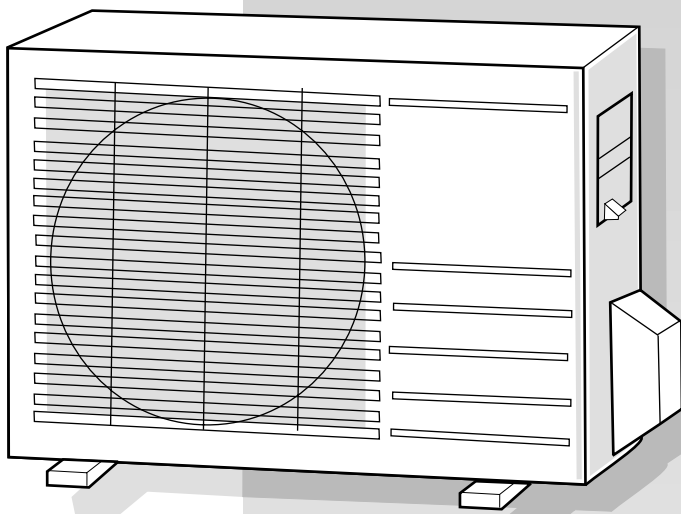
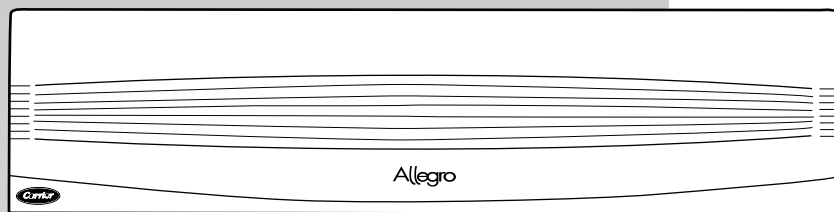




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**42HQE009/012/018/022**  
**38YE009/012/018/022**

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**R-407C**

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**INSTALLATION MANUAL**

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# Split system “Hi-Wall” indoor and outdoor units

For operation and maintenance instructions of this unit as well as installation instructions, refer to owner’s manuals.

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**Table I**

Indoor unit	Outdoor unit	Power Supply
42HQE009	38YE009	220-240 ~ 50Hz
42HQE012	38YE012	
42HQE018	38YE018	
42HQE022	38YE022	

## General information

---

### IMPORTANT:

- For correct installation, read this manual before starting installation.
  - Only trained and qualified service personnel should install, repair or service air conditioning equipment. Users should not install the air conditioner by themselves.
  - All pictures are only sketches. If there is any difference between pictures in this manual and the actual shape of the air conditioner you purchased, the actual shape shall prevail.
- 

### Installation precaution

Installation in the following places may cause trouble. If it is unavoidable, please, consult with the local dealer.

- A place full of machine oil.
- A saline place such as coast.
- A place full of sulfide gas such as hot-spring resort.
- Places where there are high frequency machines such as wireless equipment, welding machine, and medical facility.
- A place of special environmental conditions.
- The appliance shall not be installed in the laundry.

### Indoor Unit

- A place where is no obstacle near the inlet and outlet area.
- A place which can bear the weight of the indoor unit.
- A place which allows the air filter to be removed.
- A place where the reception range is not exposed to direct sunlight.
- A place where the connective pipe and drain hose is easy to led out.
- A place 1m or more to TV, radio instrument, in the center of the room is perfect.
- The indoor unit should be installed 2.3 meters or more above the floor.


### Outdoor Unit

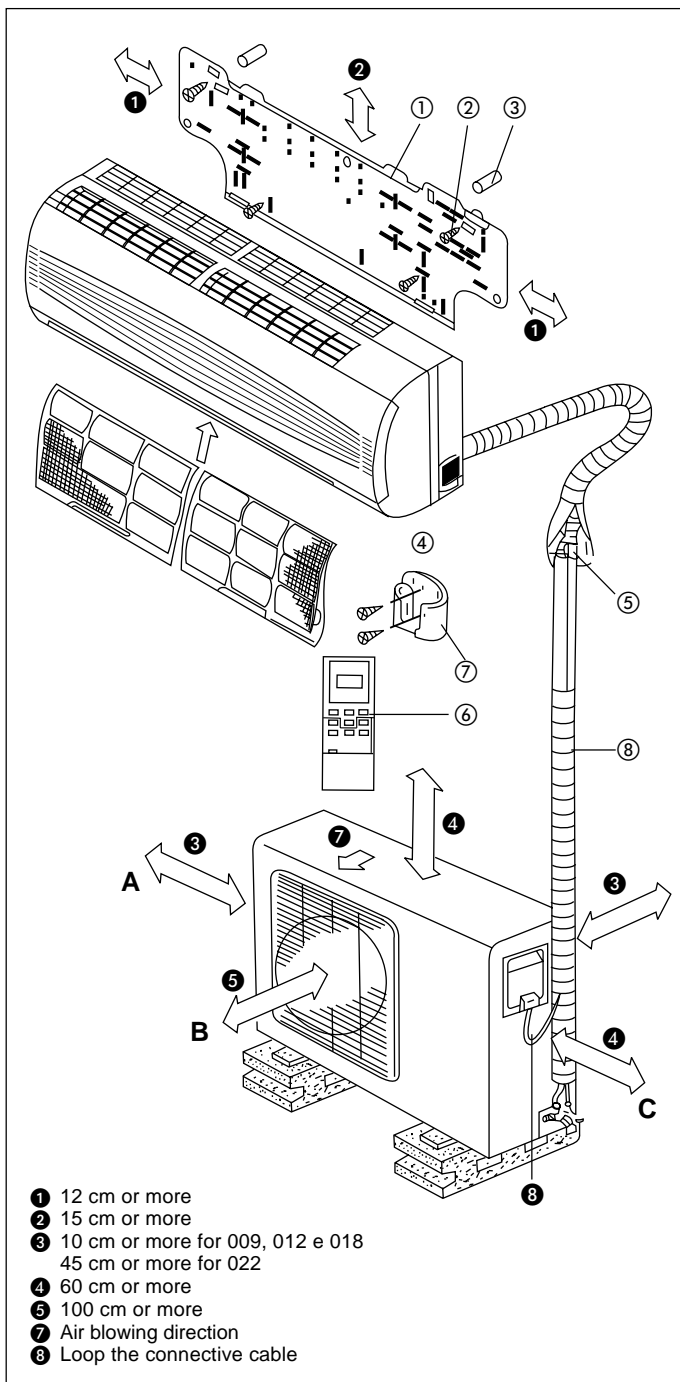
- A place, which is convenient to installation and not exposed to a strong wind.  
A place that is dry and ventilated.
- A place can bear the weight of the outdoor unit and where the outdoor unit can be held in the horizontal position.
- A place which does not allow an increase in noise level and vibration.
- A place where the operation noise and discharge air do not disturb your neighbor.
- A place free of a leakage of combustible gases.
- An allowable head level at the connective piping is less than 5m and length of the connective piping is up less than 10m.
- No any obstacle which block radiat air.
- Unavailable to children.
- A place which provides the space around the outdoor unit as required in the diagram of page 3.

### Unit installation

- Restrictions to connection may be imposed by the supply authority on the use of equipment if the actual system impedance at the interface point on the user's premises exceeds 0.115 ohms for 38YE009, 012, 018 and 0.25 ohms for 38YE022.
- The unit complies with low-voltage (EEC/73/23) and electromagnetic compatibility (EEC/89/336) directives.
- Carefully recover refrigerant within this unit before final disposal or when servicing. Never vent refrigerant to atmosphere.
- All of the manufacturing and packageing material used for your new appliance are compatible with the environment and can be recycled.
- Disconnect the mains power supply switch and wait over 2 minutes without toughing any internal parts of the unit before servicing the system or handing any internal parts of the unit.
- All field electrical connections are the responsibility of the installer.
- If not using plug, ensure that mains supply connection is made through a switch that disconnects all poles, with contact gap of a least 3mm.
- There are some kinds of cord clamp in the accessory parts. If cord clamp is not used as specified, the power cable and interconnection wire will be damaged.
- The equipment contains R-407C refrigerant, a substance that is not depleting the ozone layer but must be disposed of in a proper manner. When disposing of the unit after its operational life, remove it carefully.
- Check that the impedance of the mains power supply is in conformance with the unit power input indicated in the electric (EN 61000-3-11).
- Control batteries contain polluting elements. When exhausted they must be disposed of according to local requirements.
- After the installation thoroughly test system operation and explain all system functions to the owner.
- Leave this manual with the owner for consultation during future periodic maintenance.
- Use this unit only for factory approved applications:the unit cannot be used in laundry or steam pressing premises.
- Follow all current national safety code requirements. In particular ensure that a property sized and connected ground wire is in place.
- Check that voltage and frequency of the mains power supply are those required for the unit to be installed;the available power must be adequate to operate any other possible appliances connected to the same line.
- The manufacturer declines any liability for damage resulting from modifications or errors in the electrical or refrigerant connections.
- Failure to observe the installation instructions or use of the unit under conditions other than those indicated in operating limits , will immediately void the unit warranty.
- Failure to observe electric safety codes may cause a fire hazard in case of short circuits.
- Inspect equipment for damage due to improper transportation or handing: file an immediate claim with the shipping company. Do not install or use damaged units.

# Parts Installation

Part No	Name of part	Q'ty			
		009 - 012,	018 - 022		
①	Installation plate	1	1		
②	Mounting screw A ST3.9x25-C-H	8	8		
③	Clip anchor	8	8		
④	Mounting screw B ST2.9x10-C-H	0	2		
⑤	Refrigerant pipe	Liquid side	Ø 6.35	-	-
			Ø 9.52	-	-
		Gas side	Ø 9.52	-	-
			Ø 12.7	-	-
		Ø 15.88	-	-	
⑥	Remote controller	1	1		
⑦	Remote controller holder	1	1		
⑧	Seal	1	1		
⑨	Drain elbow	1	1		
⑩	Cable clamp	Ø 9 (9 ~ 11.5 mm)	1	0	
		 (9 ~ 14mm)	1	1	



There are some kinds of cord clamp in the accessory parts, if cord clamp is not used as specified, the power cable and interconnection wire will be damaged.

Please install the accessories attached with unit correctly according to this installation manual.

**Note:**

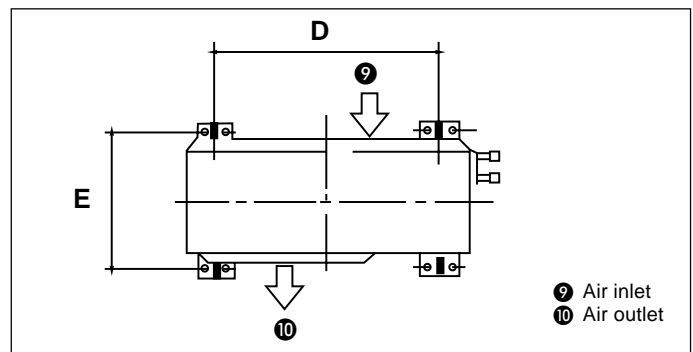
- At least two of A, B, C aspects are free from blocking.
- When the Outdoor Unit is higher than the Indoor Units, to prevent the rain from flowing into the indoor along the connection pipe, a downward tipping arc should be made before the connection pipe entering the wall to indoor to ensure the lowest point on the connection pipe is at outdoor.
- The illustration is for explanation purposes only. The actual shape of would be slightly different (depend on models).

**Cautions on remote controller installation**

Before installation, operate the remote controller to determine its location in a reception range. Keep the remote controller at least 1m apart from the nearest TV set or stereo equipment. Do not install the remote controller in a place exposed to direct sunlight or close to a heating source, such as a stove. Note that the positive and negative poles are right positions when loading batteries.

**Anchor bolts of out door unit installation**

The outdoor unit should not be exposed to strong wind. Fix the outdoor unit with Ø 10 or Ø 8 anchor bolts.



Model	D	E
38YE009	548	276
38YE012	530	290
38YE018	560	335
38YE022	560	335

# Indoor unit installation

## Drilling a hole and mounting installation plate

**Installation Plate and Its Dimension (mm)**

**42HQE009**  
Dimensions: 750 (width), 250 (height), 20 (top-left offset), 30 (top-right offset), 65 (left hole offset), 70 (right hole offset), 65 (bottom-right offset).

**42HQE012**  
Dimensions: 815 (width), 280 (height), 65 (left hole offset), 50 (right hole offset), 65 (bottom-right offset).

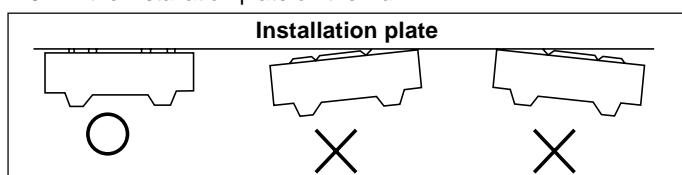
**42HQE018**  
Dimensions: 906 (width), 42 (top-left offset), 49 (top-right offset), 50 (left hole offset), 55 (left hole to center), 90 (right hole to center), 65 (right hole offset).

**42HQE022**  
Dimensions: 1800 (width), 432 (hooked part width), 432 (hooked part width), 108 (hooked part height), 21 (hooked part offset), 50.94 (left hole offset), 95 (left hole to wall), 115 (left hole to center), 465 (center to center), 465 (center to center), 115 (right hole to center), 95 (right hole to wall), 50.94 (right hole offset).

① Indoor unit outline	⑥ Right refrigerant pipe hole
② Installation plate	⑦ Rear-left pipe hole
③ 150 mm or more to ceiling	⑧ Rear-right pipe hole
④ 120 mm or more to wall	⑨ Hooked part
⑤ Left refrigerant pipe hole	⑩ Pipe hole

### 1. Fix the installation plate.

1. Install the installation plate horizontally on structural parts in the wall with the spaces provided around the plate.
2. In case of brick, concrete or similar type walls, make 6 mm Ø, holes in the wall. Insert clip anchors for appropriate mounting screws.
3. Fix the installation plate on the wall.



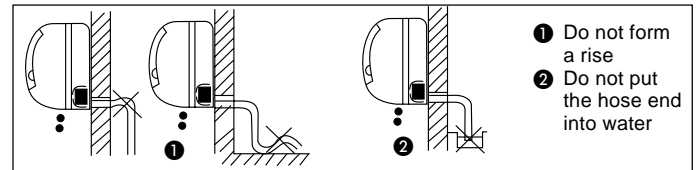
### 2. Drilling a hole.

1. As diagram above determine the pipe hole position using the installation plate, drill the pipe hole (Ø 65mm) so it slants slightly downward.
2. Always use a wall hole conduit when piercing metal lath, ply wood or metal plate.

## Connective Pipe and Drainage Installation

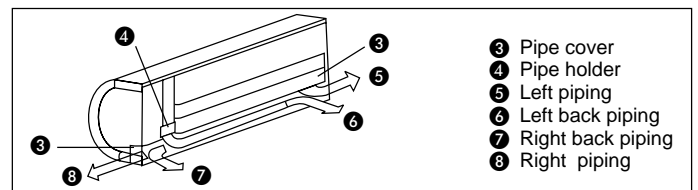
### Drainage

1. Run the drain hose sloping downward. Do not install the drain hose as illustrated below.

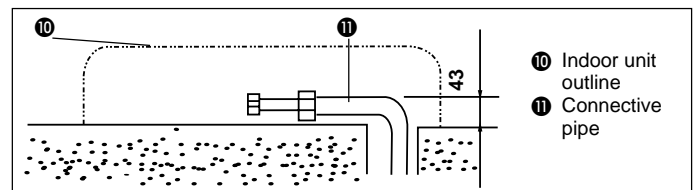


2. When connection extension drain hose, insulate the connecting part of extension drain hose with a shield pipe

### Connective pipe



1. For the left-hand and right-hand piping, remove the rear plate bushing from the left side of the rear plate. Explain to clients that the pipe cover must be kept as it may be used when relocate the air conditioner to any other place.
2. For the left-hand and rear-left-hand piping, install the piping as shown. Bend the connective pipe to be laid at 43 mm height or less from the wall.



3. Fix the end of the connective pipe. (Refer to Tightening Connection in REFRIGRANT PIPING CONNECTION).

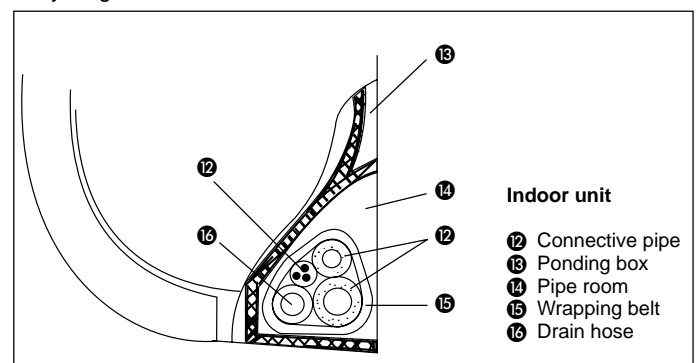
### CAUTION:

- Connect the indoor unit first then the outdoor unit and bend and arrange the pipe carefully.
- Do not allow the piping to let out from the back of the indoor unit.
- Be careful not to let the drain hose slack.
- Insulate both of the auxiliary piping.
- Banding the drain hose under the auxiliary pipe.
- Do not allow the piping to let out from the back of the indoor unit.

### Piping and bandaging

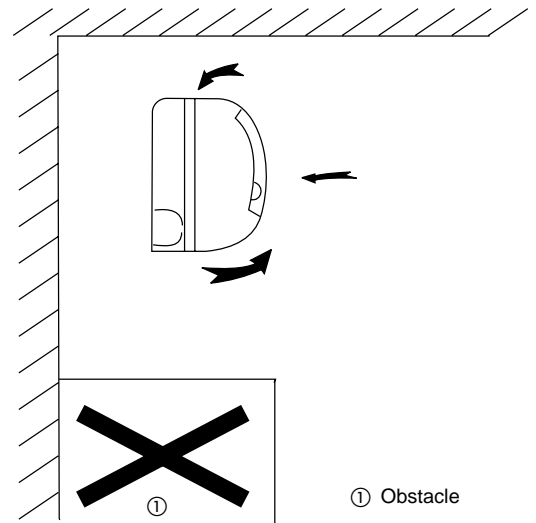
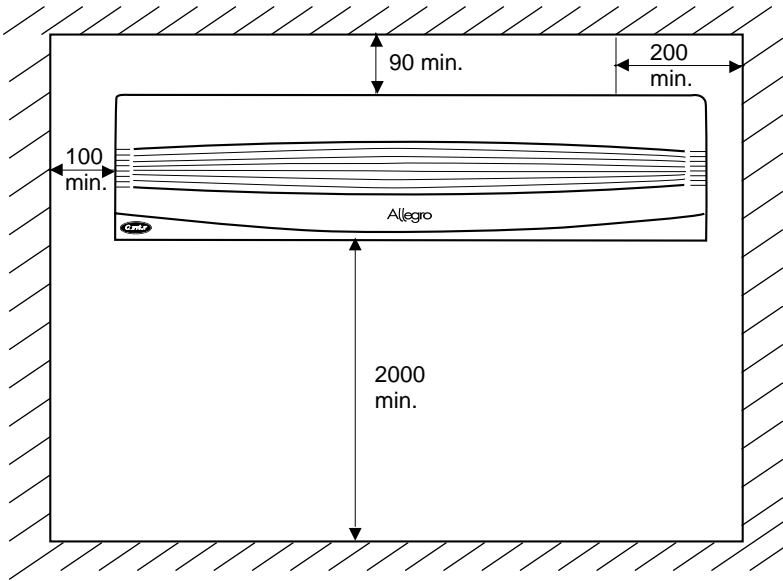
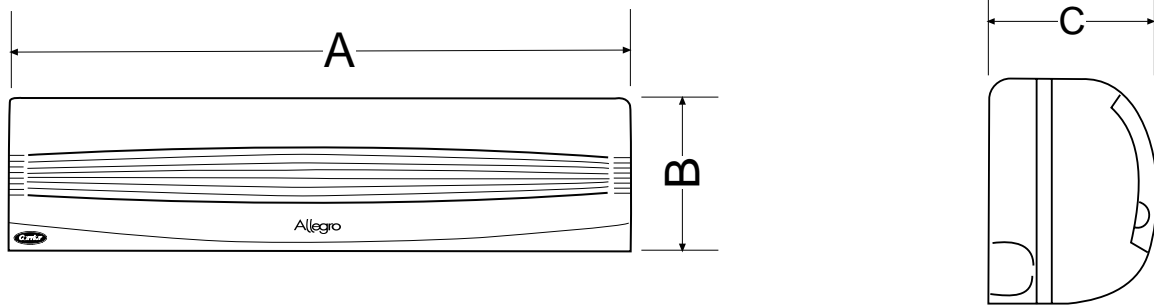
Wind the connective cable, drain hose and wiring with tape securely, evenly as shown below.

- Because the condensed water from rare of the indoor unit is gathered in ponding box and is piped out of room. Do not put anything else in the box.

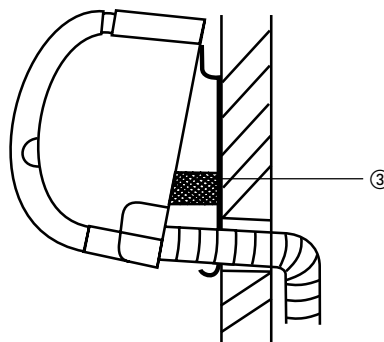
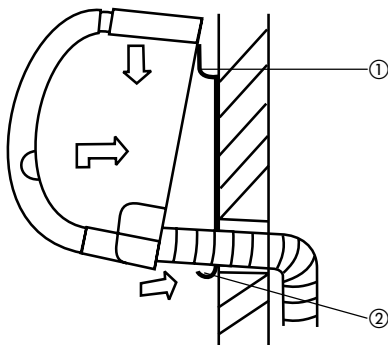


**Indoor unit installation**

**Dimensions and Minimum clearances (mm)**



Model	42HQE009	42HQE012	42HQE018	42HQE022
A mm	750	815	906	1080
B mm	250	280	286	330
C mm	188	195	235	222



- ① Upper hooker
- ② Low hooker
- ③ Cushioning material

1. Pass the piping through the hole in the wall.
2. Put the upper claw at the back of the indoor unit on the upper hook of the installation plate, move the indoor unit from side to side to see that it is securely hooked.
3. Piping can easily be made by lifting the indoor unit

- with a cushioning material between the indoor unit and the wall.  
Get it out after finish piping.
4. Push the lower part of the indoor unit up on the wall, then move the indoor unit from side to side, up and down to check if it is hooked securely.

## Indoor unit installation

### Wiring connection

Prepare the power source for exclusive with the air conditioner. The supply voltage must comply with the rated voltage of the air conditioner: The plug socket shall be accessible after installation.

Model	Power Source	Plug socket and Fuse rating	Wiring
009	50Hz, 220~240V	10A	=1.5
012	50Hz, 220~240V	16A	=1.5
018	50Hz, 220~240V	25A	=2.5
022	50Hz, 220~240V	32A	=2.5

#### CAUTION

- Perform the wiring with sufficient capacity. Installation places legally require a short circuit isolator to be attached to prevent electrical shock.
- Do not extend the power cable code by cutting.
- Power voltage should in the range of 90% 110% of rated voltage.
- The plug of the air conditioner takes a grounding leg, so clients should use a grounding socket so that the air conditioner can be grounded efficiently.
- If the power cord is damaged, replacement should be conducted by qualified technician or a serviceman.

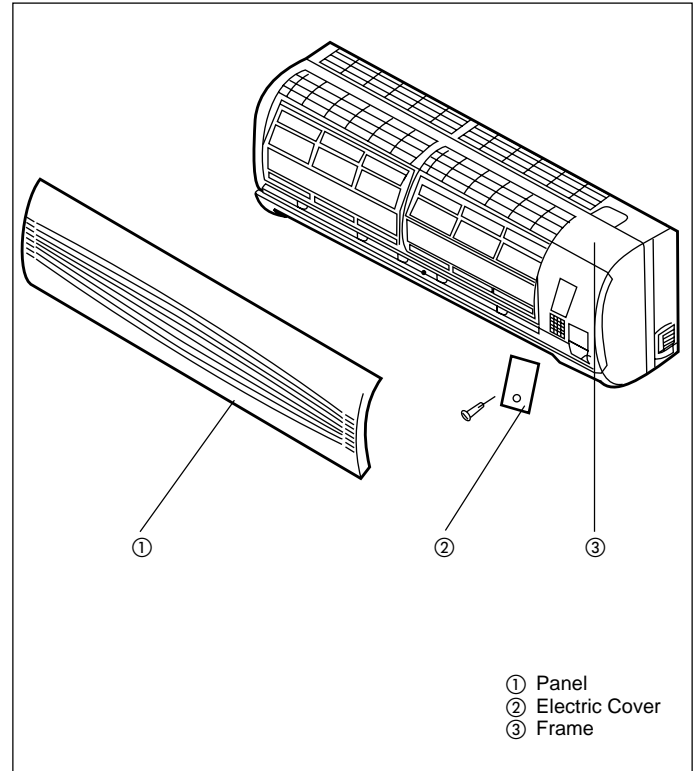
#### NOTE: Remark per EMC Directive 89/336/EEC

For to prevent flicker impressions during the start of the compressor (technical process), following installation conditions do apply.

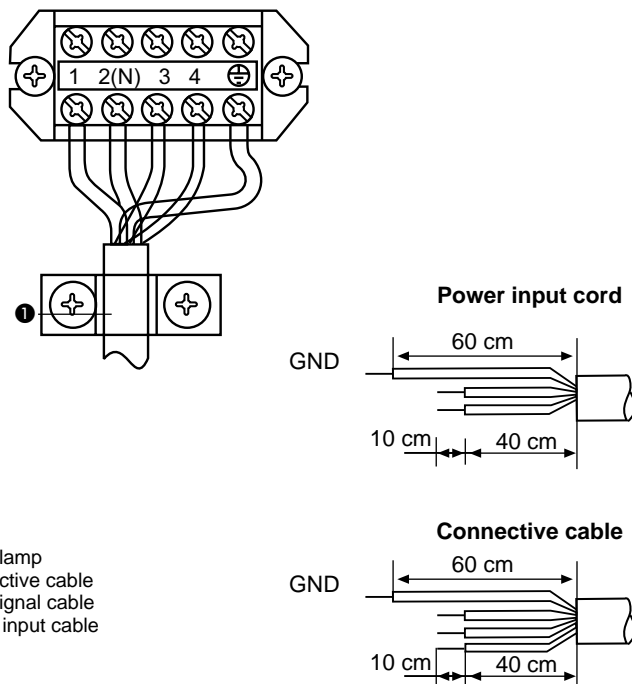
1. The power connection for the air conditioner has to be done at the main power distribution.  
The distribution has to be of an low impedance, normally the required impedance reaches at a 32 A fusing point.
2. No other equipment has to be connected with this power line,.
3. For detailed installation acceptance, please refer to your contract with the power supplier if restrictions do apply for products like washing machines, air conditioner or electrical ovens.
4. For power details of the air conditioner, refer to the rating plate of the product.
5. For any question contact your local dealer.

### Connecting Cables

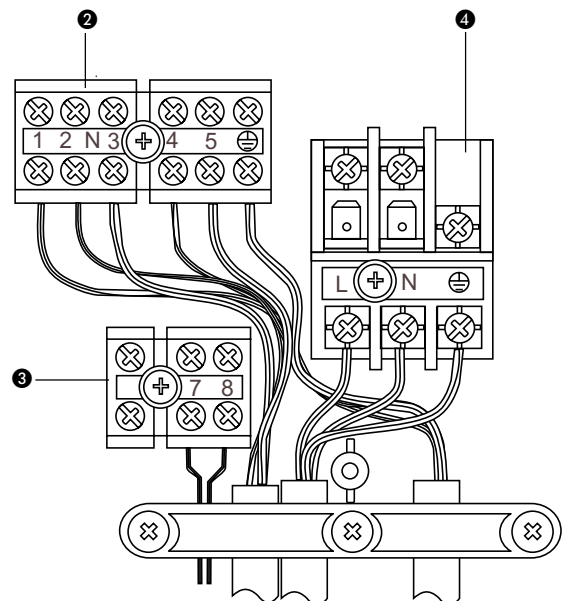
1. Indoor/Outdoor connection cable should be H07RN-F5G type.
2. Remove the panel and remove the screw of electric cover, then take down the cover.
3. Connect cables according to their marks to terminals.
4. Wrap those cables not connected with terminals with insulation tapes, so that they will not touch any electrical components.



**Terminal block of indoor unit  
42HQE009/012/018**

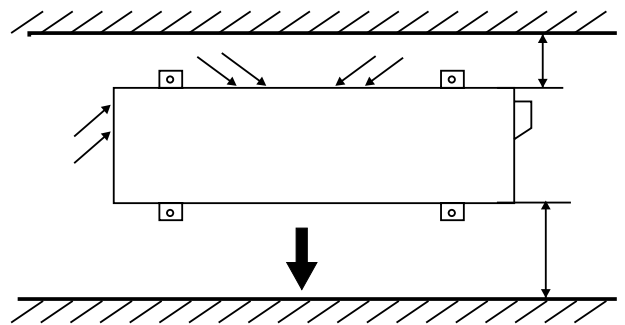
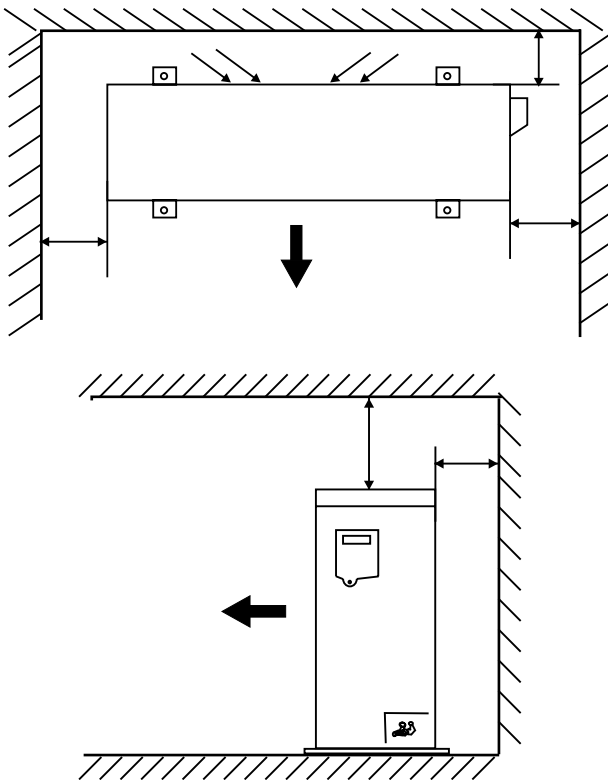


**Terminal block of indoor unit  
42HQE022**



# Outdoor unit installation

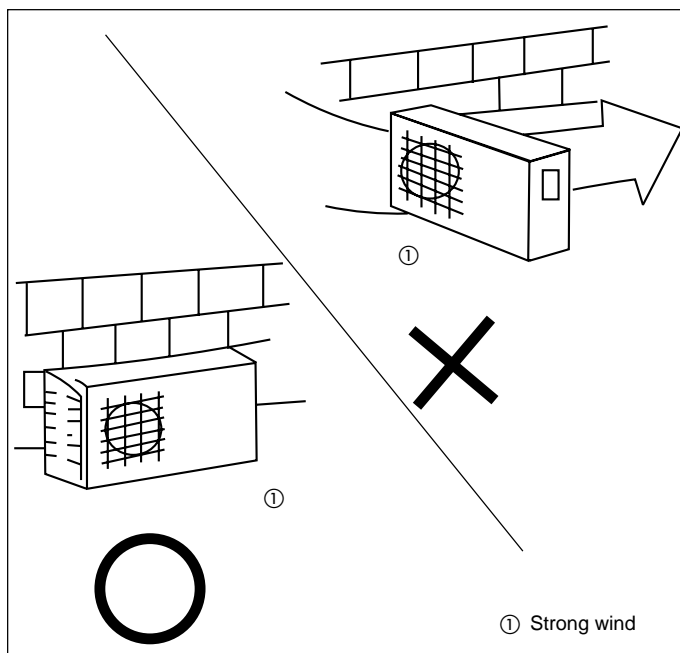
## Minimum clearances (mm)



Mod.	38YE009/012	38YE018/022
A mm	100 mm or more	100 mm or more
B mm	100 mm or more	100 mm or more
C mm	600 mm or more	600 mm or more
D mm	100 mm or more	100 mm or more
E mm	1000 mm or more	1000 mm or more
F mm	600 mm or more	600 mm or more

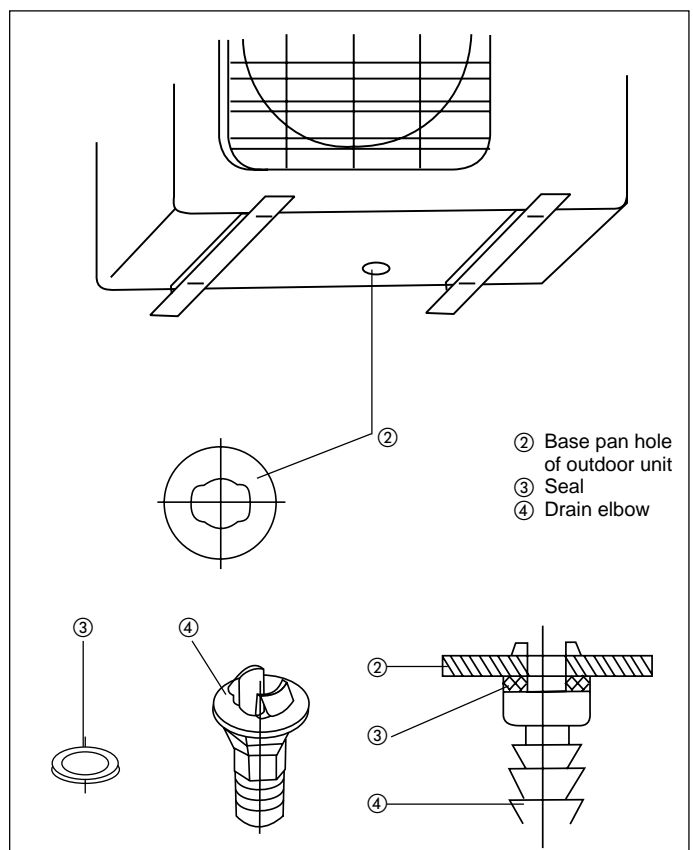
## Outdoor installation precaution

- Install the outdoor unit on a rigid base to prevent increasing noise level and vibration.
- Determine the air outlet direction where the discharged air is no blocked.
- In the case that the installation place is exposed to strong wind such as a seaside operation by putting the unit lengthwise along the wall or using a dust or shield plates.
- Specially in windy area, install the unit to prevent the admission of wind. The connection between bracket and wall, bracket and the air conditioner should be firm, stable and reliable.
- If need suspending installation, the installation bracket should accord with technique requirement in the installation bracket diagram.



## Drain elbow installation

Fit the seal into the drain elbow, then insert the drain elbow into the base pan hole of outdoor unit, rotate 90 to securely assemble them. Connecting the drain elbow with an extension drain hose (Locally purchased), in case of the water draining off the outdoor unit during the heating mode.

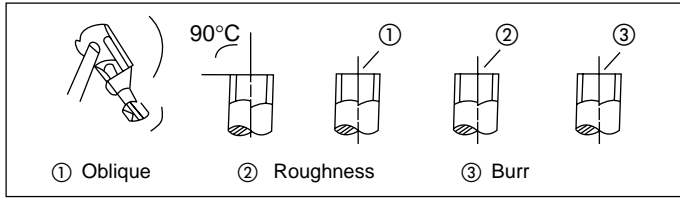




# Outdoor unit installation

## Refrigerant piping connection

### Flaring

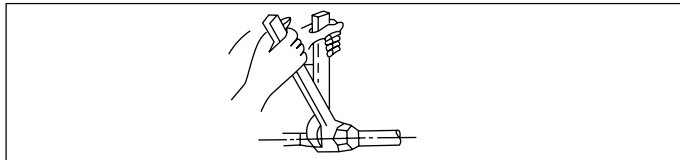


- Cut a pipe with a pipe cutter.
- Insert a flare nut into a pipe and flare the pipe.

Outer diam. (mm)	A (mm)	
	Max.	Min.
Ø 6.35	1.3	0.7
Ø 9.53	1.6	1.0
Ø 12.7	1.8	1.0
Ø 15.88	2.4	2.2

### Tightening Connection

- Align pipes to be connected.
- Sufficiently tighten the flare nut with fingers, and then tighten it with a spanner and torque wrench as shown.



### CAUTION

- Excessive torque can break nut depending on installation conditions.

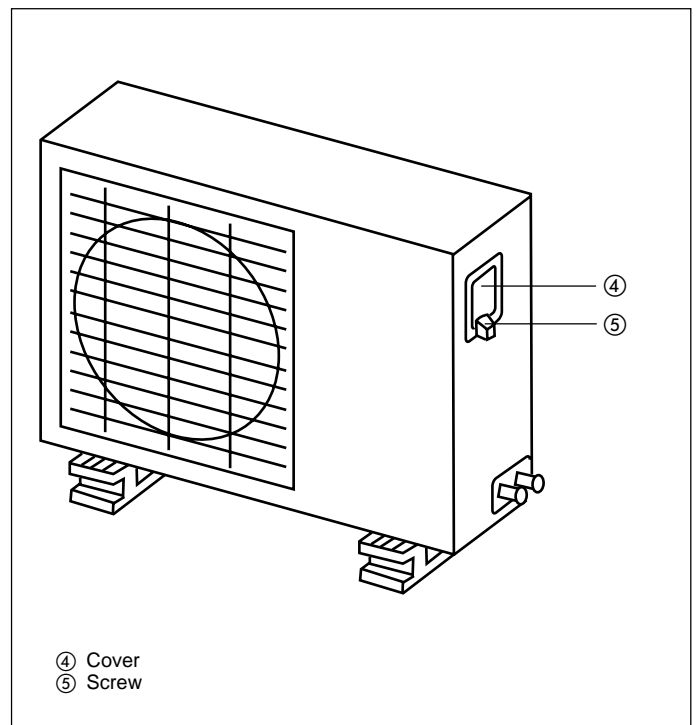
Outer diam.	Tightening torque (N.cm)	Additional tightening torque (N.cm)
Ø 6.35	1570 (160kgf.cm)	1960 (200kgf.cm)
Ø 9.53	2940 (300kgf.cm)	3430 (350kgf.cm)
Ø 12.7	2940 (300kgf.cm)	4410 (450kgf.cm)
Ø 15.88	7360 (750kgf.cm)	7850 (800kgf.cm)

## Wiring connection

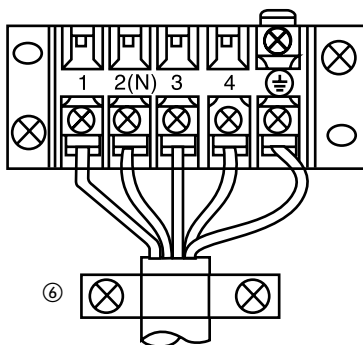
1. Remove the electric parts cover from the outdoor unit.
2. Connect the connective cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.
3. To prevent the ingress of water, from a loop of the connective cable as illustrated in the installation diagram of indoor and outdoor units.
4. Insulate unused cords (conductors) with PVC-tape. Process them so they do not touch any electrical or metal parts.

### CAUTION:

Wrong wiring connections may cause some electrical parts to malfunction. A disconnection device having an air gap contact separation in all active conductors should be incorporated in the fixed wiring according to the National Wiring Regulation. All wiring must comply with local and national electrical codes and be installed by qualified and skilled electrician.

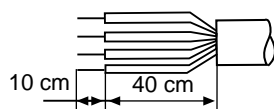


**Terminal block of outdoor unit  
38YE009/012/018**

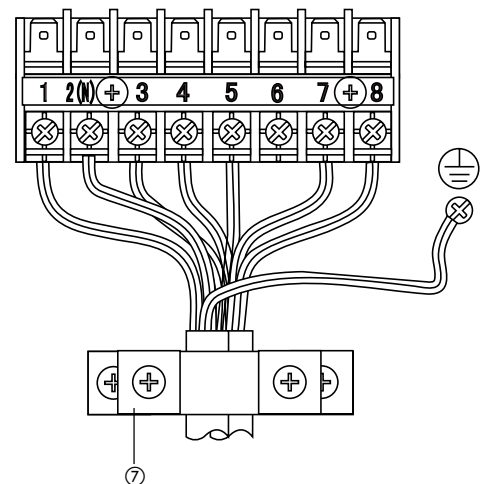


- ⑥ Wire-holding Board
- ⑦ Connective cable (1, 2, 3, 4, 5) CDU signal wire (7, 8)

**Connective cable  
(Cooling & heating type)**



**Terminal block of outdoor unit  
38YE022**



# Air purge and test operation

## Air purge

Choose purge method from the table:

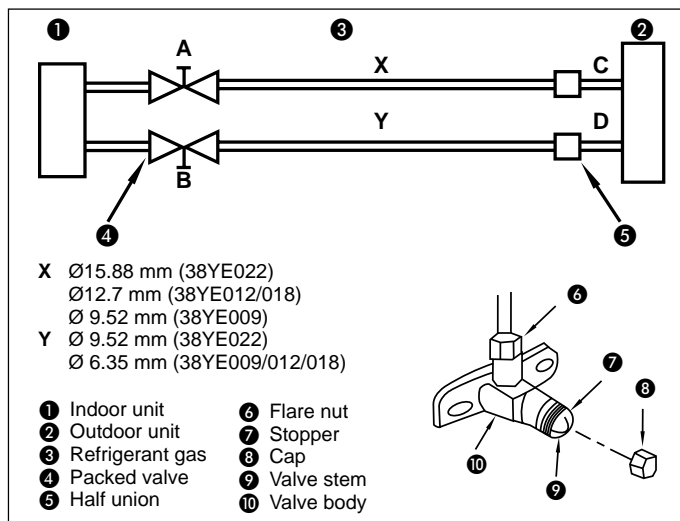
Models	Connective pipe length	Additional amount of refrigerant to be charged	Air purging method
38YE009/012 38YE018/022	Less than 5 m	-----	Use vacuum pump
38YE009/012	5~10m	(pipe length-5)x30g	
38YE018	5~15m		
38YE022	5~20m	(pipe length-5)x50g	

- For the R407C refrigerant model, make sure the refrigerant added into air conditioner is liquid form in any cases.
- When relocate the unit to another place, use vacuum pump to perform evacuation.

### CAUTION IN HANDING THE PACKED VALVE:

- Open the valve stem until it hits against the stopper. Do not try to open it further.
- Securely tighten the valve stem cap with a spanner or the like.

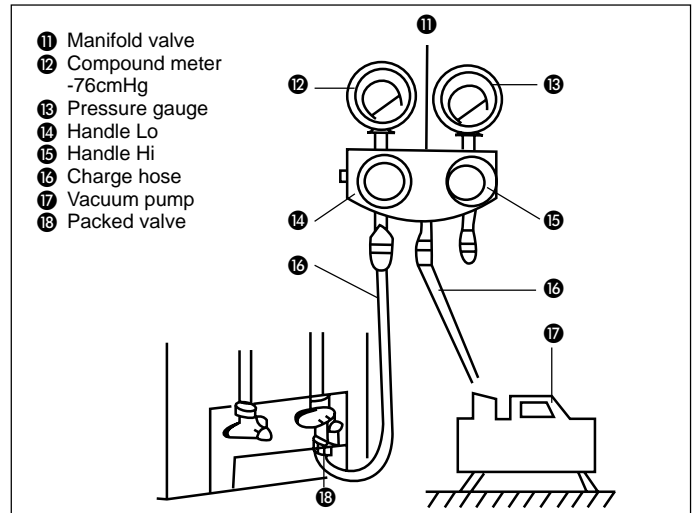
Pipe	Models	size	N.cm	kgf.cm
Gas side	38YE009	Ø 9.52	2940	300
	38YE012	Ø 9.52	2940	300
	38YE018	Ø 12.7	4900	500
	38YE022	Ø 15.88	7350	750
Liquid side	38YE009	Ø 6.35	1570	160
	38YE012	Ø 6.35	1570	160
	38YE018	Ø 6.35	1570	160
	38YE022	Ø 9.52	2940	300



### When Using the Vacuum Pump

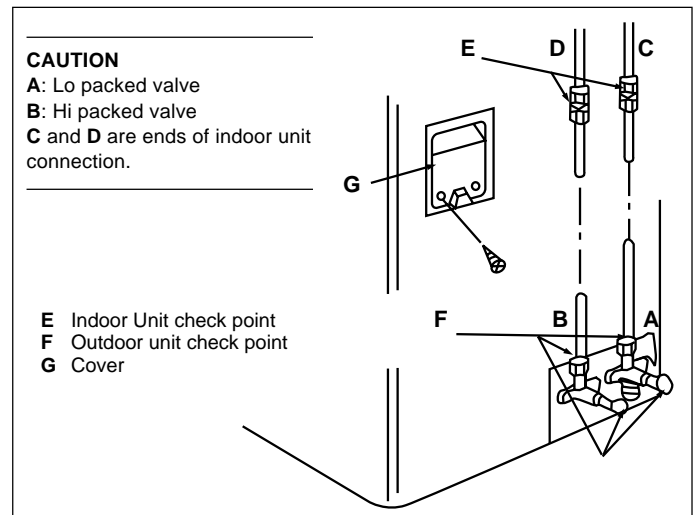
(For method of using a manifold valve, refer to its operation manual.)

1. Completely tighten the flare nuts, A, B, C, D, connect the manifold valve charge hose to a charge port of the packed valve on the gas pipe side.
2. Connect the charge hose connection to the vacuum pump.
3. Fully open the handle Lo of the manifold valve.
4. Operate the vacuum pump to evacuate. After starting evacuation, slightly loose the flare nut of the packed valve on the gas pipe side and check that the air is entering. (Operation noise of the vacuum pump changes and a compound meter indicates 0 instead of minus)
5. After the evacuation is complete, fully close the handle Lo of the manifold valve and stop the operation of the vacuum pump.
  - Make evacuation for 15 minutes and more and check that the compound meter indicates -76cmHg(-1.0x10<sup>5</sup>Pa).
6. Disconnect the charge hose from the charge connection of the packed valve at the gas pipe side.
7. Fully open the packed valve stems B and A.
8. Securely tighten the cap of the packed valve.



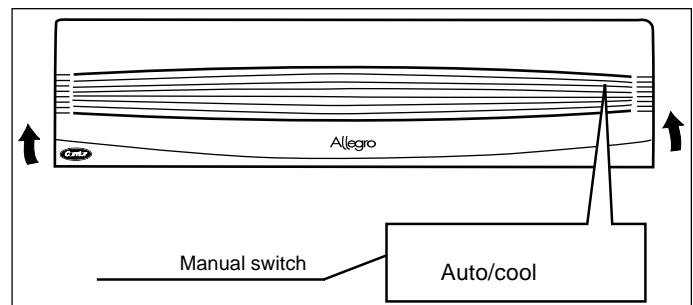
### GAS LEAK CHECK

Make sure no gas come out from connections with leak detector or soap water.



### Test operation

Perform test operation after completing gas leak check at the flare nut connections and electrical safety check.



1. Connect the power, push the "ON/OFF" button on the remote controller to begin testing.
2. Push mode button, select cooling, heating, fan mode to check if all functions work well.
3. When the ambient temperature is too low (below temperatures of 17°), the unit can't be controlled by the remote controller to run at cooling mode. At this time, manual operation can be taken to select cooling mode.
4. Be sure to set the manual switch on OFF after finishing the test operation. Then installer should explain how to manipulate, fix, and maintain their air conditioner. Also tell them that regular check of the installation bracket and maintenance are necessary. Clients should apply for inspecting to relevant department so as to ensure the air conditioner can operate normally, safety and reliably.



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The manufacturer reserves the right to change any product specifications without notice.

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