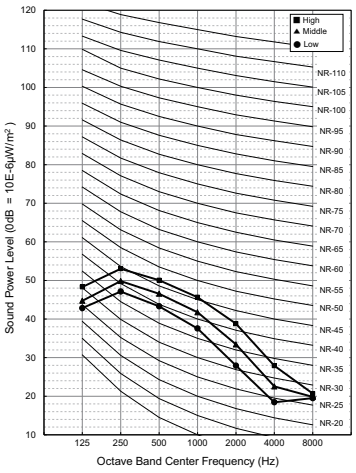
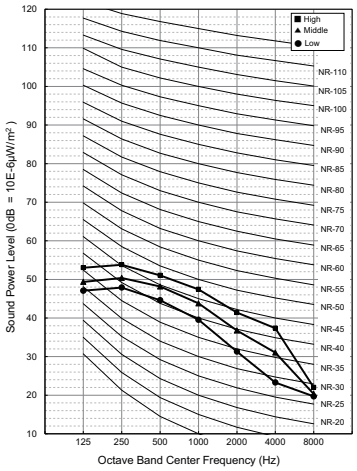


ARNU30GTBB4

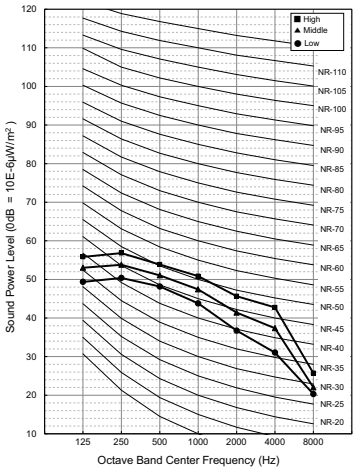


9. Sound levels

ARNU36GTAB4



ARNU42GTAB4



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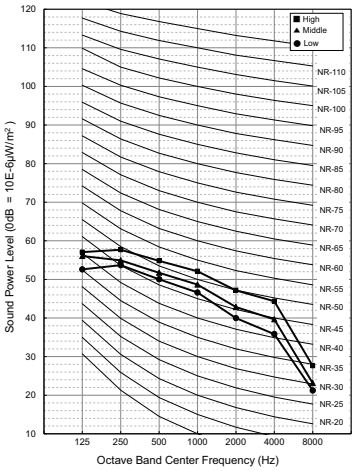


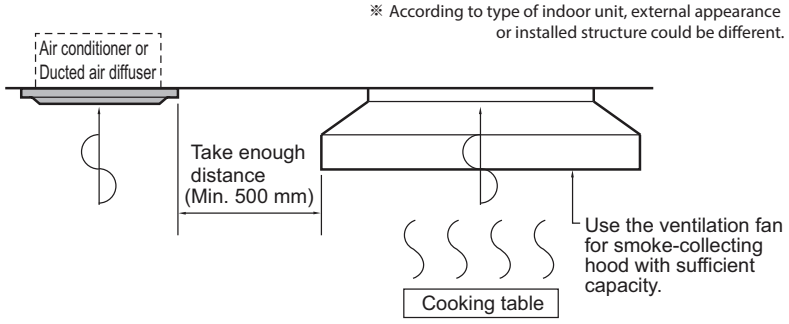
10. Installation

- 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.)

10.1 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;
   - 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.

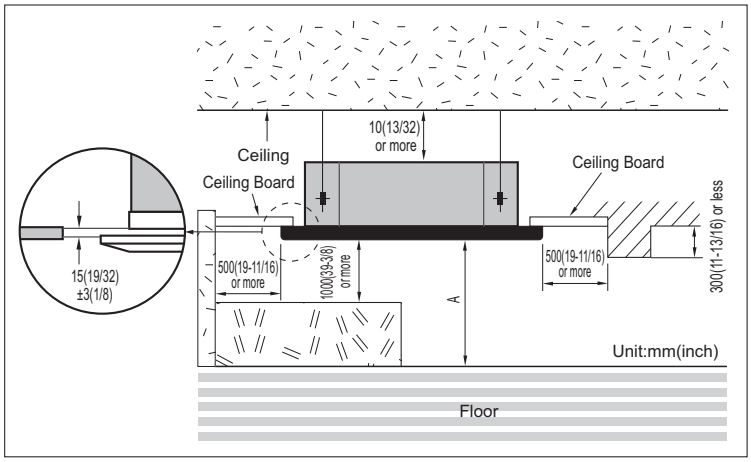
10. Installation

⚠ CAUTION

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

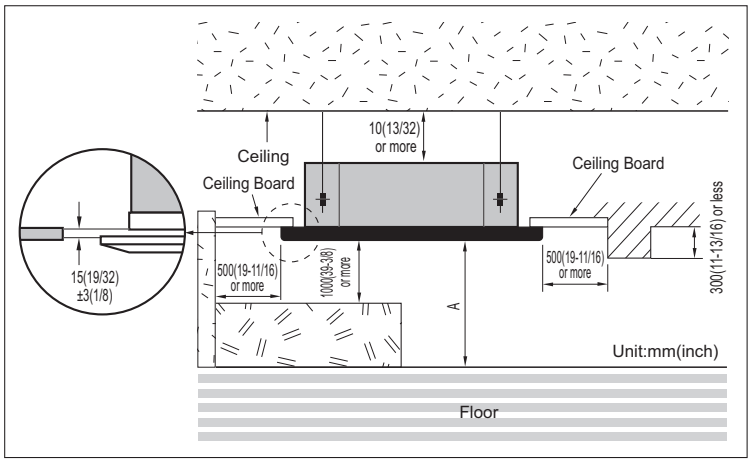
TP/TP-B Chassis

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



TM/TM-A/TN Chassis

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



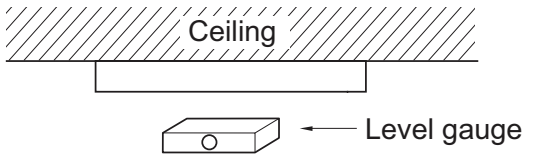
Model		A
4 Way	1.6~10.0 kW	2 000 < A ≤ 3 600
	10.0~14.5 kW	2 500 < A ≤ 4 200

10. Installation

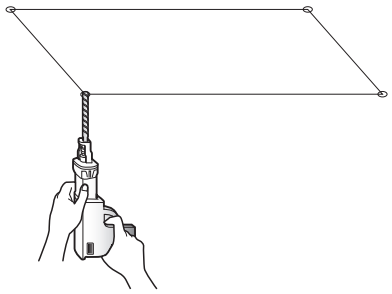
10.2 Ceiling opening dimensions and hanging bolt location

CAUTION

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

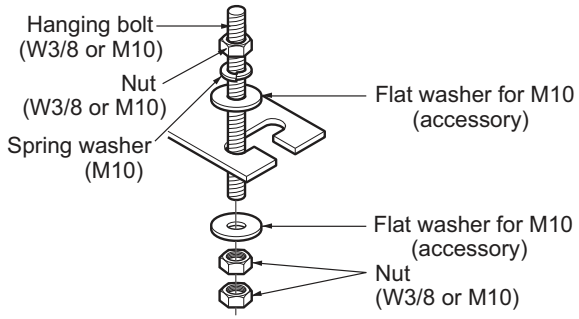


※ According to type of indoor unit, external appearance could be different.



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.

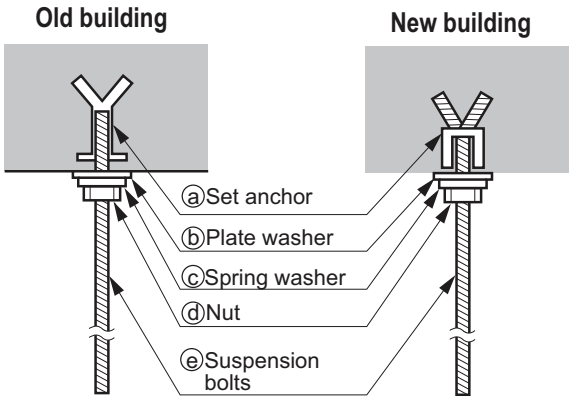
10. Installation

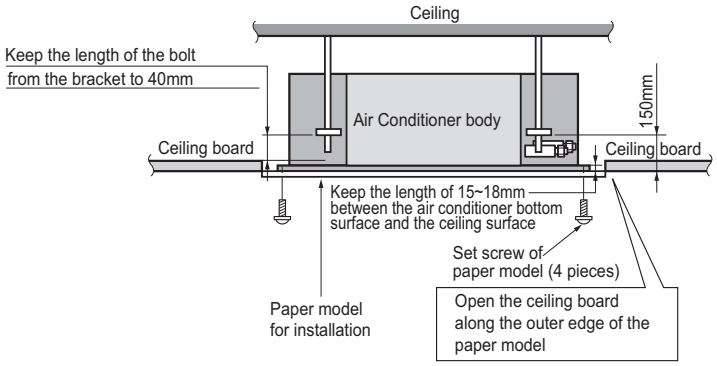


- The following parts are local purchasing.
  1. Hanging bolt - W 3/8 or M10
  2. Nut - W 3/8 or M10
  3. Spring washer - M10
  4. Plate washer - M10

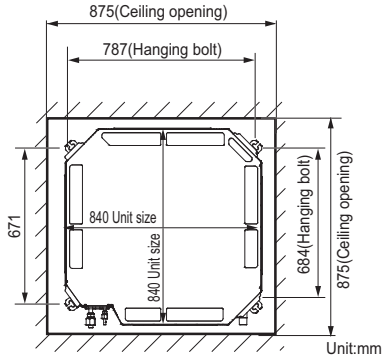
⚠ CAUTION

- 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)





TM/TM-A/TN/TP/TP-B Chassis
Panel Dimensions [Unit : mm]
950 x 950



10.3 Connecting Cables between Indoor Unit and Outdoor Unit

10.3.1 General instructions

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

⚠ CAUTION

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

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

10.3.2 Wiring connection

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

10.3.3 Clamping of cables

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

10. Installation

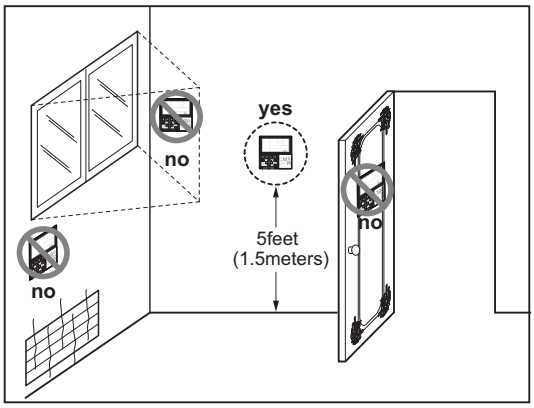
⚠ WARNING

- 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.

10.3.4 Wired Remote Controller Installation (Optional)

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

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



- **Do not install the remote controller where it can be affected by :**
  - Drafts, or dead spots behind doors and in corners.
  - Hot or cold air from ducts.
  - Radiant heat from sun or appliances.
  - Concealed pipes and chimneys.
  - Uncontrolled areas such as an outside wall behind the remote controller.
  - This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly. (The standard height is 1.2~1.5 m from floor level.)

10. Installation

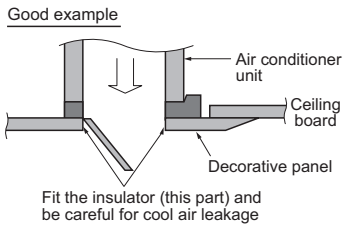
10.4 Installation of Decoration Panel

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

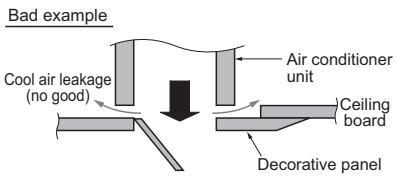
⚠ CAUTION

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

Good case



Bad case

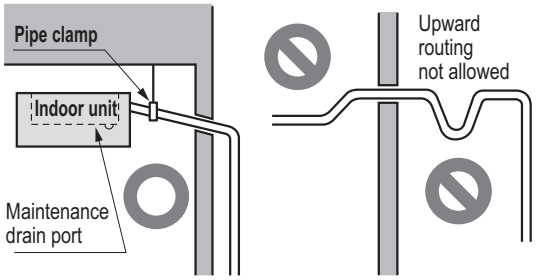


10. Installation

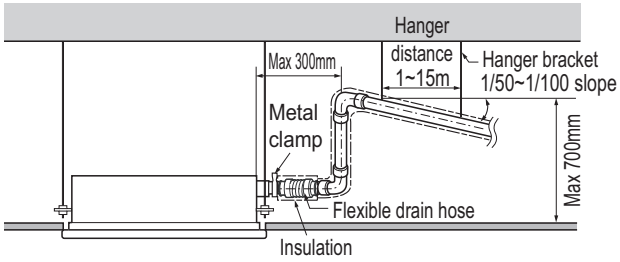
10.5 Indoor Unit Drain Piping

10.5.1 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, 25 mm (1 inch) pipe fittings.

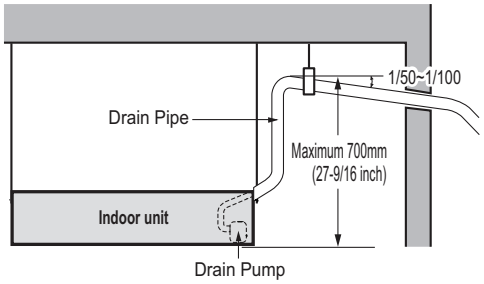


※ According to type of indoor unit, external appearance could be different.

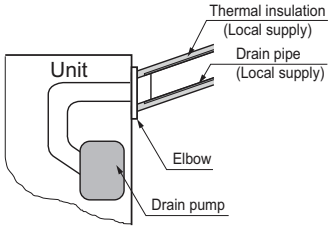


※ According to type of indoor unit, external appearance could be different.

- 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.



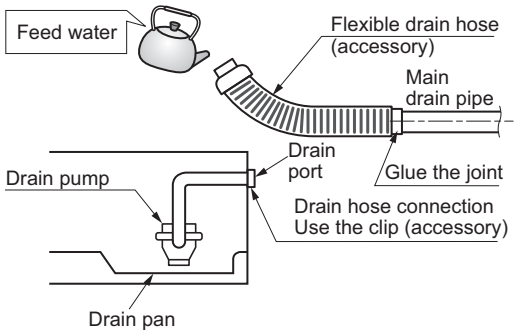
10. Installation

10.5.2 Method of Drainage test

◆ Drainage test of indoor unit with drain pump

Use the following procedure to test the drain pump operation.

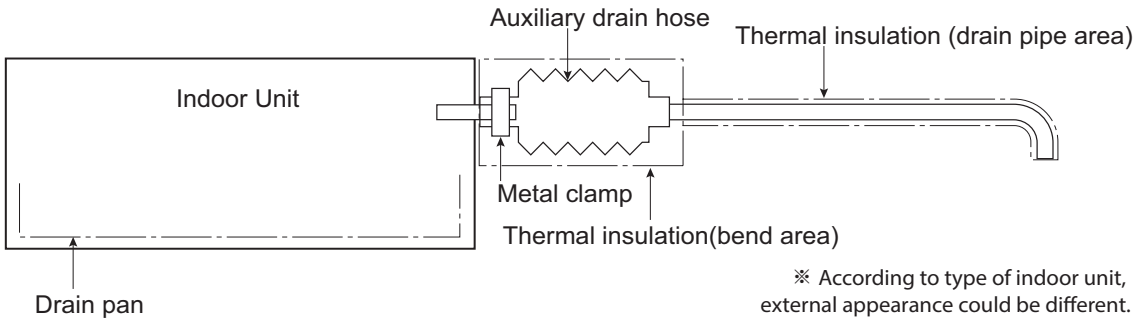
1. Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
2. Feed water to the flexible drain hose and check the piping for leakage.
3. Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
4. When the test is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

10.5.3 Connection of an auxiliary(flexible) drain hose

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

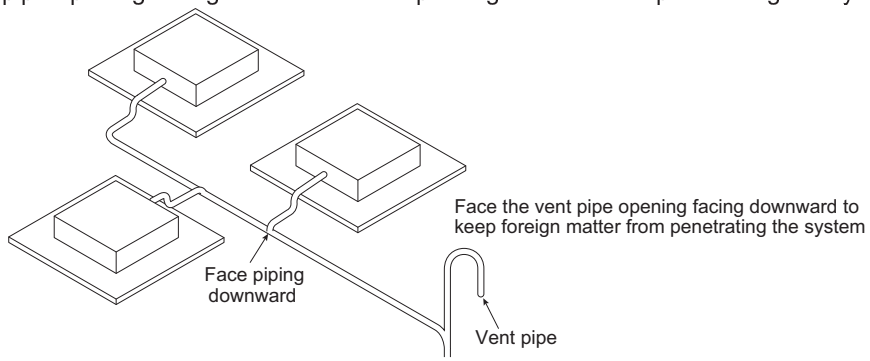


⚠ CAUTION

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

10.5.4 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.



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Printed in Korea August / 2020

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