

3. INSTALLATION SPACE

⚠ Caution

When installing the outdoor unit, pay attention to the following items.

- To prevent stopping of operation by short circuit and worsening of performance and high pressure protection, refer to the installation space shown in the figure and secure enough space.
- Install in sufficient space considering the carrying in route, installation space, maintenance space, passage of people, etc.
- Do not place obstructions in the air flow outlet direction. If there is an obstruction in the outlet direction, install an outlet duct.
- When there is a wall in front of the unit, provide a space of 500mm or more as maintenance space.
- When there is a wall at the left side of the unit, provide a space of 30mm or more as maintenance space.
- When installing, also consider the refrigerant piping space.
- An outdoor temperature of 35 °C (DB) in air-conditioned operation is assumed for the installation space in this item. If the outdoor temperature exceeds 35 °C (DB) and the outdoor unit is operating at a load exceeding its rated ability, provide a larger inlet space.

OUTDOOR UNITS

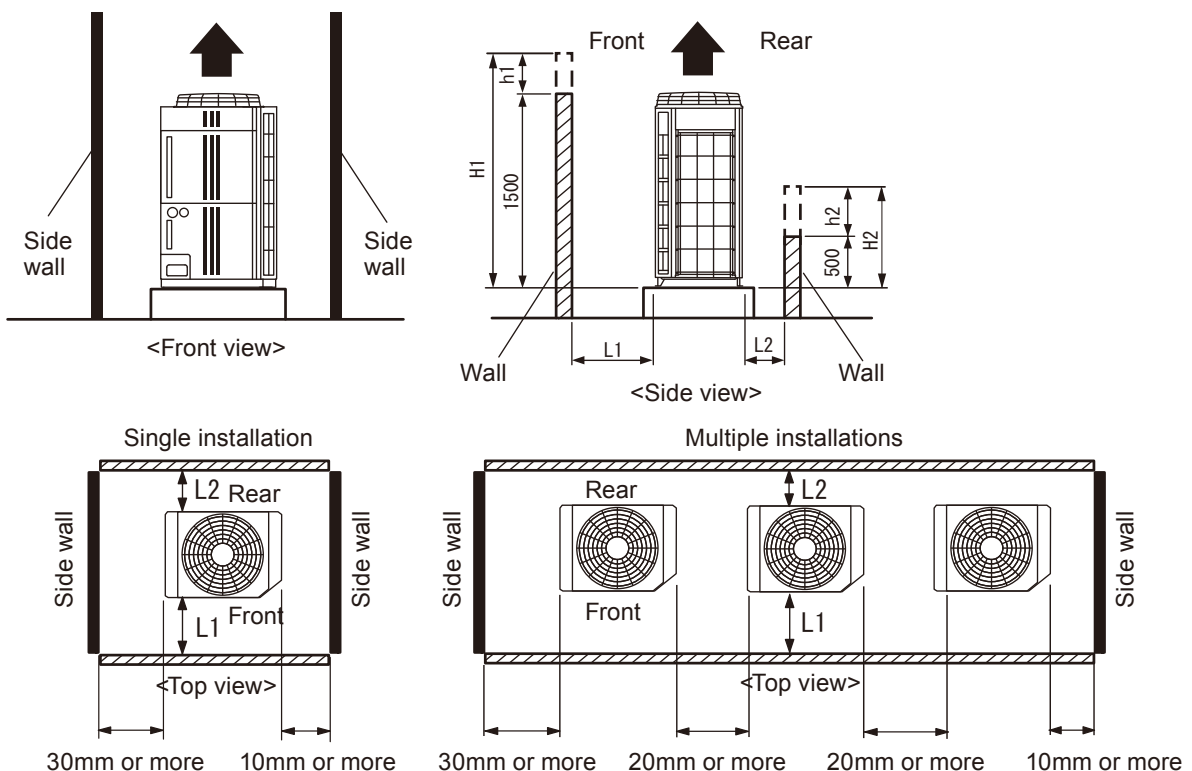
OUTDOOR UNITS

3-1. WHEN INSTALLED NEAR BY LIMITED HEIGHT WALL

■ SINGLE AND MULTIPLE INSTALLATIONS

- There are no restrictions on the height of the side wall.
- Provide installation spaces L1 and L2 in accordance with the table below according to the wall height (front side, rear side) conditions.
- Provide installation spaces other than L1 and L2 in accordance with the conditions shown in the figure below.
- Ventilation resistance can be ignored when the distance from a wall or product, etc. is larger than 2m.

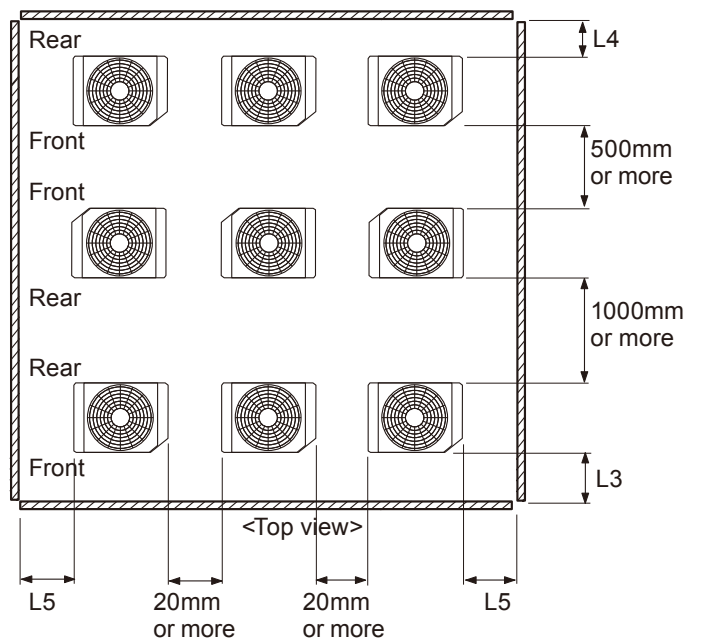
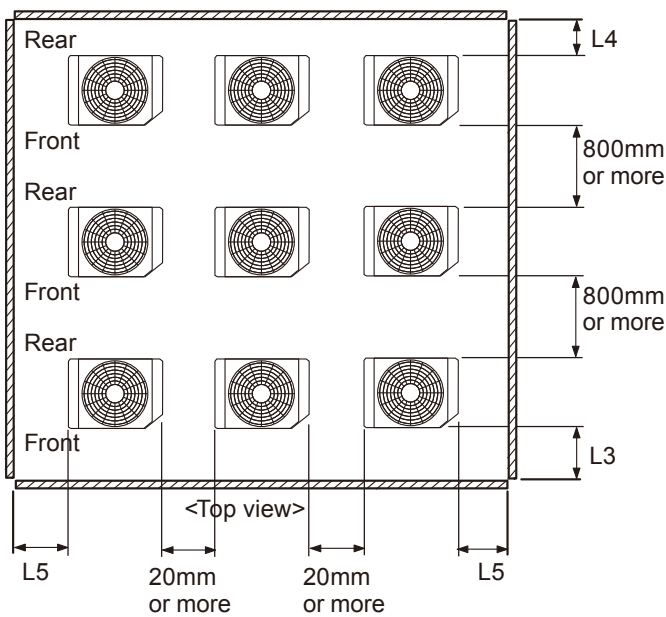
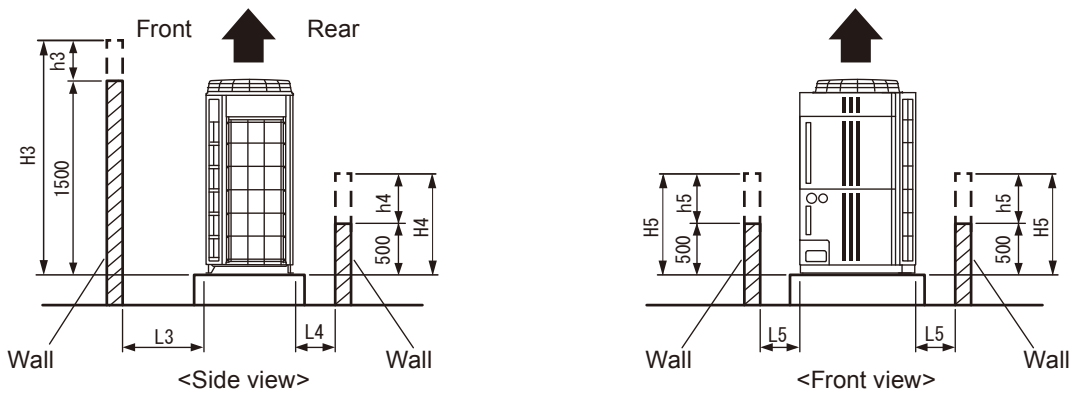
Wall height condition	Necessary installation space
When H1 is 1500(mm) or less	$L1 \geq 500$ (mm)
When H1 is 1500(mm) or more	$L1 \geq 500 + h1 \div 2$ (mm)
When H2 is 500(mm) or less	$L2 \geq 100$ (mm)
When H2 is 500(mm) or more	$L2 \geq 100 + h2 \div 2$ (mm)



■ CONCENTRATED INSTALLATION

- Provide installation spaces L3, L4, and L5 in accordance with the table below according to the wall height (front side, rear side) conditions.
- Provide installation spaces other than L3, L4, and L5 in accordance with the conditions shown in the figure below.
- Ventilation resistance can be ignored when the distance from a wall or product, etc. is larger than 2m.

Wall height condition	Necessary installation space
When H3 is 1500(mm) or less	$L3 \geq 500$ (mm)
When H3 is 1500(mm) or more	$L3 \geq 500 + h3 \div 2$ (mm)
When H4 is 500(mm) or less	$L4 \geq 200$ (mm)
When H4 is 500(mm) or more	$L4 \geq 200 + h4 \div 2$ (mm)
When H5 is 500(mm) or less	$L5 \geq 200$ (mm)
When H5 is 500(mm) or more	$L5 \geq 200 + h5 \div 2$ (mm)



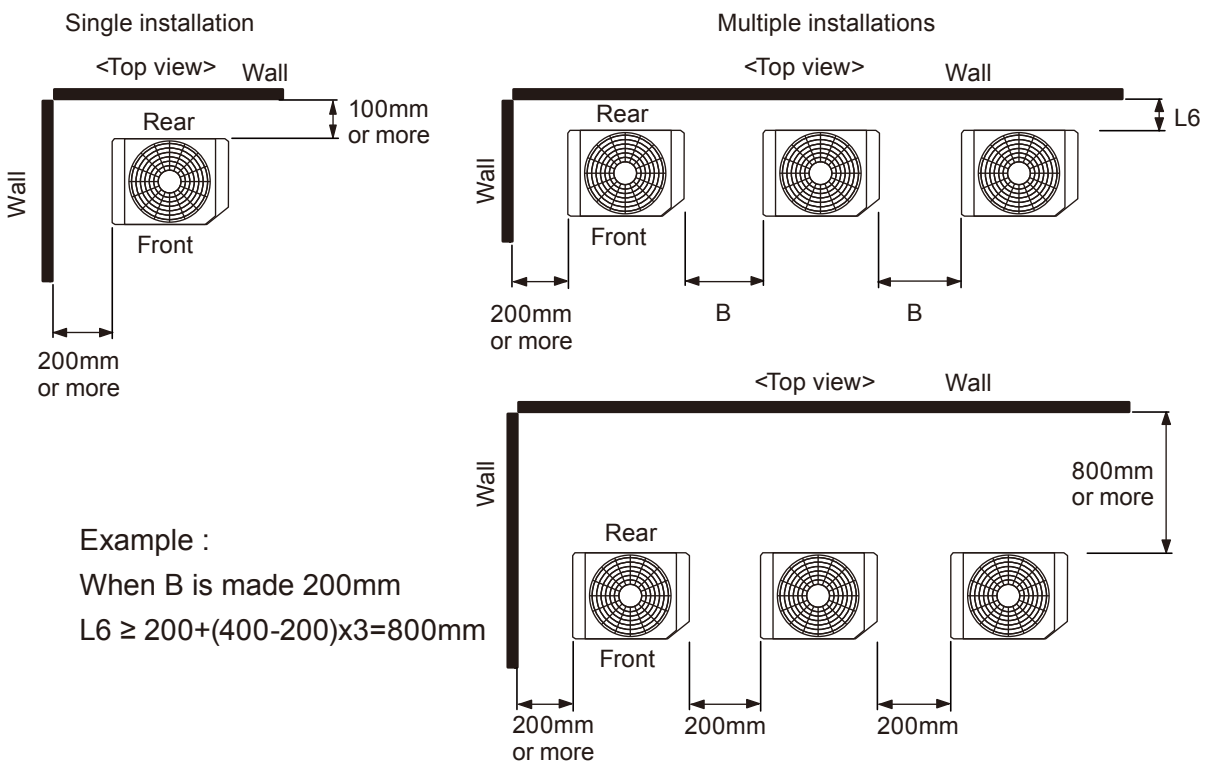
3-2. WHEN INSTALLED NEAR BY UNLIMITED HEIGHT WALL

■ SINGLE AND MULTIPLE INSTALLATIONS

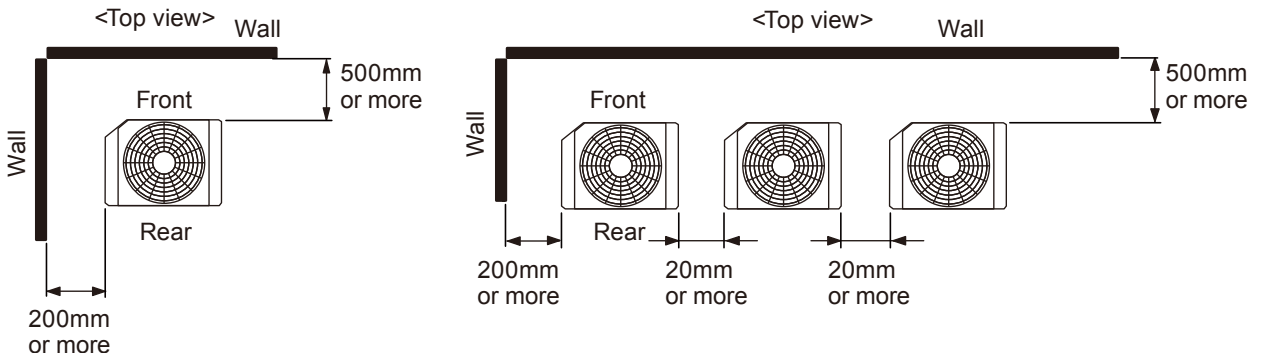
- There are no restrictions on the height of the wall.
- The wall (without height restrictions) must not exist on both sides (left / right) of outdoor unit. Also, must not exist on the both sides (front / rear) of outdoor unit.
- Provide installation spaces other than L6 in accordance with the conditions shown in the figure below.
- Ventilation resistance can be ignored when the distance from a wall or product, etc. is larger than 2m.

● When installing with the REAR of the outdoor unit facing the wall side

Condition	Necessary installation space
When $B \geq 400$ (mm)	$L6 \geq 200$ (mm)
When $20 \leq B < 400$ (mm)	$L6 \geq 200 + (400 - B) \times 3$ (mm)

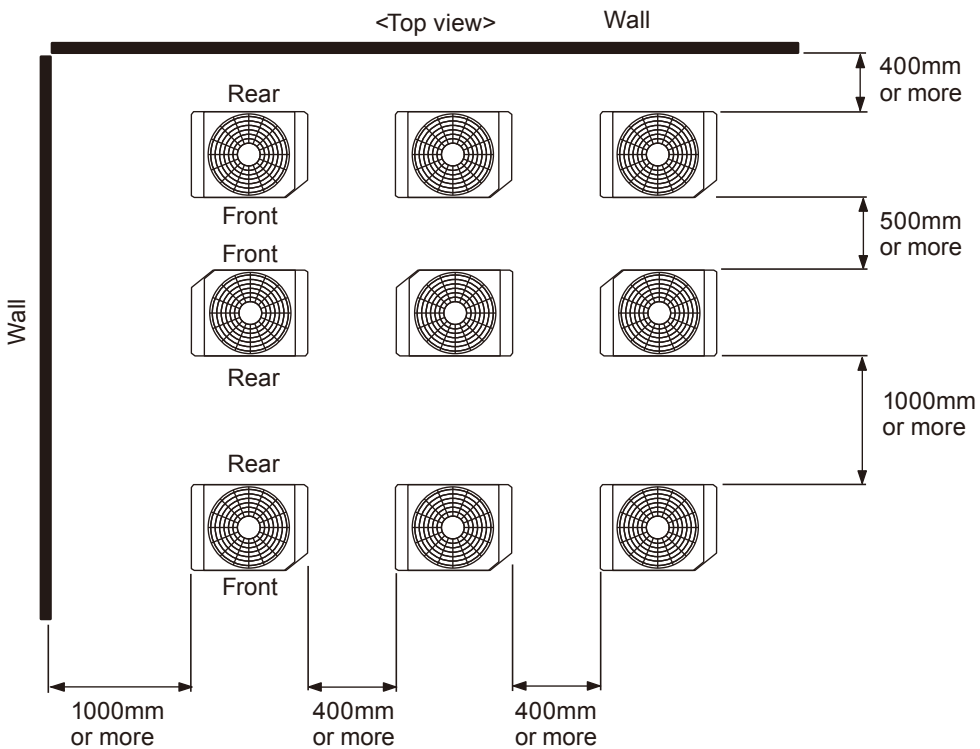
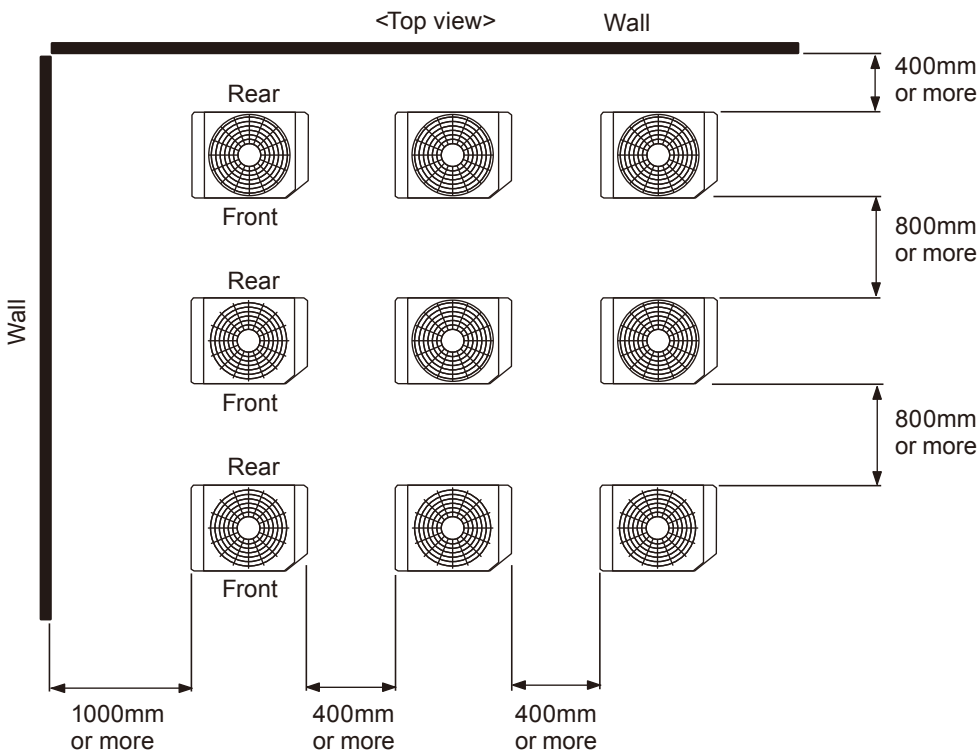


● When installing with the FRONT of the outdoor unit facing the wall side



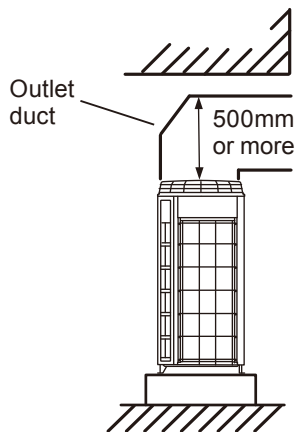
■ CONCENTRATED INSTALLATION

- The wall (without height restrictions) must not exist on both sides (left / right) of outdoor unit. Also, must not exist on the both sides (front / rear) of outdoor unit.
- Ventilation resistance can be ignored when the distance from a wall or product, etc. is larger than 2m.



3-3. WHEN THERE IS AN OBSTRUCTION ABOVE THE PRODUCT

- When there is an obstruction above the product, observe the minimum installation height and install an outlet duct as shown in the figure.
- When an outlet duct, etc. is installed; the high static pressure mode must be set by pushbutton switch.
(Also applies when a snow hood is installed)



● High static pressure mode setting

Select the high static pressure mode in accordance with the table below.

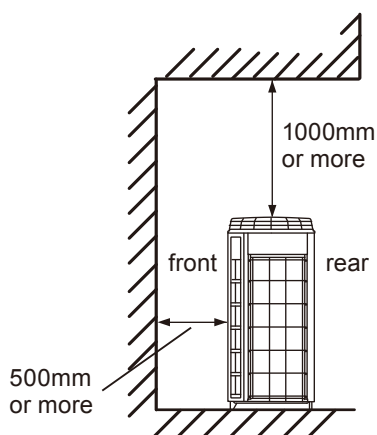
Condition	High static pressure mode setting *2
Static Pressure(SP) *1 : $0 \leq SP \leq 30$ (Pa)	Set to Mode 1
Static Pressure(SP) *1 : $30 < SP \leq 82$ (Pa)	Set to Mode 2

*1 : Static pressure is the air flow resistance that includes the discharge duct resistance & other additional resistance like discharge grill and so on.

*2 : Refer to the section on Push Switch Setting in "Chapter 7. FUNCTION SETTING".

● When an outlet duct is not installed, install the product as shown below.

- 1) Maintain an opening of 1 m or greater from the top of the unit.
- 2) Be sure there is no wall at the rear side.
- 3) When installing products adjacently, install up to 3 units.



3-4. CONCENTRATED INSTALLATION EXAMPLE

- When installing units in a group, in the worst case, drop in capacity of the outdoor units due to short circuiting of the outlet air in the surrounding units may cause the equipment to stop. Basic installation examples of 12 and 24 units are shown below.

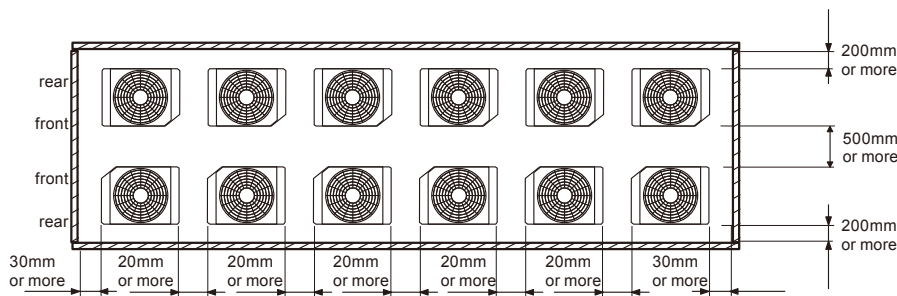
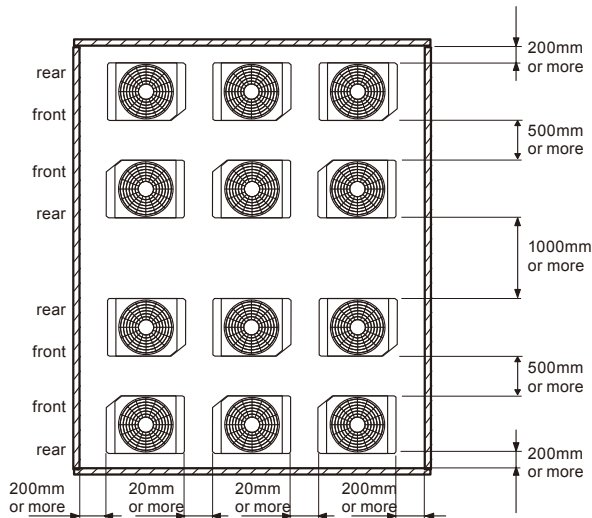
Always secure the distances of the given value or greater.

- To prevent a drop of capacity due to a short circuit, install a mount at the bottom of the body and consider design which secures a ventilation path, etc. at the bottom of the wall. In addition, when installing more than the above number of units, provide ample space as shown below or greater. If you cannot make a judgment, contact your dealer.

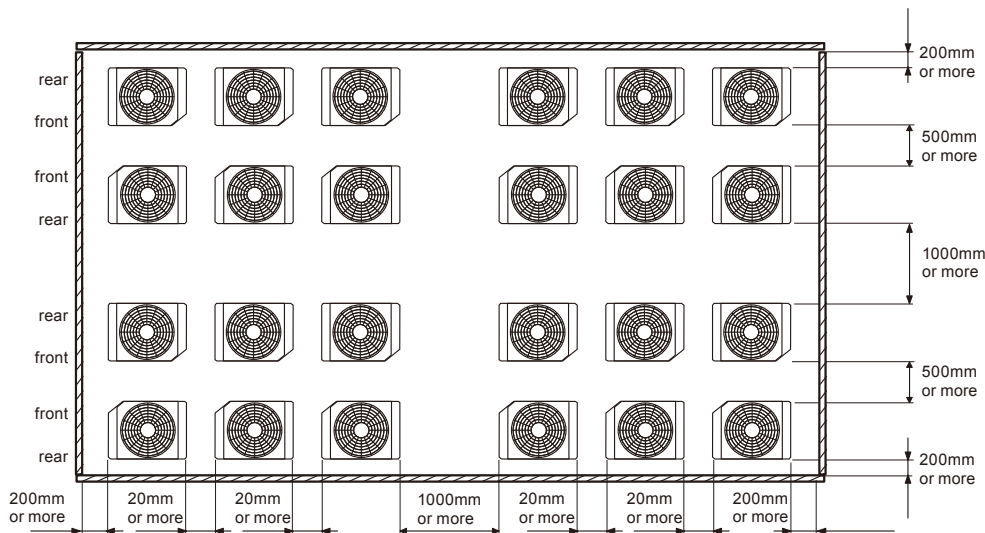
CONCENTRATED INSTALLATION EXAMPLE (1)

*Wall height: All 500 mm

12 units installation example



24 units installation example

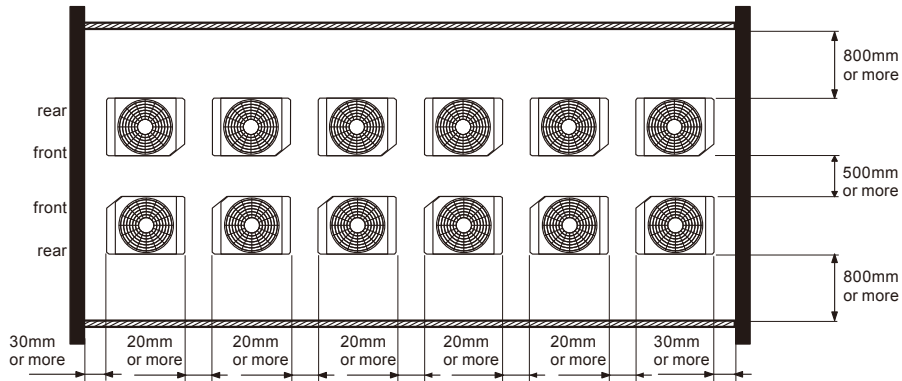
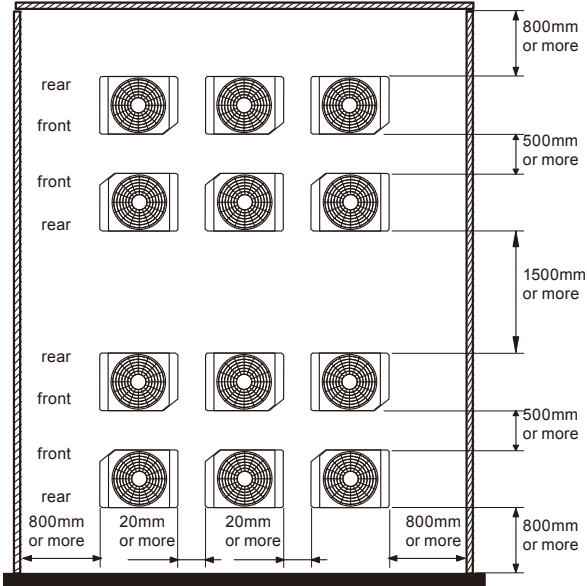


■ CONCENTRATED INSTALLATION EXAMPLE (2)

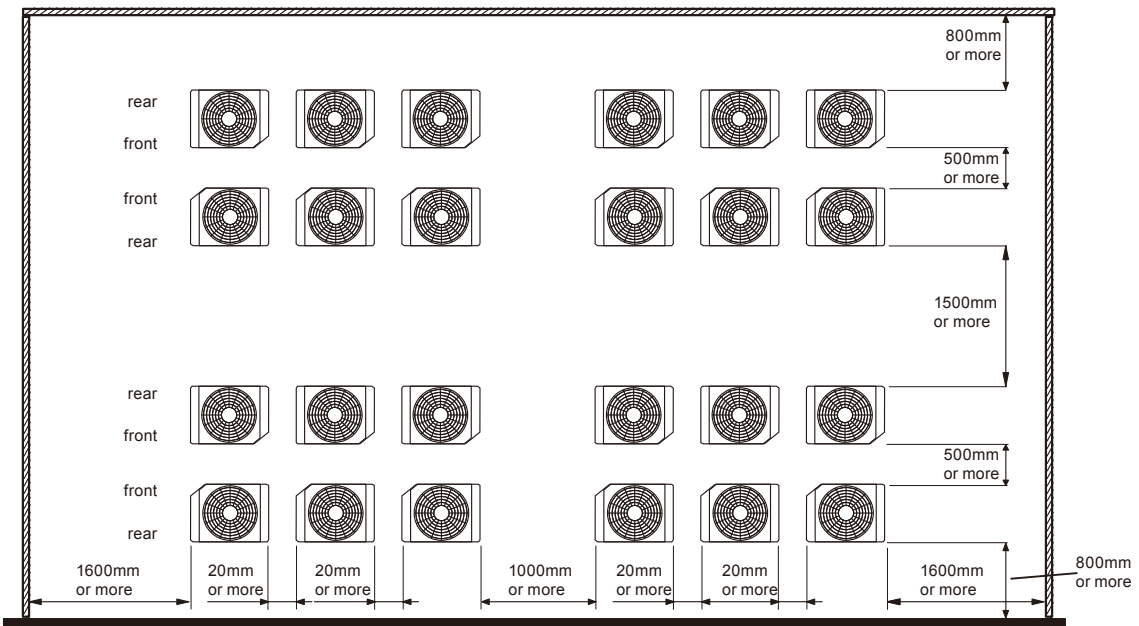
*Wall height: All 1700 mm.

*However, the height of the ████████ wall is unrestricted.

● 12 units installation example



● 24 units installation example



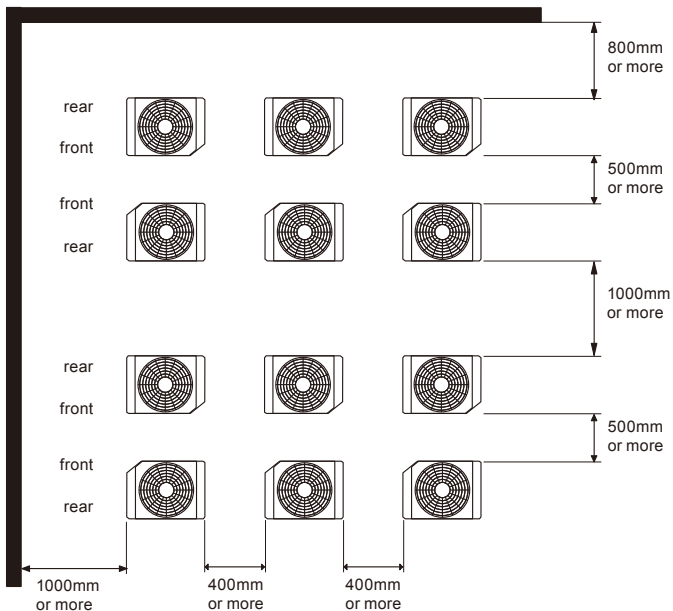
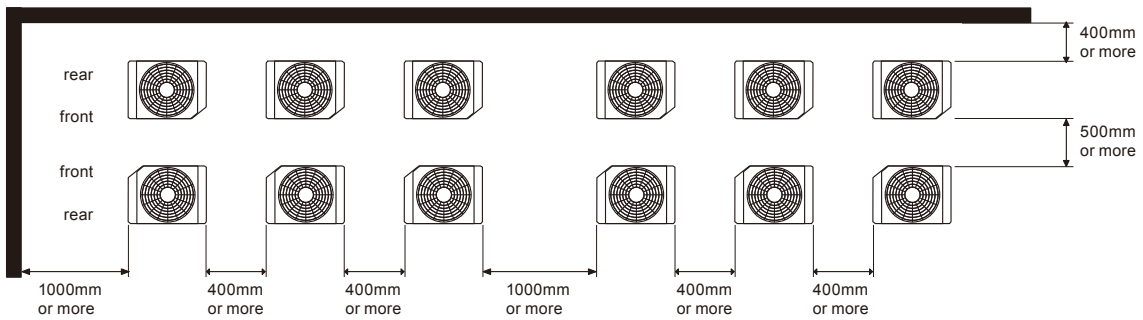
■ CONCENTRATED INSTALLATION EXAMPLE (3)

*Wall height is unrestricted.

*Of the 4 directions, leave at least 2 directions open. Leave either the front or back direction open.

● 12 units installation example

Installation of more than the number of units shown below is not recommended because short circuit easily occurs at the corners.



3-5. INSTALLATION ON EACH FLOOR

● Precautions when installing on each floor

- When installing the product on each floor, be careful because updrafts may cause short circuits. If a short circuit has occurred, the cooling and heating capacity and EER, COP (efficiency) may drop and in the worst case, high pressure protection may cause operation to stop.
- Regarding the installation dimensions, refer to the figure below and provide an ample intake space.
- Provide service space and refrigerant piping and electric wiring space.
- Install an outlet duct at each outdoor unit.

● Installation example when installed on each floor

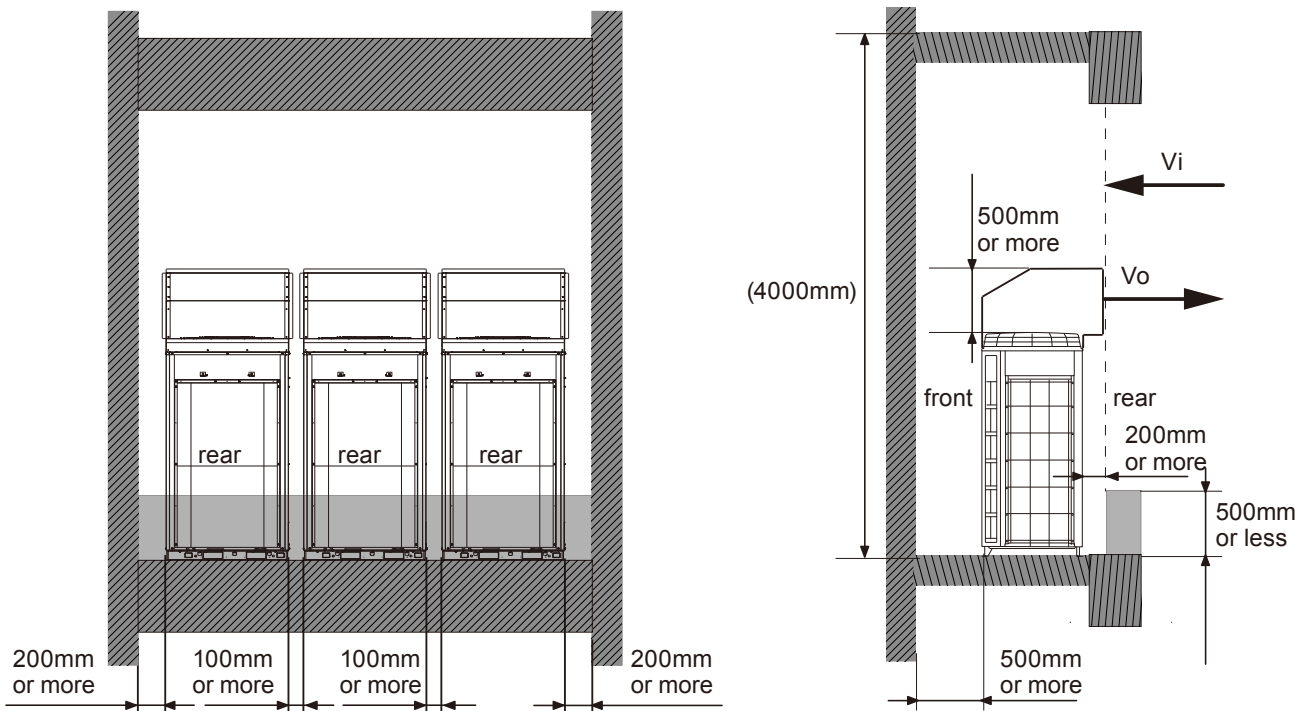
An installation example assuming conditions like those shown in the table below is shown in the figure below.

Height / floor	Capacity / floor	Number of installable floors
4000 mm	54 HP	20 floors

When substantially different from this installation example, be extra careful of short circuit, etc

- Make the outlet wind velocity $V_o = 5.5 \text{ m/s}$ to 7.5 m/s .
- Make the intake wind velocity of opening $V_i = 1.2 \text{ m/s}$ or less

[Example of each floor]



● When installing a louver

When installing a louver, pay attention to the following:

- Fit the outlet duct tightly to the louver so that short circuit will not occur.
- Make the louver angle 0° to 20° down.

If installed facing up, short circuit is easily generated by updraft.

- Make the opening ratio of the outlet louver 75% or greater.