

Outdoor Installation Guide

OH46F OH55A OH55F OH75A OH75F OH85F

Follow the instructions provided in this guide when installing the product.
Samsung will not provide warranty coverage for problems that may arise as a result of failure to follow the guide.
The color and shape of the product may vary. In addition, instructions in the installation guide may change without prior notice when necessary to improve the product.

Notice

1. When installing signage, Samsung Electronics recommends that Signage is installed by itself, without an enclosure.
2. When installing signage with an enclosure, it requires the enclosure review process by engineering team in Samsung Electronics.

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Chapter 01

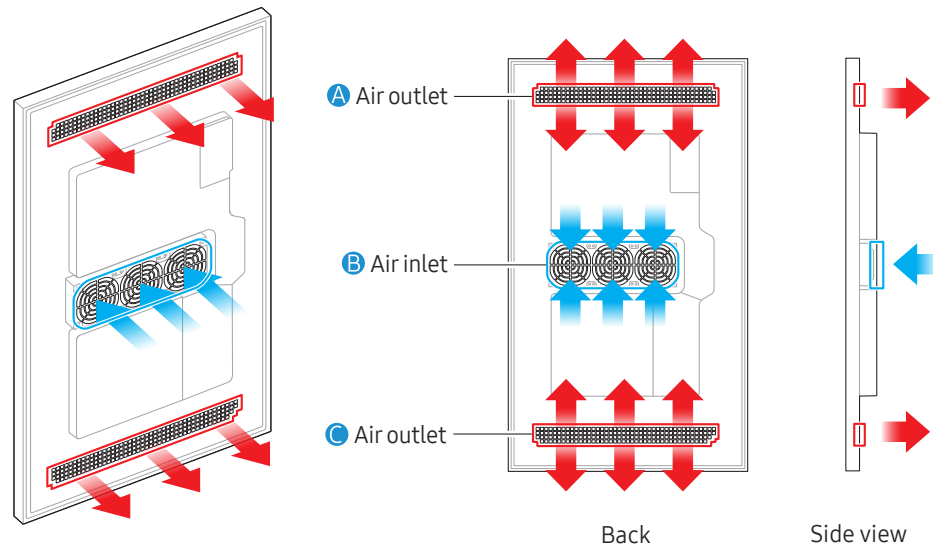
Enclosure unit design guide

Air flow direction

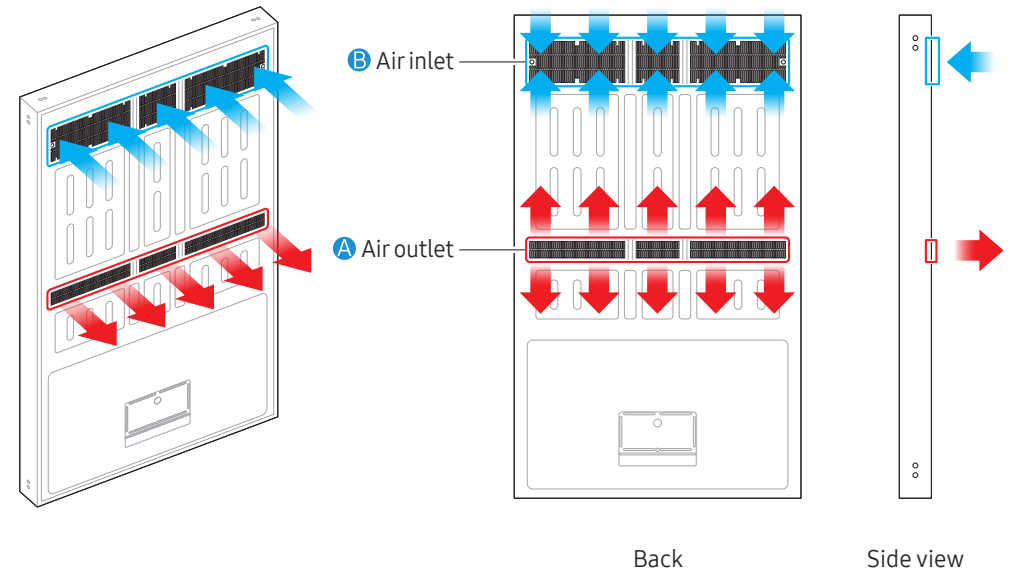
The outdoor unit uses cooling fans to take in outside air to lower the internal temperature and discharge the hot air.

 When installing an outdoor unit, remove any obstacles near the air inlet and outlet that may affect air flow.

OH46F/OH55A/OH55F



OH75A/OH75F/OH85F



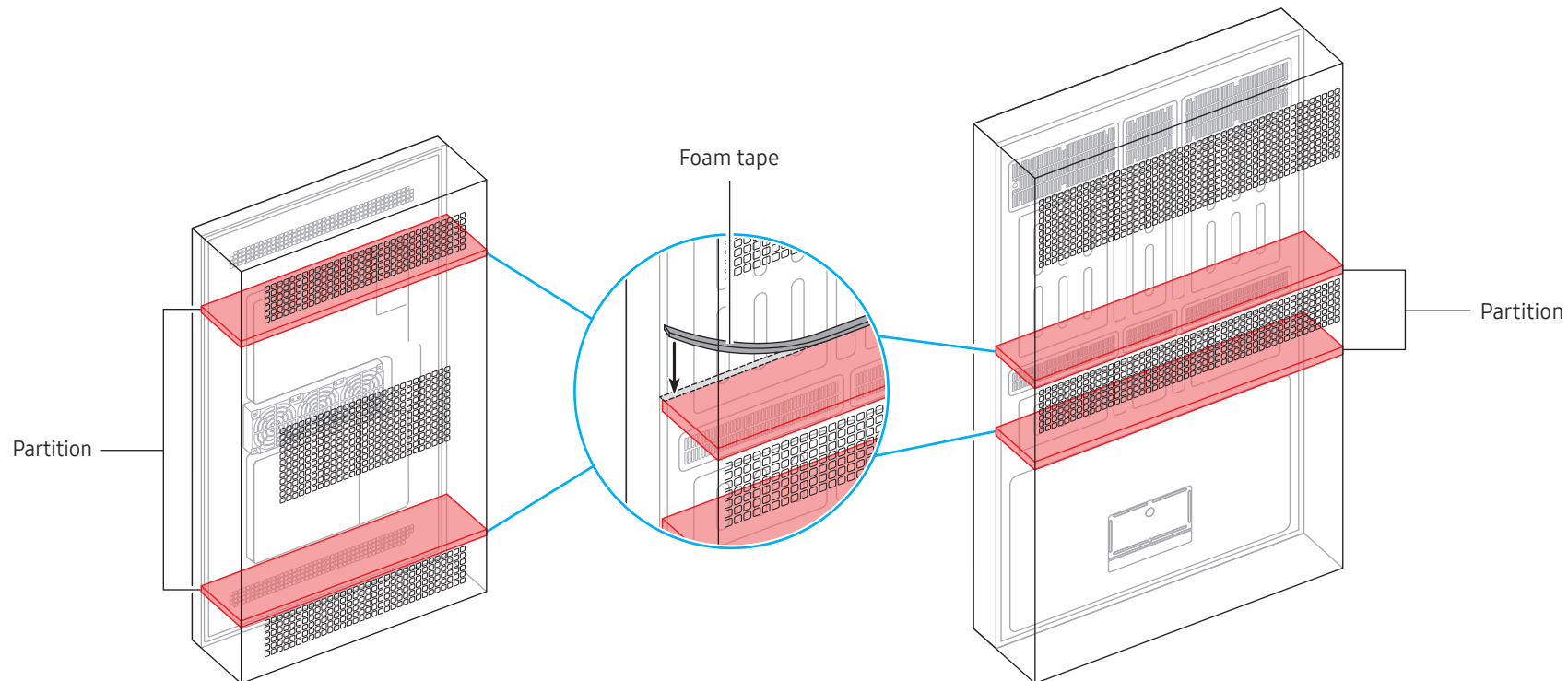
Enclosure unit partition design

Partition design guide

- For outdoor units, add partitions between the inlet and outlet inside the enclosure unit to keep air paths separated.
- Partitions should fit perfectly inside the enclosure unit, with no gap between the outdoor unit and enclosure unit. If there is a gap, use a foam tape to fill it.

OH46F/OH55A/OH55F

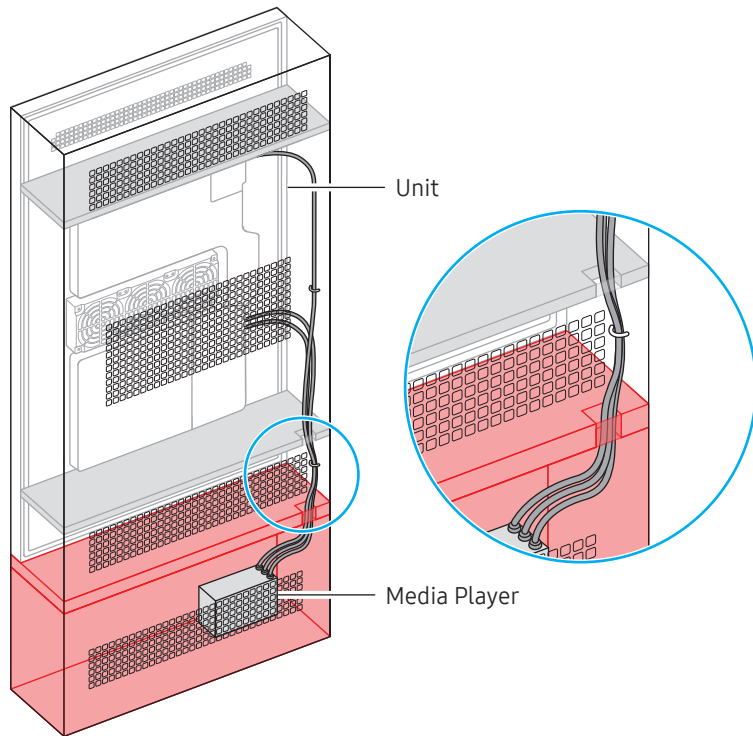
OH75A/OH75F/OH85F



Partitions when installing with an optional media player

To install an optional media player with the outdoor unit, use partitions to isolate the player.


- ✎ There should be no gap between the media player and outdoor unit; only allow cables through the partition.
- ✎ The optional media player is an additional source of heat and the increased temperature inside the enclosure unit may cause the outdoor unit to malfunction; a malfunction occurring in this manner will not be covered by the warranty.

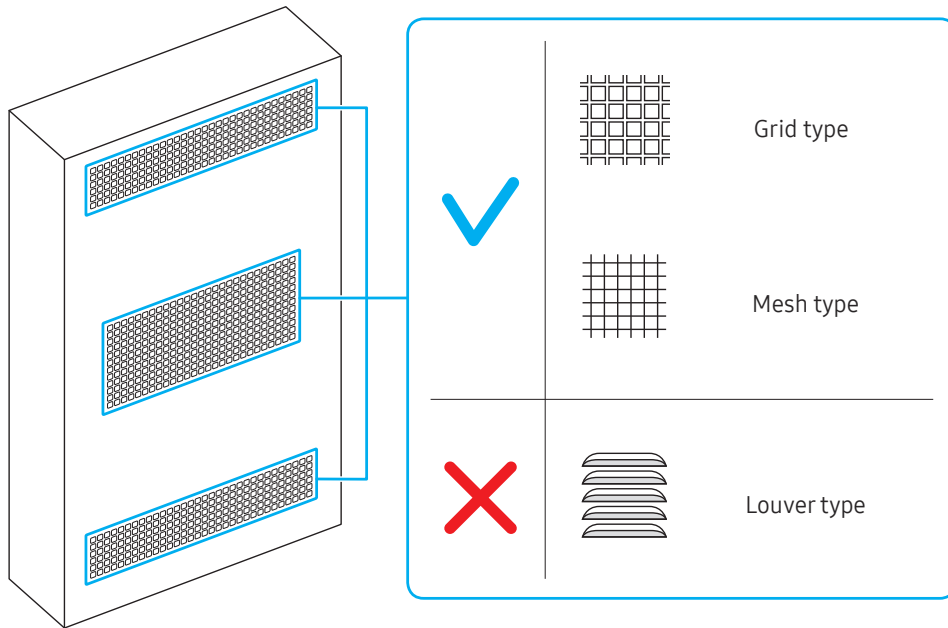


Inlet and outlet types

Ventilation opening ratio for air inlet and outlet should be minimum 50%.


Air inlet and outlet should be grid or mesh types.

 Do not use the louver type as it has a limited intake size.

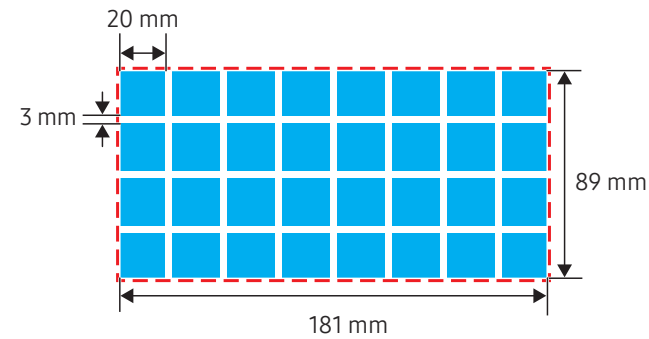


Total open area of the ventilation holes and ratio


Follow the guide when combining the outdoor unit with the enclosure unit.

 If the instructions provided in this guide are not observed, the cooling system may not work properly and may cause a malfunction, which will not be covered by warranty.

 Calculating Total open area of the ventilation and Ventilation opening ratio



 Total Area of the Ventilation: $181 \times 89 = 16109 \text{ mm}^2$

 Total open area of Ventilation holes : $20 \times 20 \times 32 = 12800 \text{ mm}^2$

$$\text{Ventilation opening ratio: } \frac{\text{Total open area of Ventilation holes}}{\text{Total Area of the Ventilation}} = \frac{12800 \text{ mm}^2}{16109 \text{ mm}^2} \times 100 = 79 \%$$

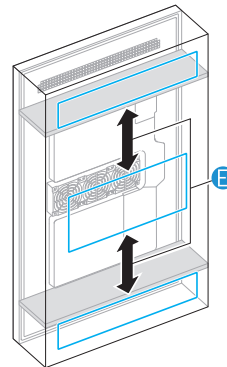
Single enclosure unit

Design the outdoor unit according to the following specifications to keep discharged hot air from flowing back into the inlet.

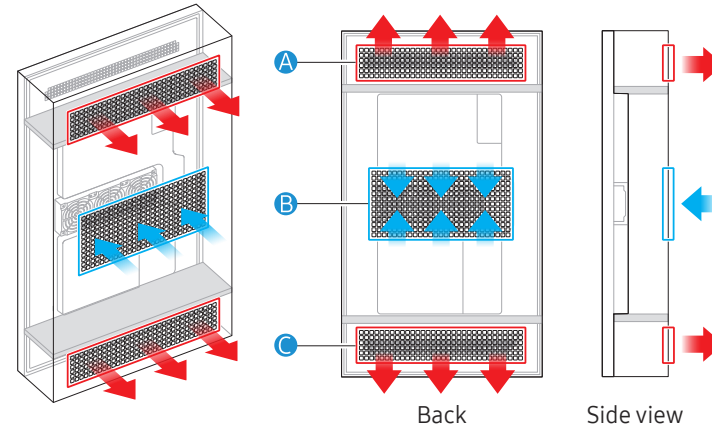
OH46F/OH55A/OH55F

- Air inlet (E)
Total open area of the ventilation holes: 53000 mm² or more
Ventilation opening ratio (% of total opening): 50 % or more
- Air outlet (A, C)
Total open area of the ventilation holes (A): 29000 mm² or more
Total open area of the ventilation holes (C): 29000 mm² or more
Ventilation opening ratio (% of total opening): 50 % or more
- ✎ Design the locations of the enclosure unit inlet and outlet to match the locations of the outdoor unit inlet and outlet.
- ✎ Ensure the minimum clearance between inlet and outlet of the enclosure.
- Minimum separation distance for each model (E)

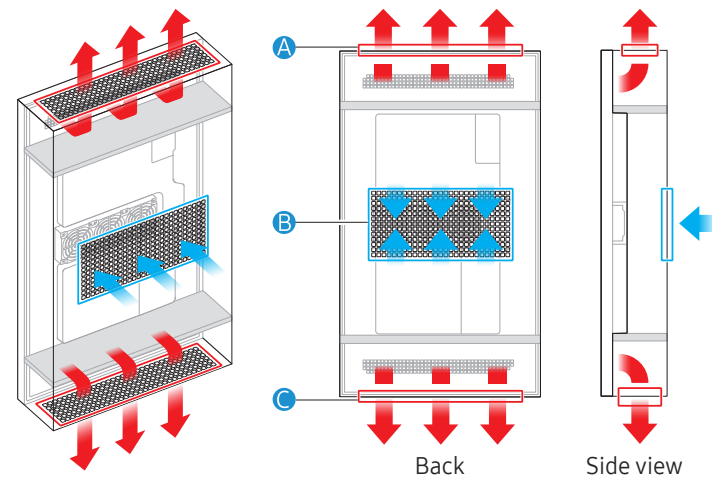
Model name	Minimum clearance(E)
OH46F	235 mm
OH55A/OH55F	286 mm



Example 1



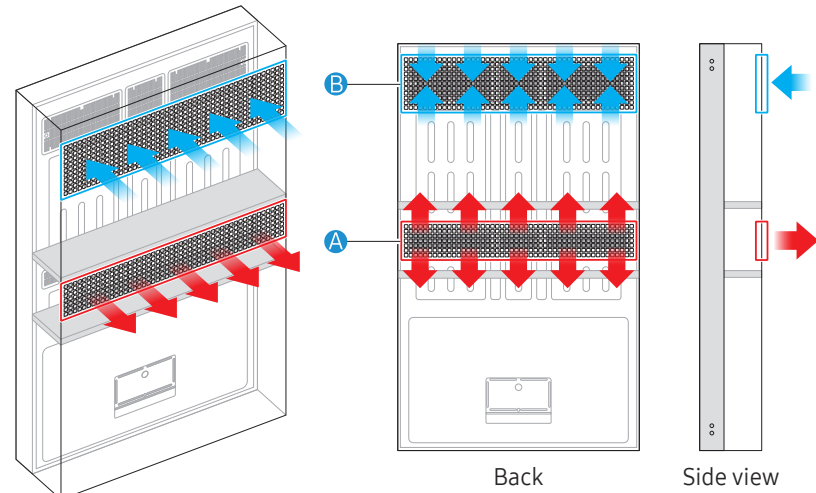
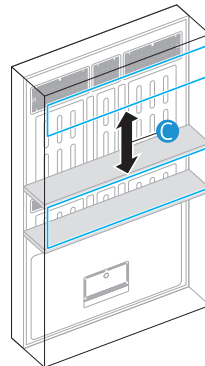
Example 2



OH75A/OH75F/OH85F

- Air inlet(Ⓑ)
Total open area of the ventilation holes: 63000 mm² or more
Ventilation opening ratio (% of total opening): 50 % or more
- Air outlet(Ⓐ)
Total open area of the ventilation holes: 57000 mm² or more
Ventilation opening ratio (% of total opening): 50 % or more
- ✎ Design the locations of the enclosure unit inlet and outlet to match the locations of the outdoor unit inlet and outlet.
- ✎ Ensure the minimum clearance between inlet and outlet of the enclosure.
- Minimum separation distance for each model (Ⓒ)

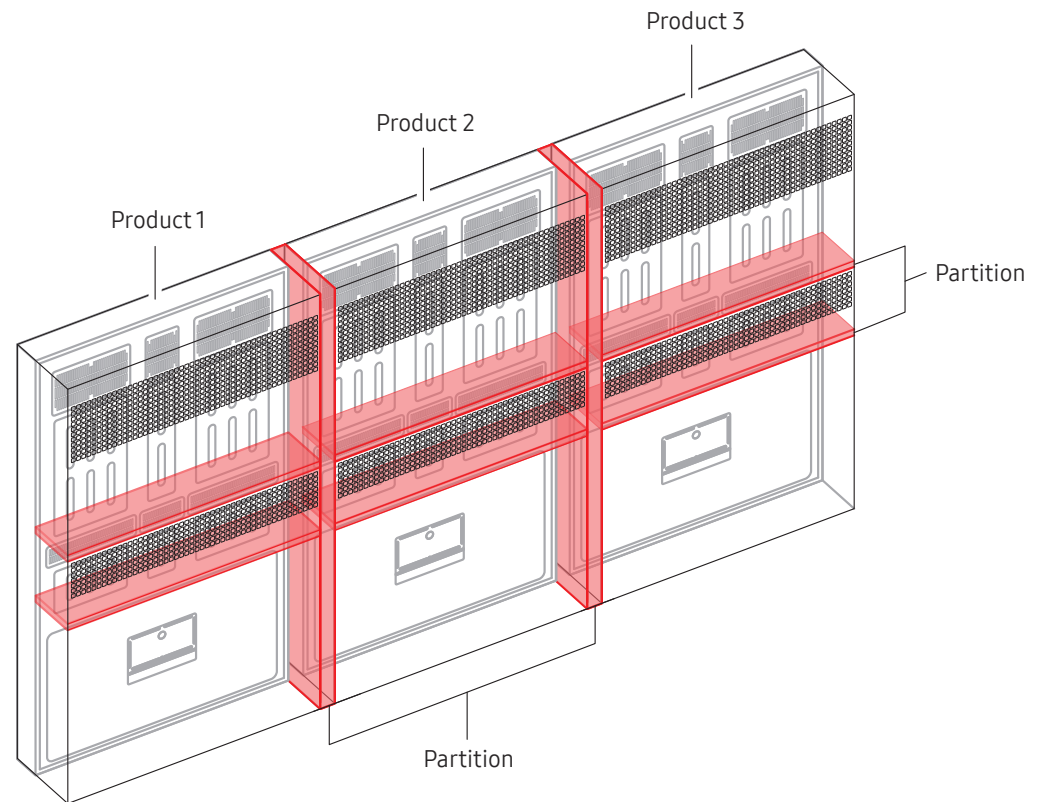
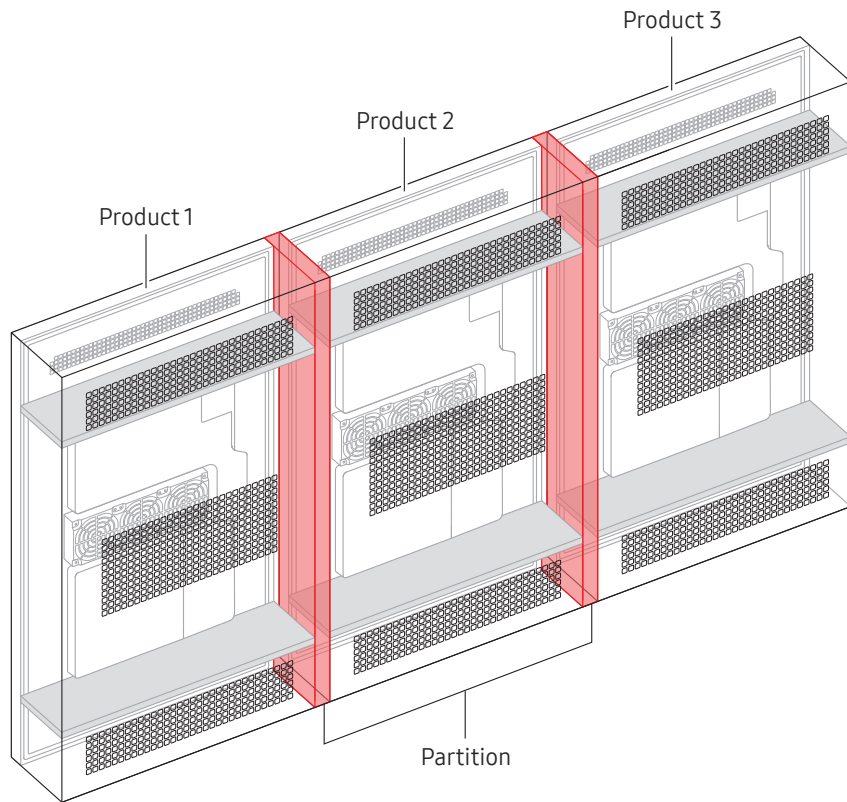
Model name	Minimum clearance(Ⓒ)
OH75A/OH75F	380 mm
OH85F	380 mm



1 x N one-side enclosure unit

When designing the 1 x N one-side enclosure unit, add partitions between the products to keep the air paths separated.


- ✎ Refer to the 'Total open area of the ventilation holes and ratio'. ([Page 6](#))
- ✎ Make sure there is no gap between the partitions and the enclosure unit.



Double-sided enclosure unit

Design your outdoor unit to keep discharged hot air from flowing back into the inlet.

 When designing double-sided enclosure units, position the inlet on the top or to the side.

 Outlet can be on the top/bottom or on the side.

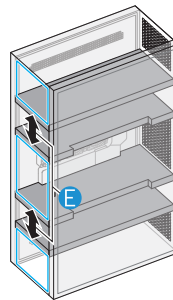
OH46F/OH55A/OH55F

- Clearance between outdoor units (D): 100 mm or more
- Air inlet (E)
 - Total open area of the ventilation holes: 106000 mm² or more
 - Ventilation opening ratio (% of total opening): 50 % or more
- Air outlet (A, C)
 - Total open area of the ventilation holes (A): 58000 mm² or more
 - Total open area of the ventilation holes (C): 58000 mm² or more
 - Ventilation opening ratio (% of total opening): 50 % or more

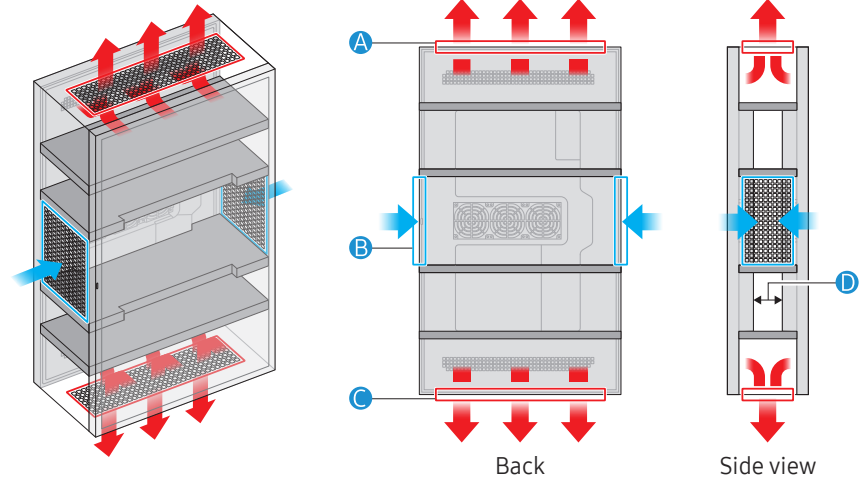
 Ensure the minimum clearance between inlet and outlet of the enclosure.

- Minimum separation distance for each model (E)

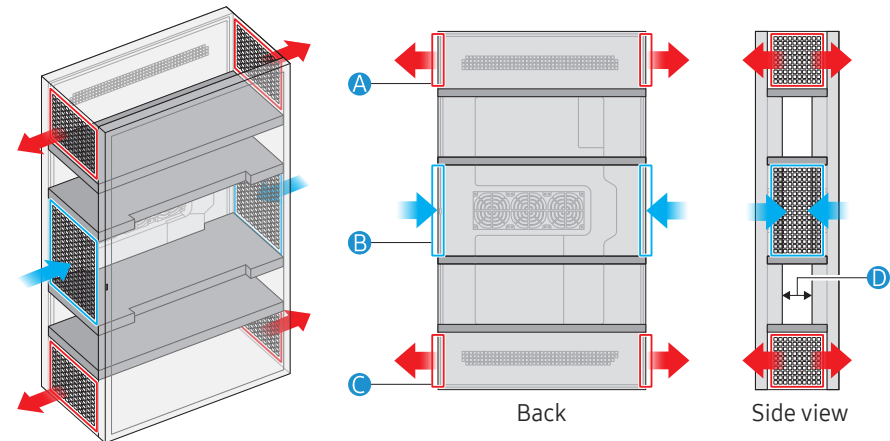
Model name	Minimum clearance (E)
OH46F	235 mm
OH55A/OH55F	286 mm



Example 1



Example 2

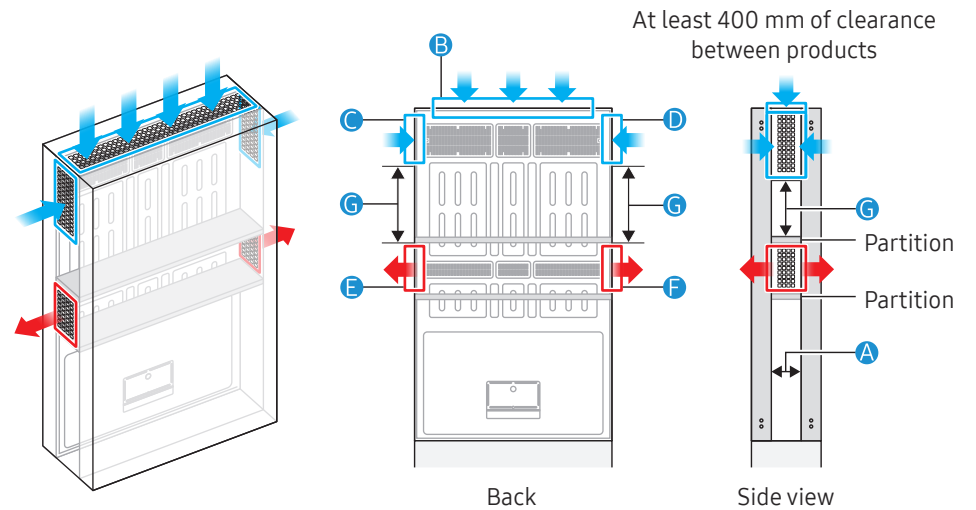


OH75A/OH75F/OH85F

- Clearance (A): 400 mm or more
- Air inlet (B, C, D)
 - Total open area of the ventilation holes: 126000 mm² or more
 - Ventilation opening ratio (% of total opening): 50 % or more
- Air outlet (E, F)
 - Total open area of the ventilation holes: 114000 mm² or more
 - Ventilation opening ratio (% of total opening): 50 % or more
- ✎ Add partitions without any gap to completely separate the inlet and outlet.
 - Secure at least 400 mm of clearance between two products.
- ✎ The structure of the enclosure must be designed to clean the inlet / outlet / heat exchanger regularly.
 - Ex) Add a door for workers to ensure access for cleaning with the tools.
 - For details, see [Cleaning and cautions](#).
- ✎ Ensure the minimum clearance between inlet and outlet of the enclosure.
- Minimum separation distance for each model (G)

Model name	Minimum clearance(G)
OH75A/OH75F	380 mm
OH85F	

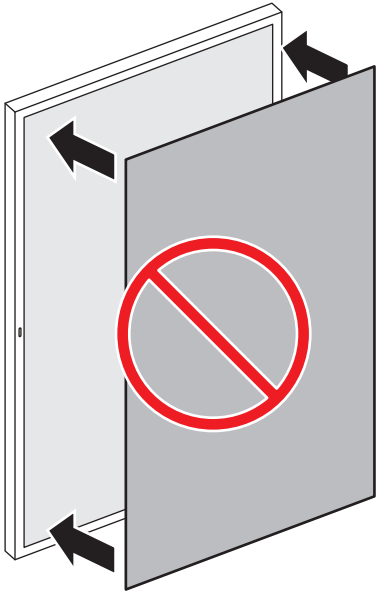
Example 1



Precautions for enclosure unit designing

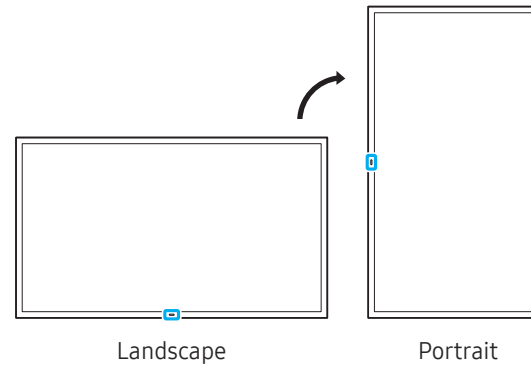
No additional front glass (tempered glass)

- Applying tempered glass on the front side of the display is prohibited.

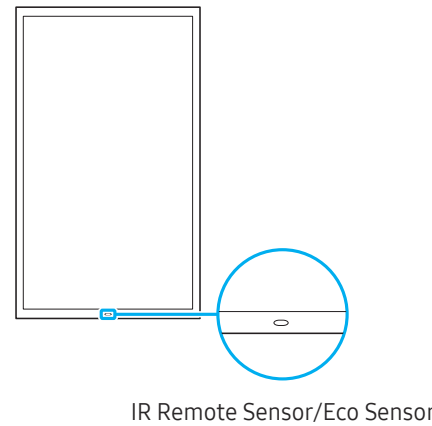


- Consider the location of the IR Remote and Eco Sensor on your product when designing an enclosure unit.
- ✎ The sensor may not operate or may cause the screen to darken if the sensor is not sufficiently exposed.
- If the product temperature increases due to high outside temperature or the environment in which the product is installed, the luminance decreases for product overheating mitigation and accident prevention.

OH46F/OH55A/OH55F



OH75A/OH75F/OH85F

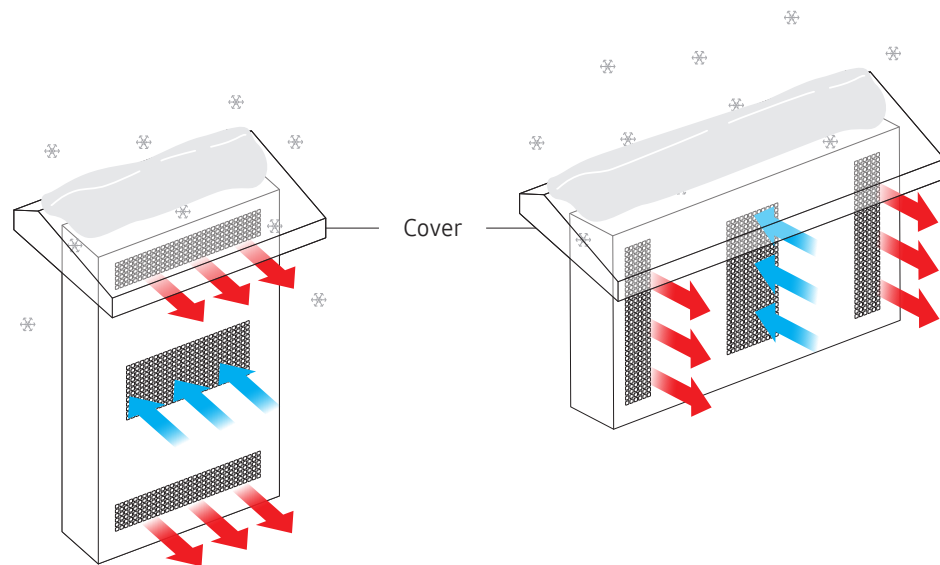


Chapter 02

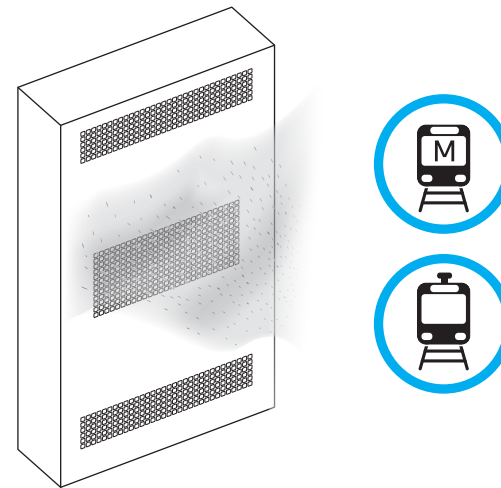
Installation requirements

Surrounding environment

- When installed in places such as a ski resort, fans may not operate if the inlet is blocked by a pile of snow. Install a cover to avoid snow piling directly onto the inlet



- The product can be used in a train or subway station. The outdoor unit is designed to keep out iron dust.

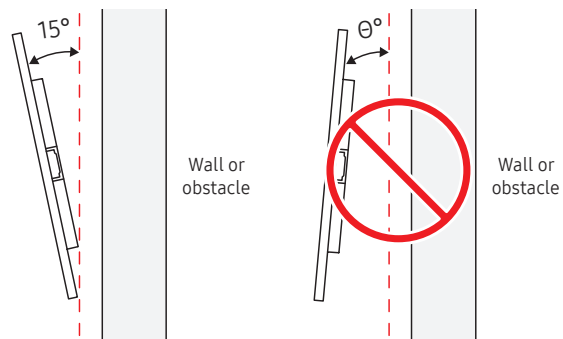


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- When installed on beach area, make sure the display is placed where seawater is not accessible.
 - ✎ Ensure the display unit installed location is within safe distance from the possible contact from rising seawater due to strong winds due to storm or other natural phenomenon.

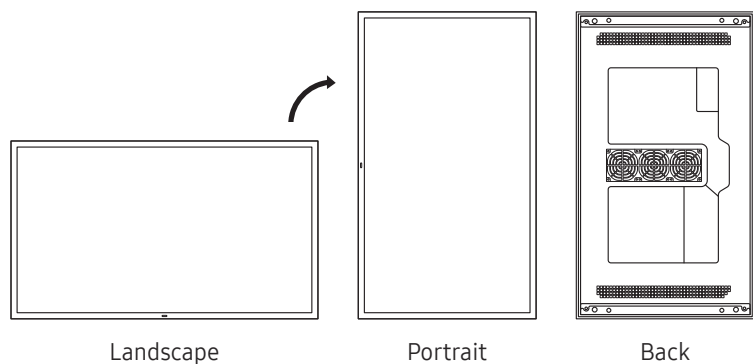


Rotation and tilt angle

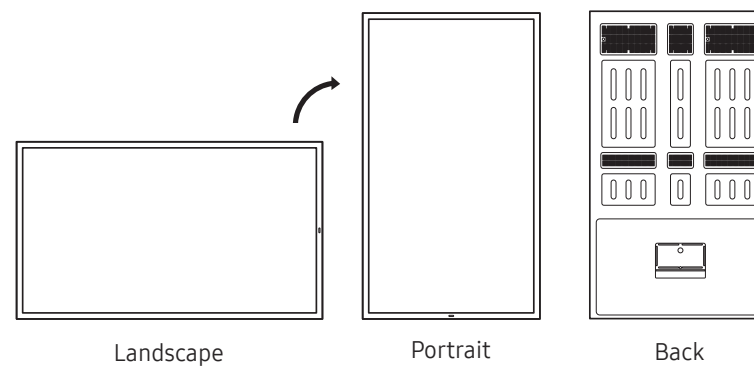
- The outdoor unit can be installed in Landscape or Portrait orientations.
- The outdoor unit can be installed in a tilted position on a vertical wall or an obstacle, up to 15°.



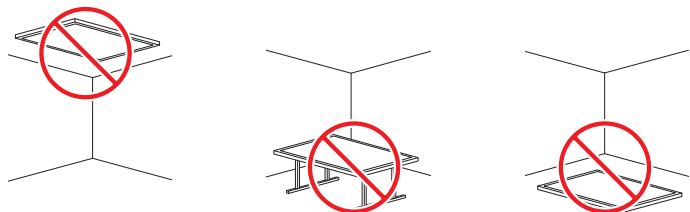
OH46F/OH55F/OH55A



OH75A/OH75F/OH85F



 Do not use this model installed on a ceiling, floor, or table.



Installing the wall-mount

The mount hole depth

Model name	Mount hole (a * b) (mm)	The mount hole depth(C)	Standard Screw	Quantity
OH46F	995 x 500	14	M8	4
OH55F	1186 x 560	14		
OH55A		11		

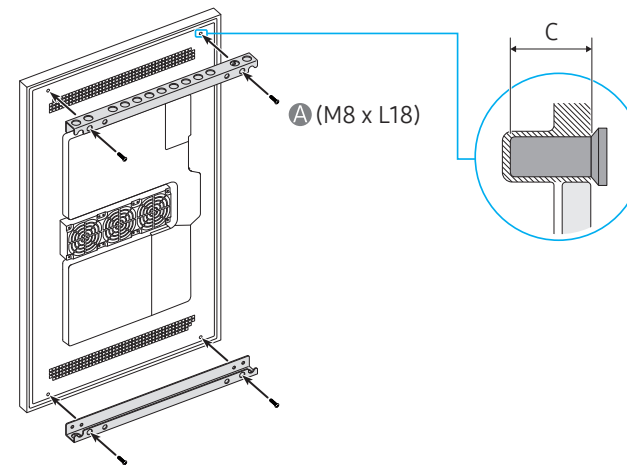
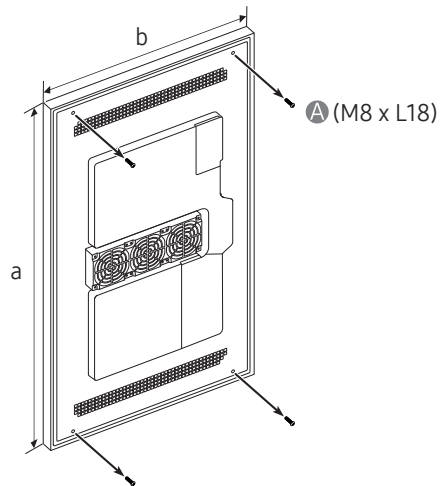
Installing the wall-mount brackets

- To use a VESA compatible wall-mount, you must first install the appropriate brackets.
- If you have any questions regarding wall-mount brackets, please contact your provider or the Samsung Electronics Service Center.

1 Remove the bolts (A) from the product.

2 Place the wall-mount brackets on the product, adjust the position, and fasten the bolts (A).

Torque: 12~15 kgf.cm



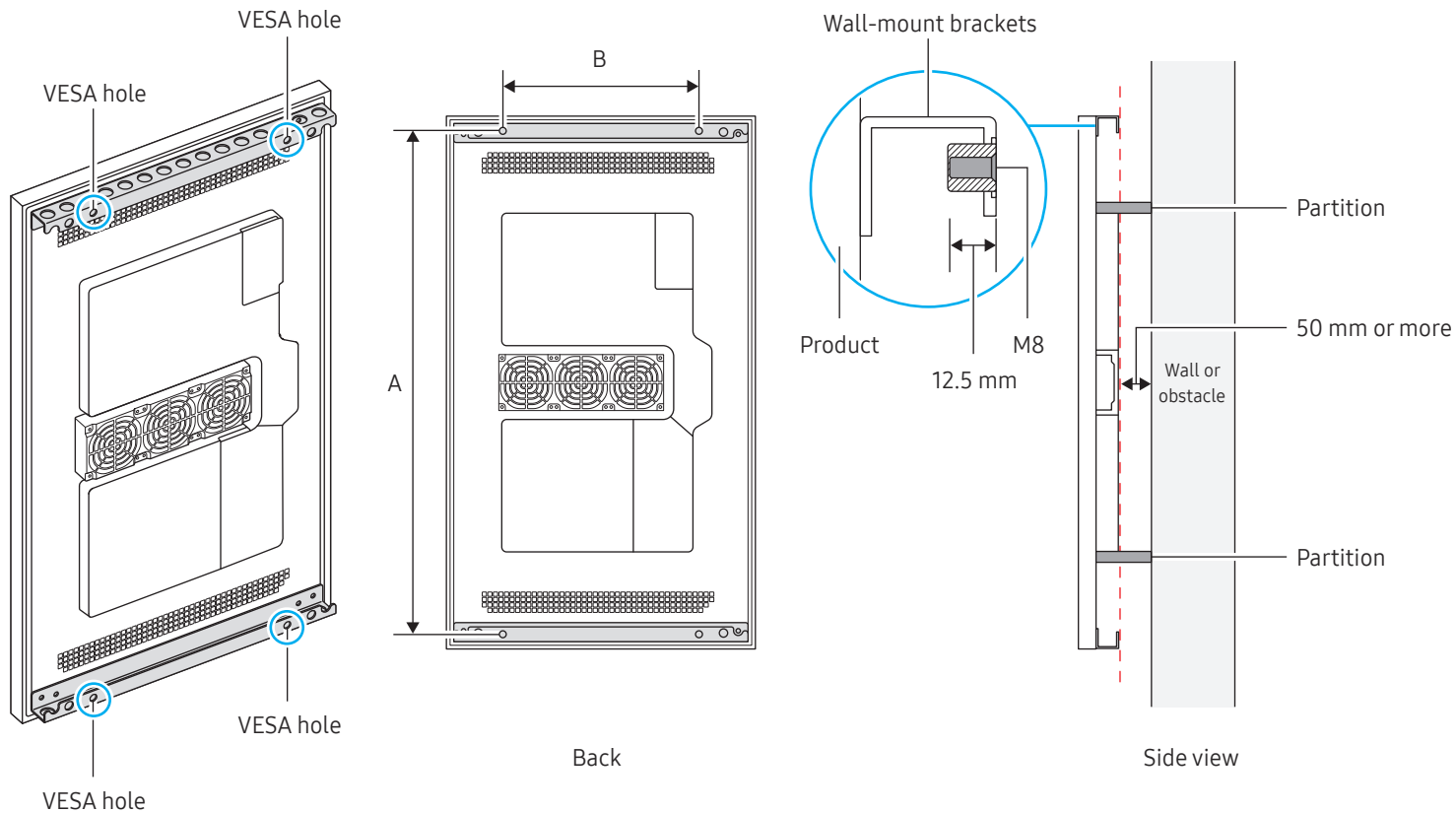
Wall-mount standard (VESA)

Model name	VESA standard (A * B) in millimetres (inches)	Standard Screw	Quantity
OH46F	1000 x 400 (39.4 x 15.7)	M8	4
OH55A/OH55F	1200 x 400 (47.2 x 15.7)		

 For more information about wall mounting, refer to the user guide enclosed with the wall-mount parts.

 Installation of the wall-mount must be performed by a technician.

 Samsung is not responsible for any damage or injury caused to the product, you or other people by installing the product without expert help.

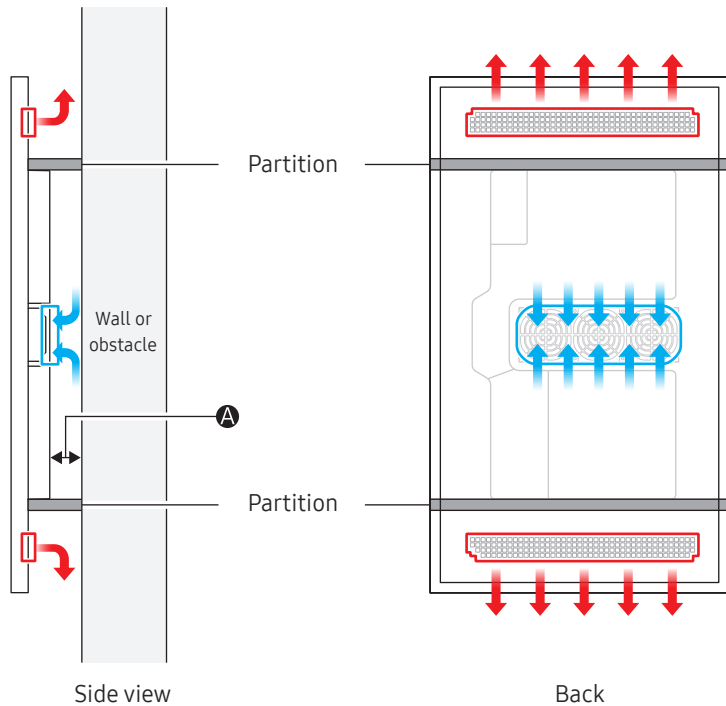


Clearance for wall mounting

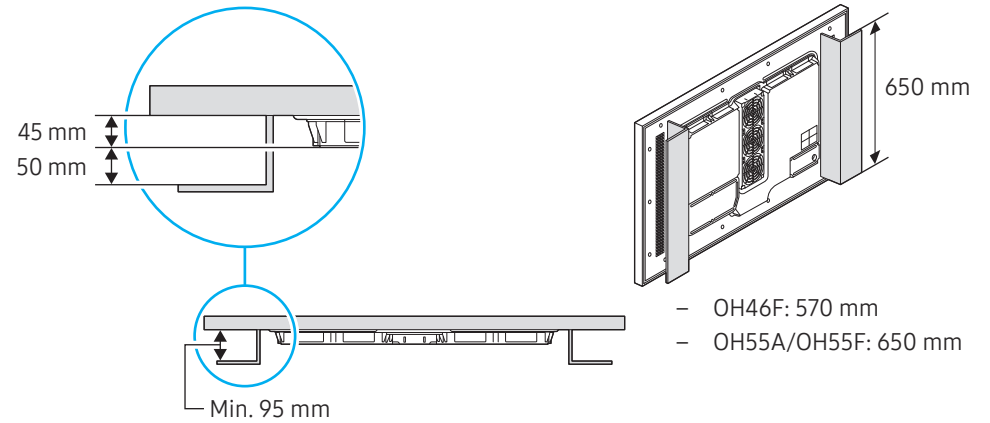
Installing the outdoor unit only

- When installing close to the wall, maintain a sufficient clearance in order to secure air flow.
- Clearance for OH46F/OH55A/OH55F (A): 50 mm or more
- Clearance for OH75A/OH75F/OH85F (B)
 - Example 1) Exposure to direct sunlight: 200 mm or more
 - Example 2) Atmospheric temperatures under 35 °C without direct sunlight: 60 mm or more
- Add partitions between the inlet and outlet to prevent discharged air from flowing back into the inlet.
- ✎ If the unit is subjected to excess heat due to an insufficient gap, this may cause a malfunction, which will not be covered by the warranty.

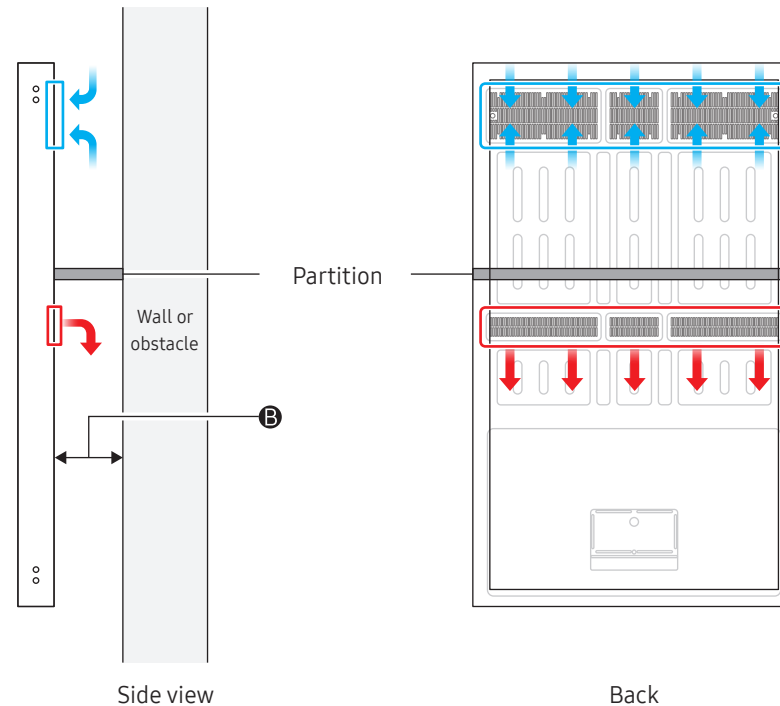
OH46F/OH55A/OH55F




- If the distance between the back of the product and the wall is too large, the following types of partitions can be installed.



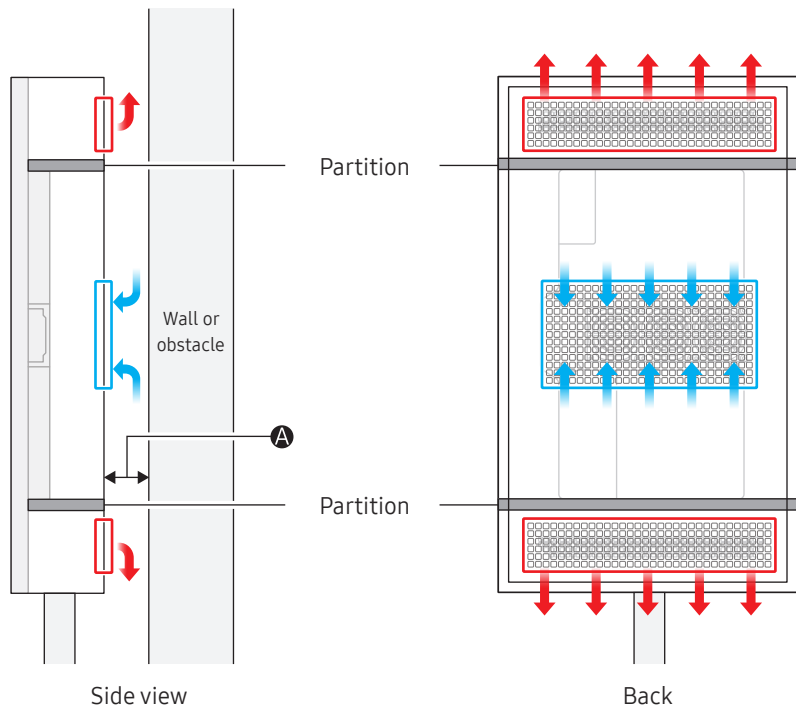
OH75A/OH75F/OH85F



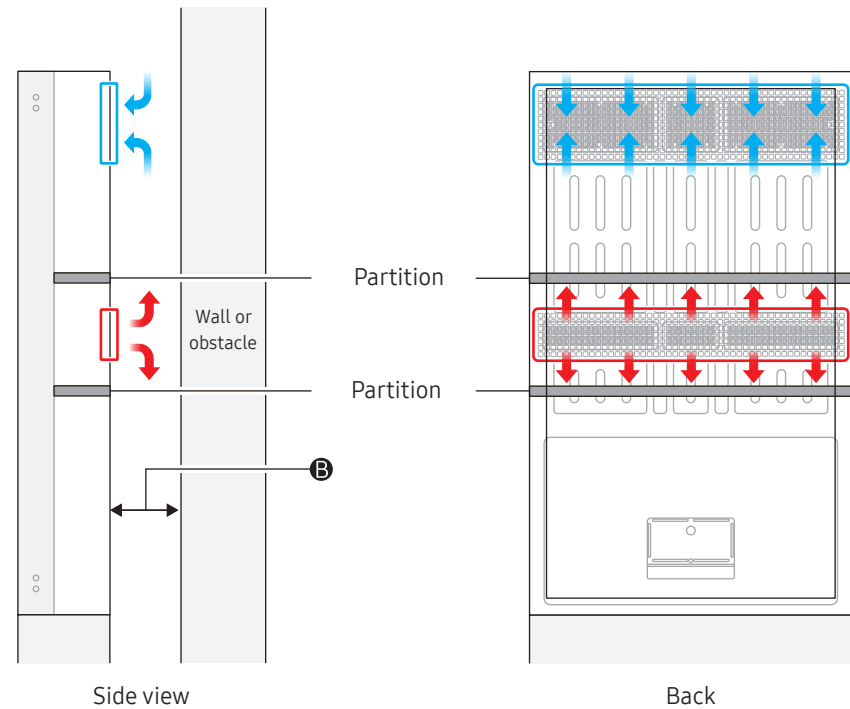
Installing with enclosure unit

- When installing an enclosure unit close to the wall, maintain the clearance in order to secure air flow. Consult your provider for detailed requirements before installing the product. Excessive heat due to the use of the enclosure unit with an obstacle or a wall may cause a malfunction or a problem with the product.
 - Clearance for OH46F/OH55A/OH55F (A): 100 mm or more
 - Clearance for OH75A/OH75F/OH85F (B): 200 mm or more
 - Remove any obstacles near the inlet and outlet that may affect air flow.
-  If the unit is subjected to excess heat due to an insufficient gap, this may cause a malfunction, which will not be covered by the warranty.

OH46F/OH55A/OH55F



OH75A/OH75F/OH85F



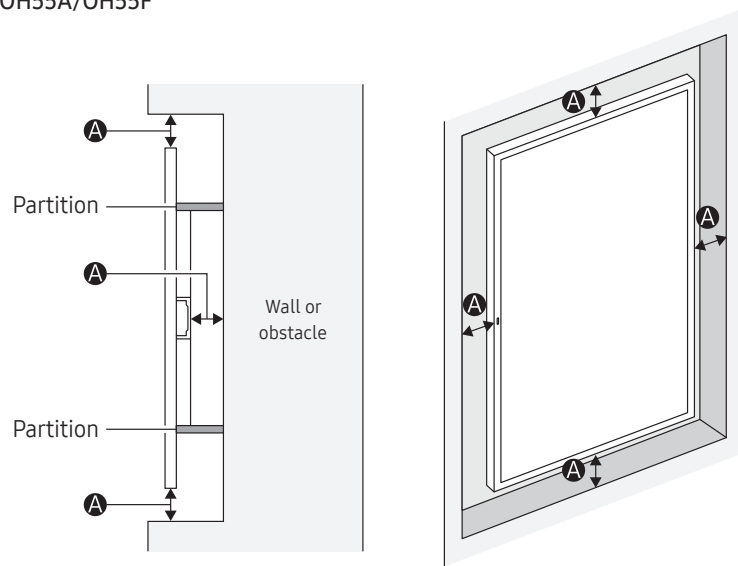
Clearance for built-in installation

Installing the outdoor unit only

- When installing built-in to the wall, maintain the clearance from the back, top, bottom, and sides of the product in order to secure air flow.
- Clearance for OH46F/OH55A/OH55F (A): 50 mm or more
- Clearance for OH75A/OH75F/OH85F (B)
 - Example 1) Exposure to direct sunlight: 200 mm or more
 - Example 2) Atmospheric temperatures under 35 °C without direct sunlight: 60 mm or more

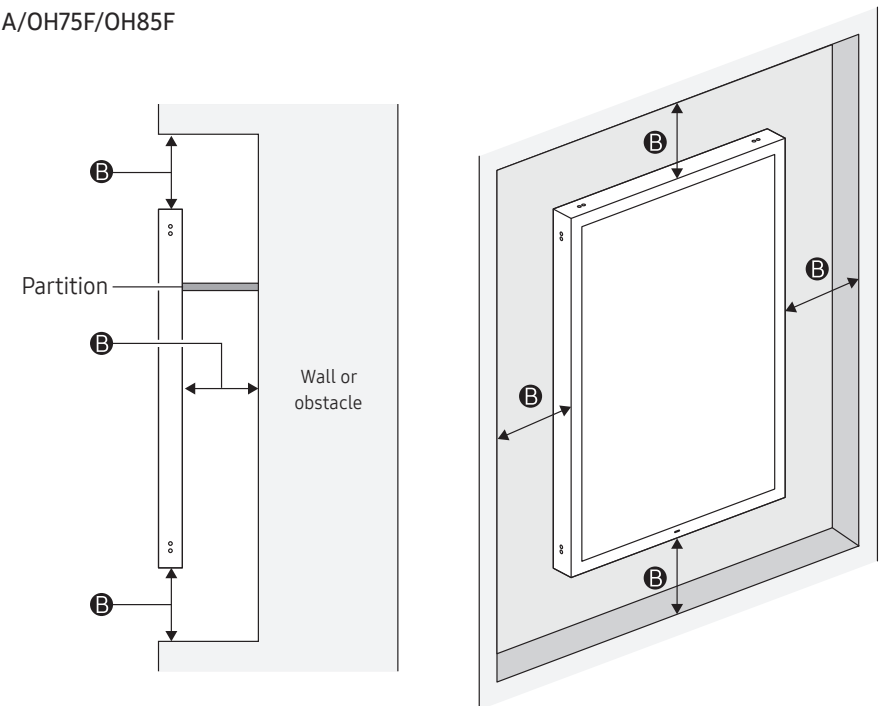
 If the unit is subjected to excess heat due to an insufficient gap, this may cause a malfunction, which will not be covered by the warranty.

OH46F/OH55A/OH55F



Side view

OH75A/OH75F/OH85F



Side view


Chapter 03

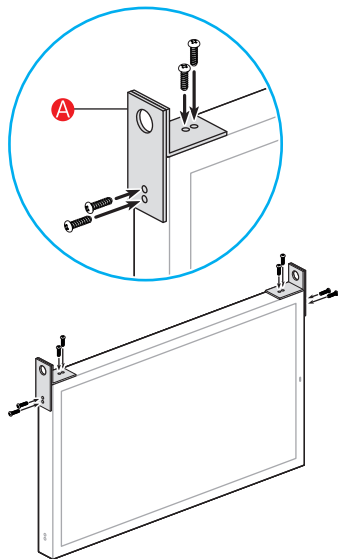
Handling guide

Supported models: OH75A/OH75F/OH85F

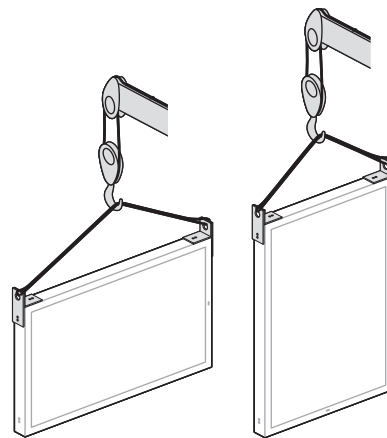
Moving by crane

- 1 To use a crane, attach Bracket-Hang (A) to the top and the sides of the product, and fasten the bolts.

 To purchase the Bracket-Hang (A) and bolts (M8 x L23), contact your provider.



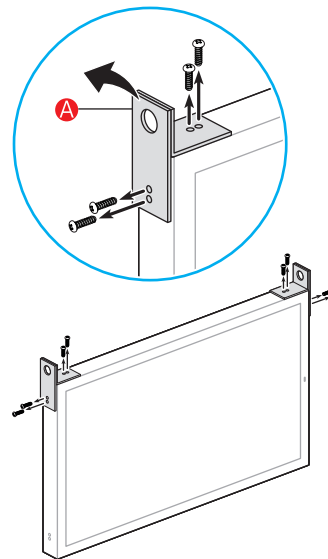
- 2 Use the crane to move the product.




Landscape

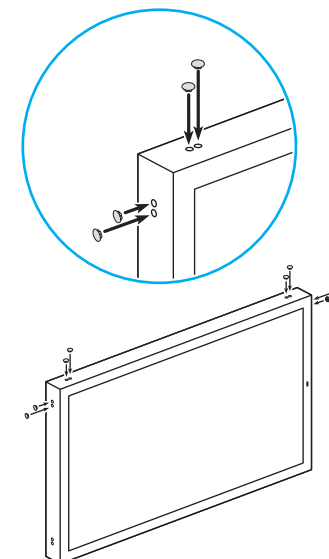
Portrait

- 3 When the product has been brought to the installation site, unfasten and remove the Bracket-Hang (A) and bolts.



- 4 Place Cover-Caps in the holes on the top and sides.

 Cover-Caps for your outdoor unit are found enclosed in the package.



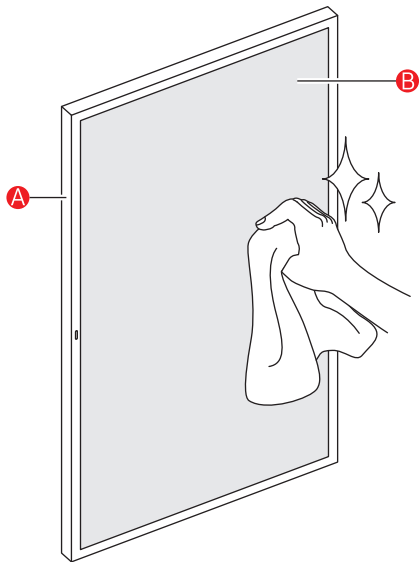
Chapter 04

Cleaning and cautions

Cleaning

Cleaning the protection glass

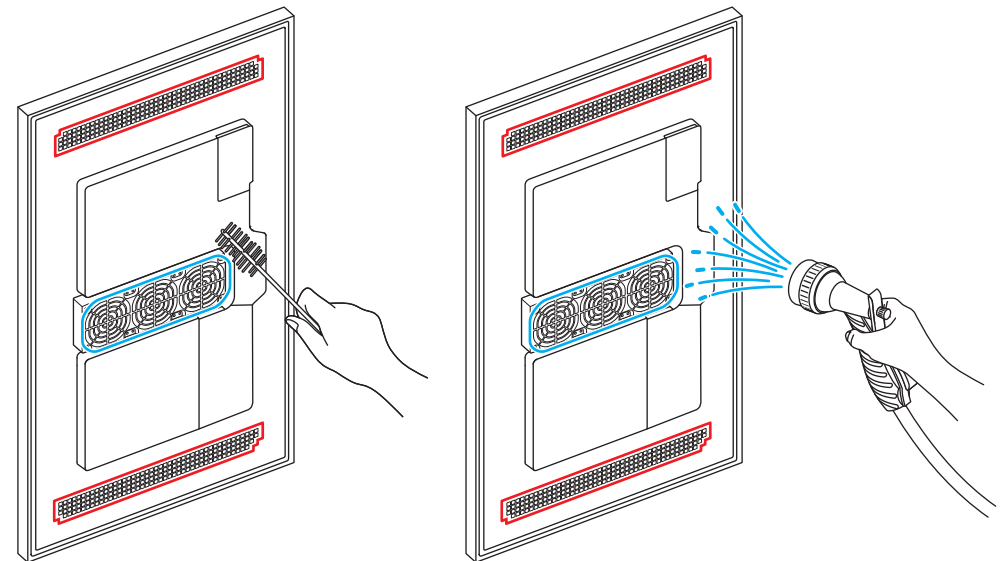
- **A** (areas except the Magic-Glass): Use a clean, soft cloth dampened with water to wipe off the surface.
- **B** (Magic-Glass): Wipe off the surface periodically with a clean, soft cloth dampened with water or glass cleaner (cleaning cycle: within 1 month). For dirt that cannot be removed, use an ethanol based cleaner. After a rain, use a clean, soft cloth to wipe off rain drops or dirt from the glass.



Cleaning the inlet and outlet


Use a brush to remove any debris from the inlet and outlet opening.

- ✎ To remove tough stains, wipe using a cloth with a small amount of ethanol based cleaner.
- ✎ If washing with water, keep the pressure below 0.5 bar.
- ✎ When installing an enclosure, the unit's inlet and outlet should not be blocked by dust or other materials.

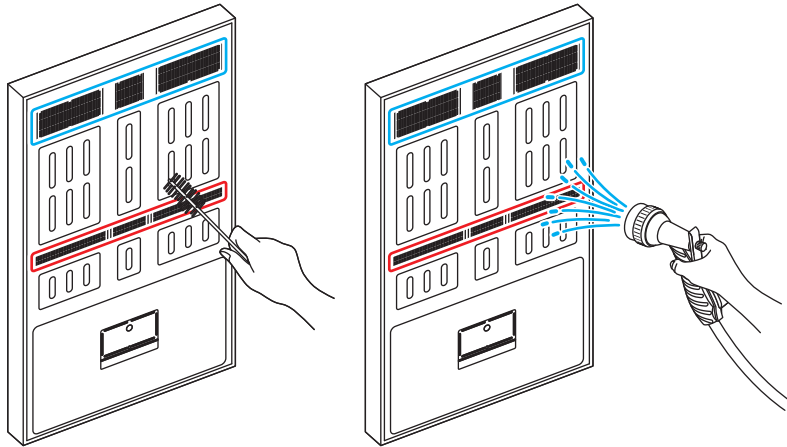


Cleaning the inlet and outlet

Use a brush to remove any debris from the inlet and outlet opening.

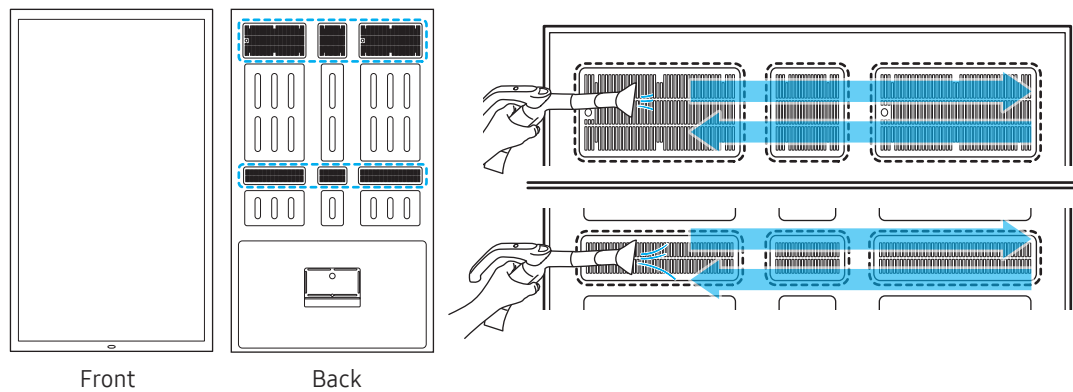
 To remove tough stains, wipe using a cloth with a small amount of ethanol based cleaner.

 If washing with water, keep the pressure below 0.5 bar.



Check once every 6 months and clean the inlet and outlet if they are covered/blocked by dust and other materials (more than 20 %).

 Remove power before cleaning. Use an industrial-grade vacuum cleaner (vacuum degree 2600 - 3000 mm H2O).

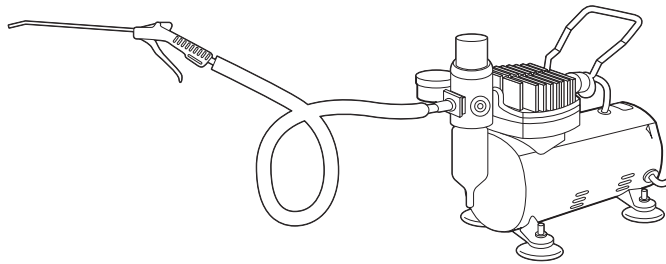


Heat Exchanger cleaning/Maintenance

Recommended tools / equipment

To clean the display properly, only use the tools / equipment that meet recommendations below.

- High-pressure compressor airgun (pressure: 5,000 mmH₂O or higher)



Cleaning and maintenance cycle of the heat exchanger

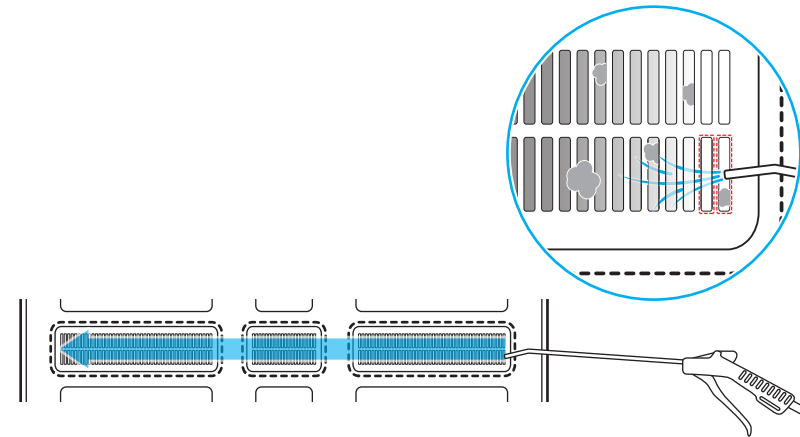
Samsung outdoor display needs regular cleaning and maintenance on heat exchange. Failure to comply with the guide may cause the product to malfunction, which voids the product warranty.

For the cleaning cycle, follow the instructions below.

- It is recommended to clean the display at least once every 3 months following the provided cleaning guide.
- At dusty areas such as bus stops or subway stations, it is recommended to clean the display every month.
- Samsung outdoor display is designed to be cool down mostly with air ventilation. Check if the cooling fan of the display operates properly on every visit for inspection.

How to clean the heat exchanger

- Turn off the display and disconnect the power cable.
- As shown below, use the airgun to clean the dust, which is attached to the fins of the heat exchanger, by injecting high-pressure air(5 bar or higher) in the rear of the outlet of OH85F.
- Inject high-pressure air for more than 5 seconds between the fins of the heat exchanger closely.

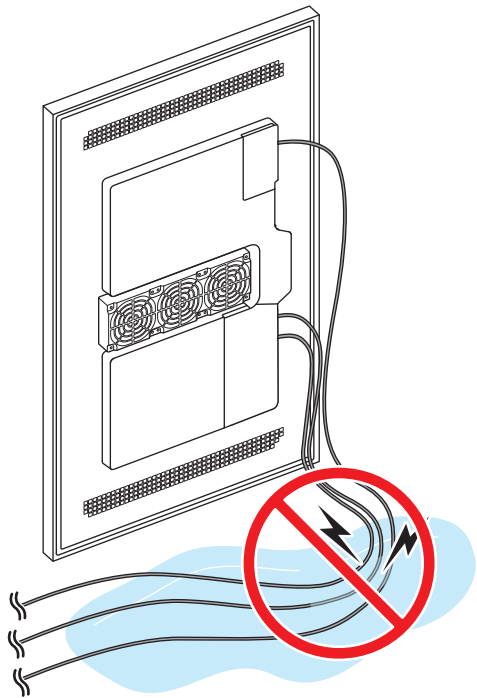


- Turn on the display when completed.
- When the display turns on, check if it operates properly.

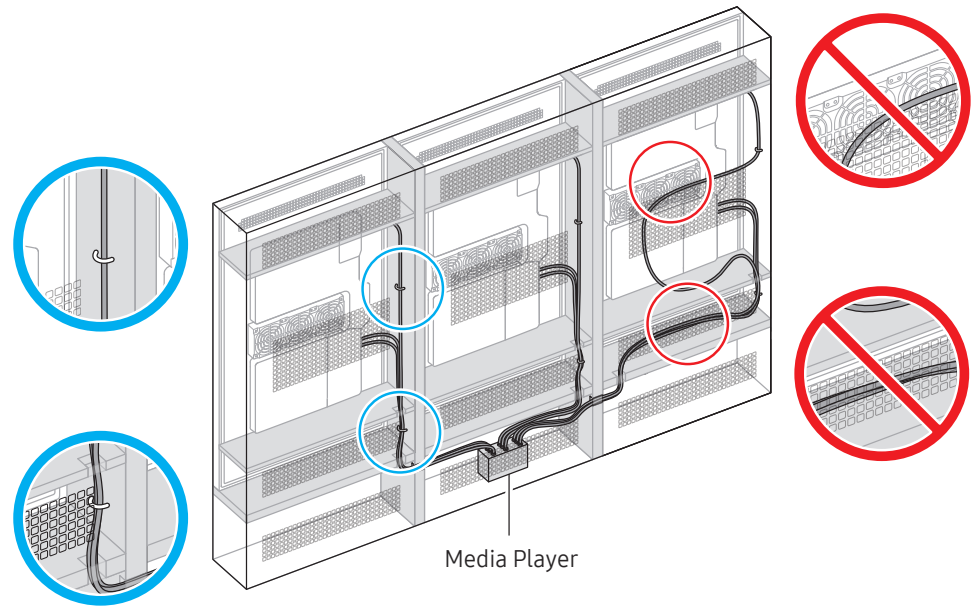
Precautions

Cautions when routing cables

- Route cables connected to the outdoor unit in a manner that keeps them away from water.
- ✎ Use the provided Samsung power cable only.

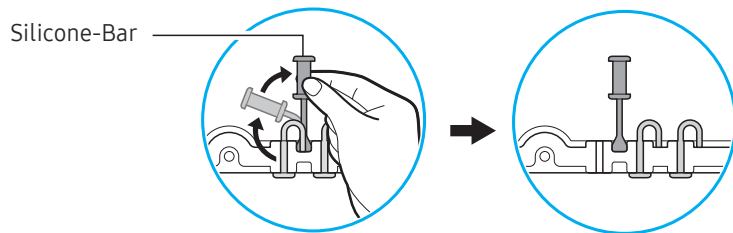
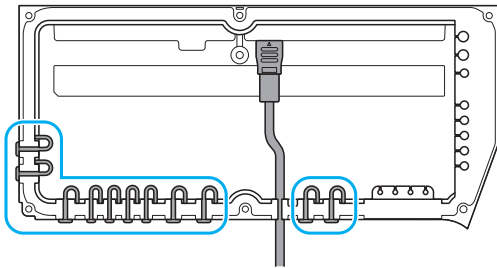


- When installing the 1 x N one-sided enclosure unit, route cables away from the inlet and outlet.

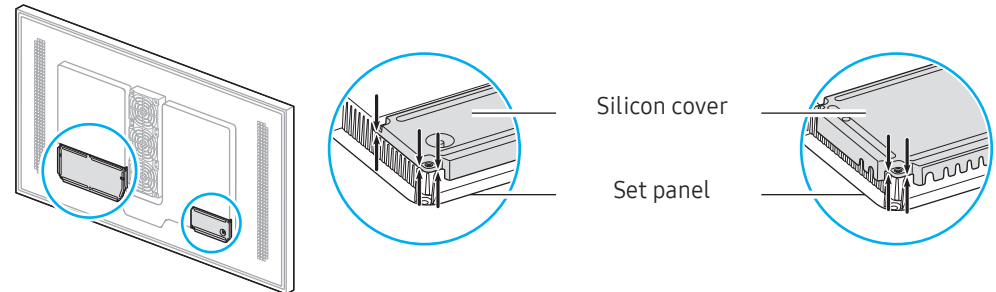


Cautions when connecting cables

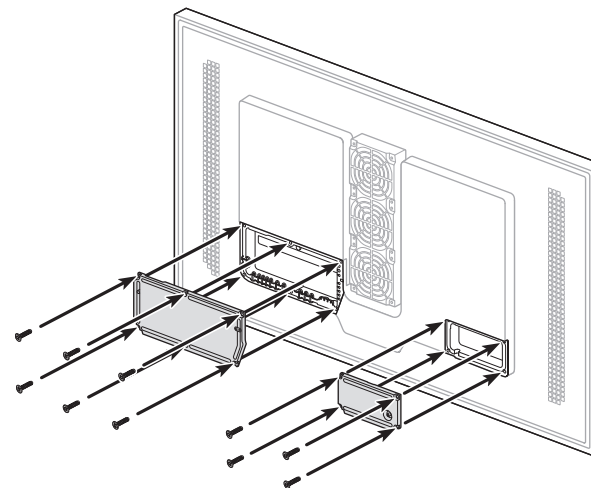
- Remove the appropriate silicon bar before connecting cables.
 - 7 Ø hole: For inserting 7-7.5 Ø cables
 - 5.5 Ø hole: For inserting 5.5-6 Ø cables
 - 3 Ø hole: For inserting 3-3.5 Ø cables
- ✎ Do not remove silicon bars where there is no cable connection. This will lessen the protection of your product against water and may result in a malfunction due to water damage, which will not be covered by the warranty.



- After complete cabling, ensure that there is no gap between the set panel and the silicon covers.
 - ✎ A gap may allow water damage and product malfunction.



- After all the cables are connected, make sure to close the cover and fasten the screws to ensure it is watertight.
 - ✎ Only remove the cover under the following conditions.
 - Environment: Temperature (below 25 °C), humidity (below 50 %)
 - Duration: Less than 2 hours (maximum allowed duration without cover)



Cautions when replacing parts

- The outdoor unit is designed to resist water and dust. Do not disassemble the product.
- ✎ If disassembly is necessary due to a malfunction, contact the service center.

