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01E7050231W

This drawing is the property of LGE, and it is protected by the concerned laws and regulation.

CTQ Table

No.

CTQ Item

Unit

Value & Tolerance Target

LSL

USL

Z-Value Zst

Zit

1

2

3

4

관리지수
(Working Dimension)

CTQ/CTP 지수
(CTQ/CTP Dimension)

제품 성능 및 안전성 등의 중요 품질에 영향을 주는 핵심 특성치(Core characteristic value which can make a serious effect to function or safety of the product)

◇CTQ◇

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양산관리 지수
(Mass production management dimension)

양산 부품의 중량치 변동 확인을 위한 지수로, 입고 또는 발착검사 시 관리되어야 할 항목(Dimension for the specification deviation management of the mass production part, it should be checked with incoming inspection by LG+QC or outgoing inspection by supplier)

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개발지수
(Design Dimension)

개발관리지수
(Development management dimension)

설비의 올바른 제작 여부 확인을 위한 지수로, 제작된 금형/Jig 통해 대한 조물검사 대상 항목(Dimension for new equipment's approval, all that dimension should be checked at FPA-stage for approval)

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참고지수
(Reference Dimension)

상계 사상 반영 또는 금형/Jig 제작을 위한 지수 (상계 측정 불가항목 또는 비품요 지수)(Dimension for the design concept application or Mold/Jig making, or another reference)

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Tolerance Grade

Classification(a < Lsb)

0.5~3

3~6

6~30

30~120

120~400

400~1000

1000~2000

2000~4000

Mark

F

M

C

⓪

Very Coarse (≒M-Grade)

0.05

0.05

0.1

0.15

0.2

0.3

0.5

0.8

1.2

2.0

Round/Chamfer(±mm)

1*

30'

20'

10'

5'

Angle (±Degree° Minute' Second')

10~50

50~120

120~400

400 < L

Tolerance Grade

Classification(a < Lsb)

0.5~3

3~6

6 < L

L≤10

10~50

50~120

120~400

400 < L

Mark

F

M

C

⓪

Very Coarse (≒M-Grade)

0.2

0.5

1.0

1*

30'

20'

10'

5'

1*

30'

20'

10'

5'

1*

30'

20'

10'

5'

항목

Spec.

재질

모조지

평량

70

사이즈

A2

표지 여부

유

페이지 수

2

인쇄 도수

1도

SYM.

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REVISION

ECO. NO.

DATE

PREPARED

SYM.

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REVISION

ECO. NO.

DATE

PREPARED

DIE/MOLD TYPE

필수입력
Essential input

DIE MAKER

MANUFACTURER

필수입력
Essential input

필수입력
Essential input

필수입력
Essential input

UNIT

DESIGNED

2025-08-13

Suchanun

DATE

CHECK

DATE

REVIEW

DATE

APPROVE

mm

SCALE

N/S

APPROVED

DATE

APPROVE

SHEET NO.

1 OF 2

LG Electronics

DWG. NO.

Manual,Installation

PRINTING N S1 GGRD S1 Multi R32 TH Singapore 2025

MFL70502310

TITLE

DWG. NO.

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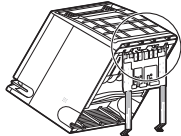
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[illegible]

Installing the Indoor Unit on the Installation Plate

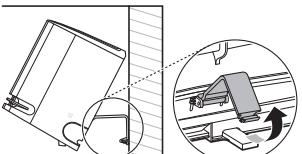
Put the indoor unit onto the installation plate fixed on the wall.

- Check if the hook on top of the rear part of the indoor unit is securely fastened onto the installation plate.



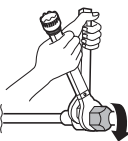
Connecting the Indoor Unit Pipe

1 By reclining the tubing holder, make a space between the bottom of the indoor unit and the wall.



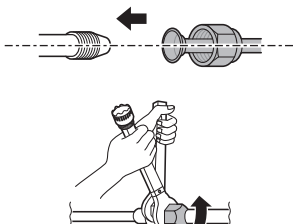
2 Remove each of the flare nuts attached to the pipes of the indoor unit.

- First, secure the pipe with an adjustable wrench and then, loosen the flare nut using a torque wrench.



3 Tighten the flare nut after inserting the pipe engaged with the flare nut through the center of the indoor unit's pipe.

- After fixing the pipe with the help of an adjustable wrench, securely tighten the flare nut using a torque wrench.



Piping Size		Torque		
mm	inch	kgf·cm	N·m	lbf·ft
Ø 6.35	Ø 1/4	180~250	17.6~24.5	13~18
Ø 9.52	Ø 3/8	340~420	33.3~41.2	25~30
Ø 12.70	Ø 1/2	550~660	53.9~64.7	40~48
Ø 15.88	Ø 5/8	630~820	61.7~80.4	45~59

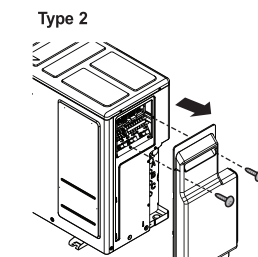
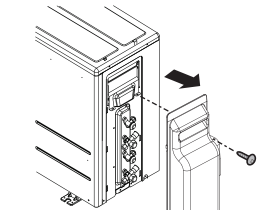
NOTE

- To prevent gas leakage, apply refrigeration oil on both inner and outer surfaces of the flare.

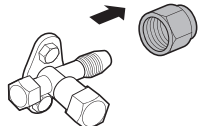
INSTALLING THE OUTDOOR UNIT

Connecting the Outdoor Unit Pipe

1 Open the tubing cover.

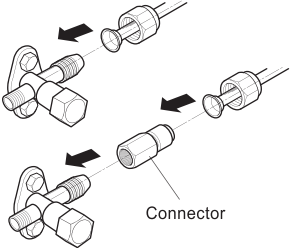


2 Remove each of the flare nuts attached to the valves of the outdoor unit.



3 Tighten the flare nut after inserting the pipe engaged with the flare nut through the center of the outdoor unit's valve.

- After fixing the valve with the help of an adjustable wrench, securely tighten the flare nut using a torque wrench.



Connector

Pipe Size		Torque	
mm	inch	kgf·cm	N·m
Ø 6.35	Ø 1/4	180~250	17.6~24.5
Ø 9.52	Ø 3/8	340~420	33.3~41.2
Ø 12.70	Ø 1/2	550~660	53.9~64.7
Ø 15.88	Ø 5/8	630~820	61.7~80.4

NOTE

- To prevent gas leakage, apply refrigeration oil on both inner and outer surfaces of the flare.

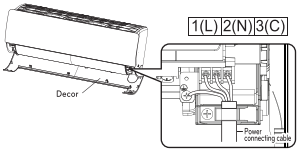
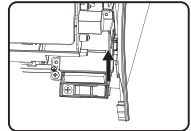
6

CONNECTING THE CABLE INDOOR UNIT

- All power wiring/communication cables must comply with applicable local and national codes.
- The cable specification for outdoor use shall not be less than polychloroprene sheathed flexible cord.
- The earth wire should be longer than the common wires.

Indoor Connecting Cable

- Open the Decor
- Unscrew the screw of C/Box
- Slide up the Metal Plate Cover
- Connect the connecting cable
- After complete connect the cables, shouldassemble the Metal Plate Cover by screw.



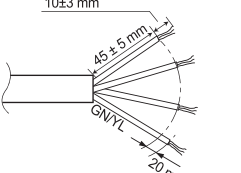
* The feature can be changed according a type of model.

WARNING

- The circuit diagram is a subject to change without notice.
- The earth wire should be longer than the common wires.
- When installing, refer to the circuit diagram on the chassis cover.
- Connect the wires firmly so that they may not be pulled out easily.
- Connect the wires according to color codes, referring to the wiring diagram.

NOTE

- The power cord connected to unit should be selected according to the following national wiring regulations.
- The supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (code designation 60245 IEC 37, H05RN-F)

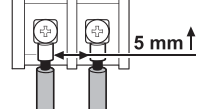


NOMINAL CROSS SECTIONAL AREA	Capacity
9, 12, 18, 20, 24kBut/h	0.75

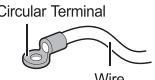
- Connect the wires to the terminals on the control board individually.
 - Secure the cable onto the control board with the cord clamp.
- *Pipes and wires should be purchased separately for installation of the product.

Connecting the Wires

- The distance between wires should be more than 5 mm.



- Connect the wire after inserting the circular terminal.



CAUTION

- Without exception, install an independent power circuit specifically designed for the appliance. Refer to the circuit diagram attached inside the control cover for where to connect the cable.
- Screw connections in the appliance's control box can vibrate loose during transporting and operating the appliance. Check that all the connections in the appliance are securely fixed at all times. (If they have loosened, both the wire and the termination can be broken.)

NOTE

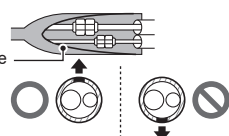
- Circuit diagrams may be altered by the manufacturer without any notification.

6

FINALIZING INSTALLATION

Wrap of Pipe Connection with Insulation

- Bind the pipe connecting area with insulator and securely tie with vinyl tape.
- Wrap up the pipes with insulator to prevent gaps between them.
- Make the cutting line of the insulator wrapping the pipe face the upper direction.



NOTE

- For left rear piping, bundle the piping and drain hose together by wrapping them cloth tape over the range within which they fit into the rear piping housing section.
 - Wrap the piping of the indoor unit that are visible from the outside with vinyl tape.

Wrapping Up the Pipe, Drain Hose, and Power Cable

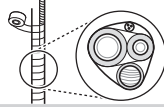
If the Outdoor Unit is Placed Below the Indoor Unit

1 Partially tie up the overlapping lines of pipe, drain hose, and power cable using thin vinyl tape.



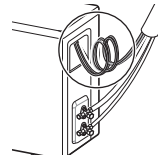
2 Use wide vinyl tape to fully tie up all the lines (pipe, drain hose, and power cable).

- Start winding from the bottom up.



3 Trap the power cable.

- This can prevent the electrical components from coming into contact with water.



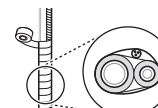
4 Close the tubing cover.

If the Outdoor Unit is Above the Indoor Unit

1 Partially tie up the overlapping lines of pipe, and power cable using thin vinyl tape.

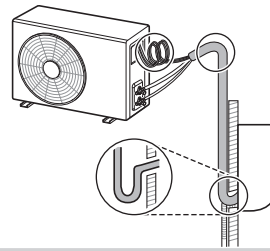
2 Use wide vinyl tape to fully tie up all the lines (pipe, and power cable).

- Start winding from the bottom up.



3 Trap both the pipe and the power cable.

- This can prevent the room and the electrical components from coming into contact with water.



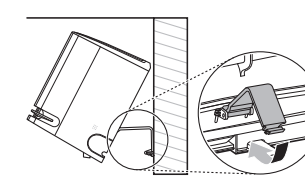
4 Close the tubing cover.

NOTE

- Apply sealant around the pipe going through the hole in the wall. This sealant can prevent the indoor air from being contaminated by outdoor air and foreign substances.

Finalizing the Indoor Unit Installation

1 Close the tubing holder.

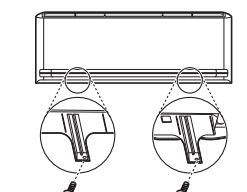


2 Push both sides (right and left) of the indoor unit toward the installation plate.

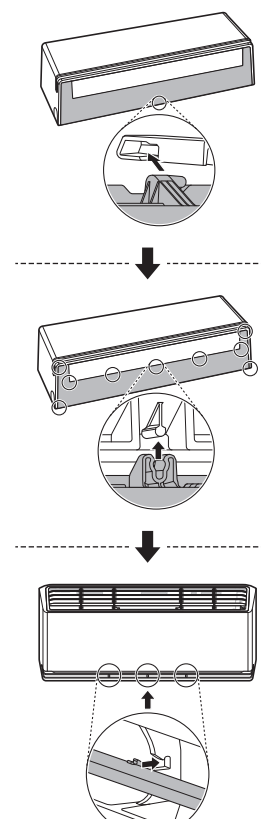


3 Fix the indoor unit on the installation plate using 'B' type screws.

- Unless the indoor unit is fixed onto the installation plate securely, it may fall. Tighten the screws firmly to avoid a gap between the indoor unit and the installation plate.



4 Reassemble the separated decor and air guide to the indoor unit.

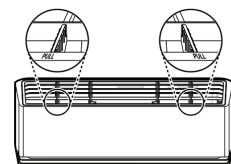


8

Checking the Drainage

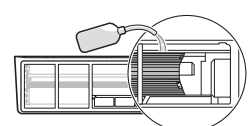
1 Remove the filter.

- Pull the filter up and out towards you.



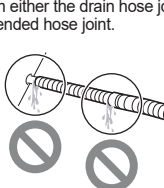
NOTE

- Do not touch the metal part of the appliance when removing the filter.
- 2 Pour a cup of water into the back of the evaporator.



3 Check the drainage condition.

- Check whether there is any leakage from either the drain hose joint or the extended hose joint.



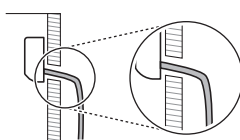
- Check the water is flowing out through the drain hose.

NOTE

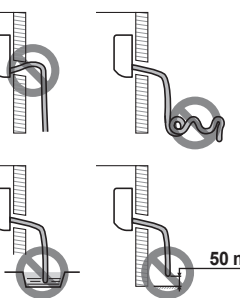
- If there is no leakage, but no water is flowing, pour a proper amount of water again.

9

Example of Correct Drain Hose Installation



Example of Incorrect Drain Hose Installation



NOTE

- If the drain hose is not installed properly, water can leak indoors.
 - If the drain hose is installed at a higher position than the indoor unit
 - If the drain hose is entangled or kinked
 - If the end of the drain hose is dipped in water
 - If the gap between the end of the drain hose and the bottom is lower than 50 mm

- Check the water is flowing out through the drain hose.

NOTE

- If there is no leakage, but no water is flowing, pour a proper amount of water again.

CHECK AFTER INSTALLATION

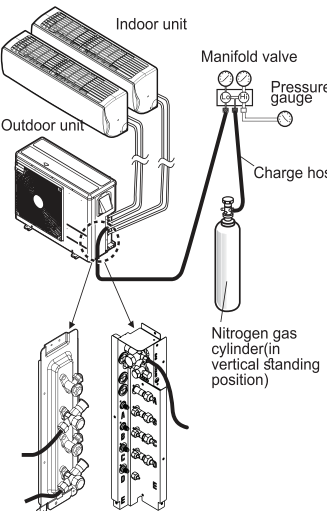
Air purging with vacuum pump

- Preparation
 - Check that each tube (both liquid and gas side tubes) between the indoor and outdoor units have been properly connected and all wiring for the test rin has been completed. Remove the service valve caps from both the gas and the liquid side on the outdoor unit. Note that both the liquid and the gas side service valves on the outdoor unit are kept closed at this stage.

WARNING

- There is a risk of fire and explosion. Inert gas (nitrogen) should be used when you check plumbing leaks, cleaning or repairs of pipes etc. If you are using combustible gases including oxygen, product may have the risk of fires and explosions.

- Do a leak test of all joints of the tubing (both indoor and outdoor) and both gas and liquid side service valves. Bubbles indicate a leak. Be sure to wipe off the soap with a clean cloth.
- After the system is found to be free of leaks, relieve the nitrogen pressure by loosening the charge hose connector at the nitrogen cylinder. When the system pressure is reduced to normal, disconnect the hose from the cylinder.



Soap water method

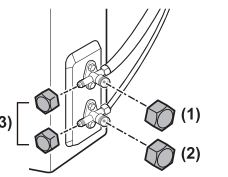
- Remove the caps from the 2-way and 3-way valves.
- Remove the service-port cap from the 3-way valve.
- Apply a soap water or a liquid neutral detergent on the indoor unit connection or outdoor unit connections by a soft brush to check for leakage of the connecting points of the piping.
- If bubbles come out, the pipes have leakage

Vacuum

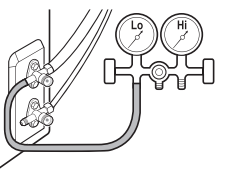
Residual air or vapor in the refrigerant system can lower appliance performance. To increase cooling and heating performance, remove air or vapor remaining in the refrigerant system using the vacuum pump.

- Work the vacuuming through the gas service valve (larger pipe).

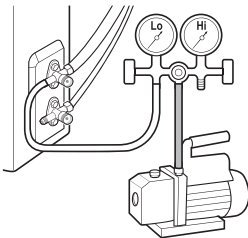
1 Remove the caps from the gas service valve (1), the liquid service valve (2), and the core valves (3) in the outdoor unit.



2 Connect the low-pressure hose of the manifold gauge to the core valve of the gas service valve.

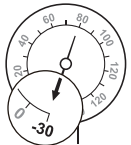


3 Connect the charging hose of the manifold gauge to the vacuum pump.



4 Open the low-pressure valve of the manifold gauge, and operate the vacuum pump.

- Operate the vacuuming until the pressure gauge is at -30 inHg (-76 cmHg).



- The time for vacuuming could be different depending on pipe lengths.

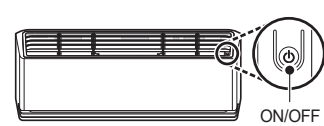
If the pipe is shorter than 10 m (33 ft)	If the pipe is longer than 10 m (33 ft)
Longer than 10 minutes	Longer than 15 minutes

NOTE

- Make sure to check for gas leakage unless the vacuuming works for a long time.

Test-Running

Press the **ON/OFF** button for 3 to 5 seconds for test operation.



NOTE

- Make sure that the pipe and the power cable are connected properly.
- For the operating the appliance, check whether both the gas service valve and the liquid service valve of the outdoor unit are fully opened.
- The feature and position of the button could be different depending on models.

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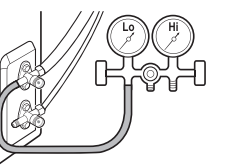
PUMP DOWN

In case of appliance relocation and repair of the refrigerant system, operate the pump down process that brings the refrigerant from the indoor unit and pipes it to the outdoor unit to avoid refrigerant loss.

- Operate the pump down process in the cooling mode.

1 Remove the caps from the gas service valve, the liquid service valve, and the core valves in the outdoor unit.

2 Connect the low-pressure hose of the manifold gauge to the core valve of the gas service valve.



3 Operate the appliance in the cooling mode.

- Operate the appliance more than 10 minutes after checking whether the compressor of the outdoor unit is operating properly.

4 Close the liquid service valve in the outdoor unit.

- Rotate the valve clockwise using a hexagon wrench.



5 Close the gas service valve in the outdoor unit at a pressure of 0.5 kgf/cm² (14.2 to 7.1 psi).

- Rotate the valve clockwise using a hexagon wrench.

6 Turn off the appliance.

NOTE

- Do not operate the appliance for a long time. It may cause damage to the compressor.

7 Separate the low-pressure hose of the manifold gauge and the pipe connected to the outdoor unit.

- Use a torque wrench and adjustable wrench.

8 Close the caps from the gas service valve, the liquid service valve, and the core valves.

- Tighten all the caps by using an adjustable wrench and torque wrench.

NOTE

- Block the outdoor valve by screwing a flare nut through the pipe after welding the end of the separated pipe. This can protect the appliance from air, vapor, and foreign substances.

WARNING

- Operating the appliance while it is disconnected to the pipe could result in explosion and damage. Use the appliance after connecting it to the pipe once the appliance has been relocated and the refrigerant circuit repaired.

The following symbols are displayed on indoor and outdoor units.



This symbol indicates that this appliance uses a flammable refrigerant. If the refrigerant is leaked and exposure to an external ignition source, there is a risk of fire.



This symbol indicates that the Operation Manual should be read carefully.



This symbol indicates that a service personnel should be handling this equipment with reference to the Installation Manual.



This symbol indicates that information is available such as the Operating Manual or Installation Manual.

11

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