

## 4. Installation space

### ⚠ CAUTION

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

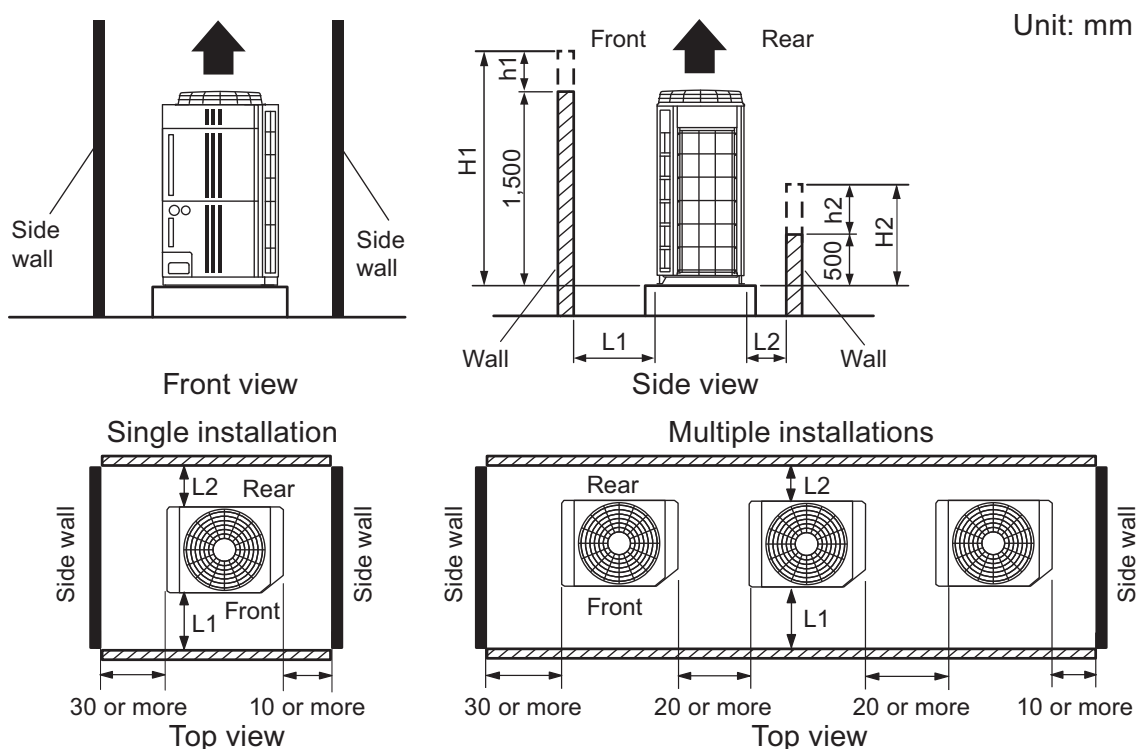
- To prevent shut down due to discharge air short circuiting, reduction in capacity, and high pressure protection, refer to the installation space requirements shown in the following diagrams to provide sufficient space.
- Provide sufficient space to allow for rigging and setting of unit, installation, maintenance, and access.
- Do not obstruct discharge airflow. Provide discharge duct if required for proper air discharge.
- If there is a wall in front of the unit, provide 500 mm or more clearance for maintenance.
- If there is a wall on the left side of the unit, provide 30 mm or more clearance for maintenance.
- An outdoor temperature of 35°CDB in air-conditioned operation is assumed for the installation space in this item. If the outdoor temperature exceeds 35°CDB and the outdoor unit is operating at a load exceeding its rated ability, provide a larger inlet space.

### 4-1. When installing in front of height-restricted 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 and rear side) conditions.
- Provide installation spaces other than L1 and L2 in accordance with the conditions shown in the figure below.
- Airflow resistance can be ignored when the distance from a wall or other equipment is more than 2 m.

Wall height condition (mm)	Installation requirement (mm)
When H1 is 1,500 or less	$L1 \geq 500$
When H1 is 1,500 or more	$L1 \geq 500 + h1/2$
When H2 is 500 or less	$L2 \geq 100$
When H2 is 500 or more	$L2 \geq 100 + h2/2$

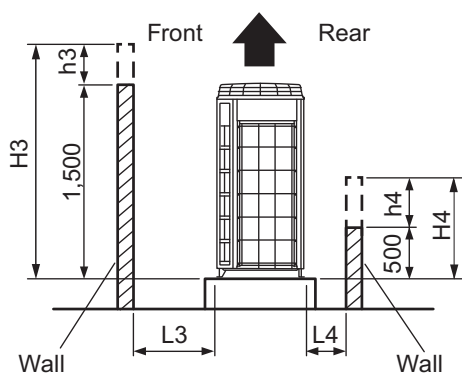


## Concentrated installation

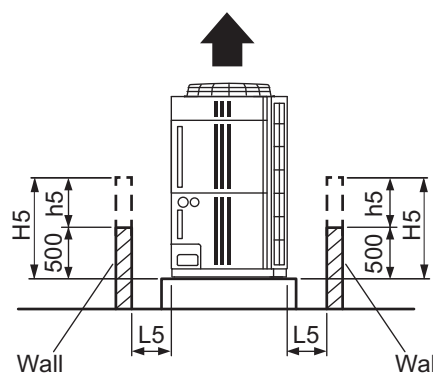
- Provide installation spaces L3, L4, and L5 in accordance with the table below according to the wall height (front side and rear side) conditions.
- Provide installation spaces other than L3, L4, and L5 in accordance with the conditions shown in the figure below.
- Airflow resistance can be ignored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

Wall height condition (mm)	Installation requirement (mm)
When H3 is 1,500 or less	$L3 \geq 500$
When H3 is 1,500 or more	$L3 \geq 500 + h3/2$
When H4 is 500 or less	$L4 \geq 200$
When H4 is 500 or more	$L4 \geq 200 + h4/2$
When H5 is 500 or less	$L5 \geq 200$
When H5 is 500 or more	$L5 \geq 200 + h5/2$

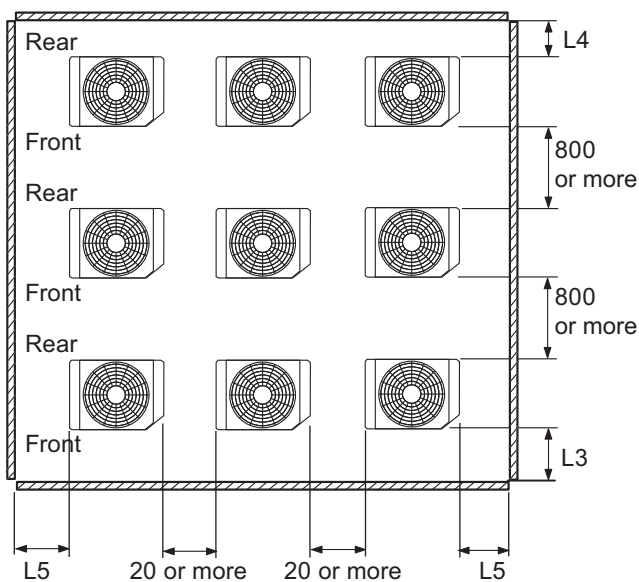
Unit: mm



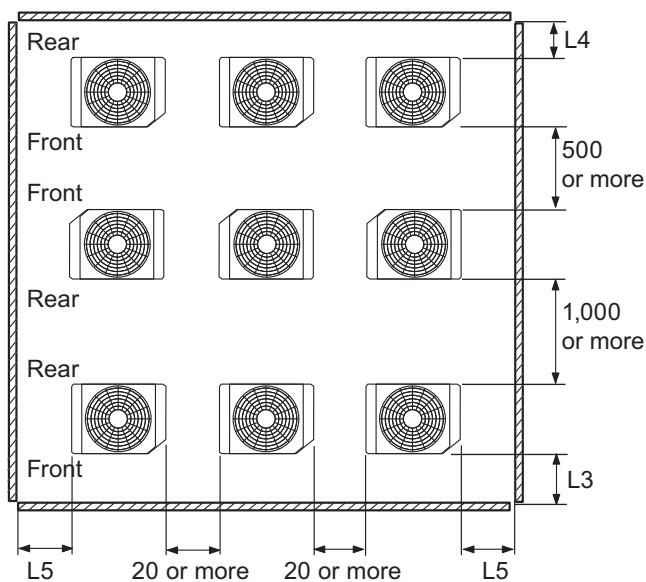
Side view



Front view



Top view



Top view

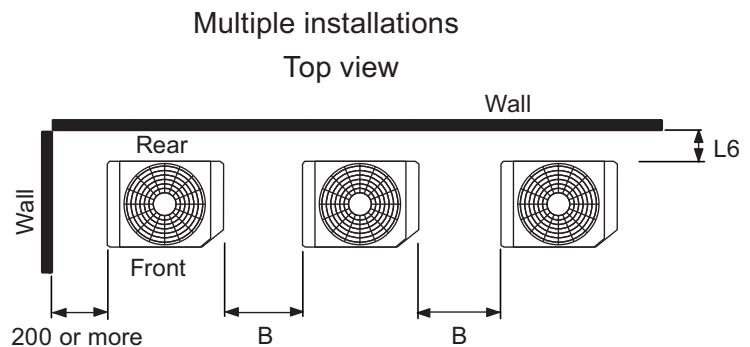
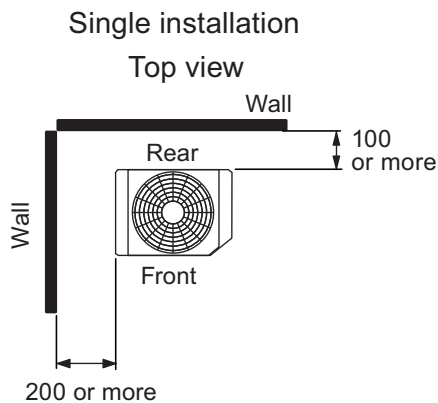
## 4-2. When installing in front of wall with no specific height-restriction

### Single and multiple installations

- There are no restrictions on the height of the side wall.
- The wall (without height restrictions) must not exist on both left and right sides of the outdoor unit. Also, the wall must not exist on both front and rear of the outdoor unit.
- Provide installation spaces other than L6 in accordance with the conditions shown in the figure bellow.
- Airflow resistance can be ignored when the distance from a wall or other equipment is more than 2 m.
- **When installing with the rear of the outdoor unit facing the wall side:**

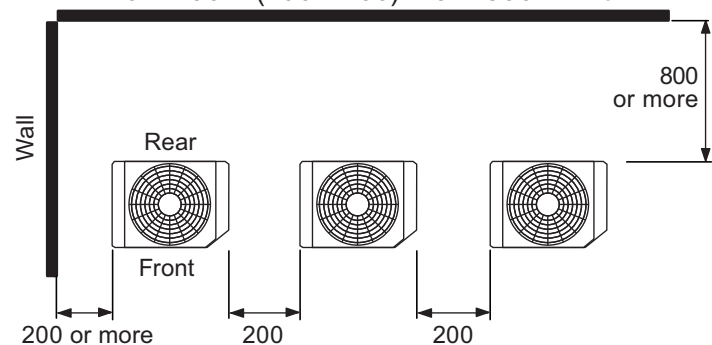
Wall height condition (mm)	Installation requirement (mm)
When $B \geq 400$	$L6 \geq 200$
When $20 \leq B \leq 400$	$L6 \geq 200 + (400 - B) \times 3$

Unit: mm

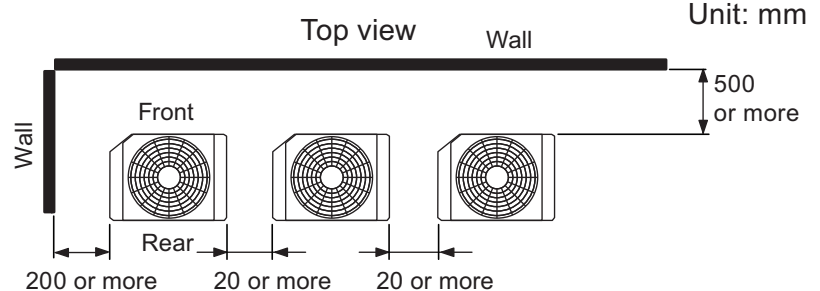
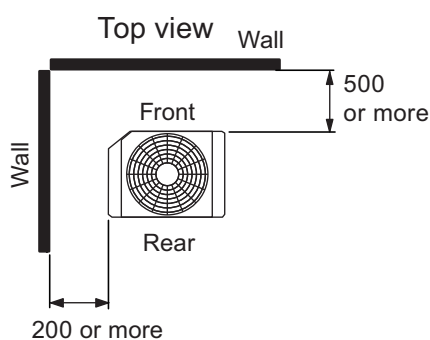


Example: When B is made 200

$$L6 \geq 200 + (400 - 200) \times 3 = 800$$



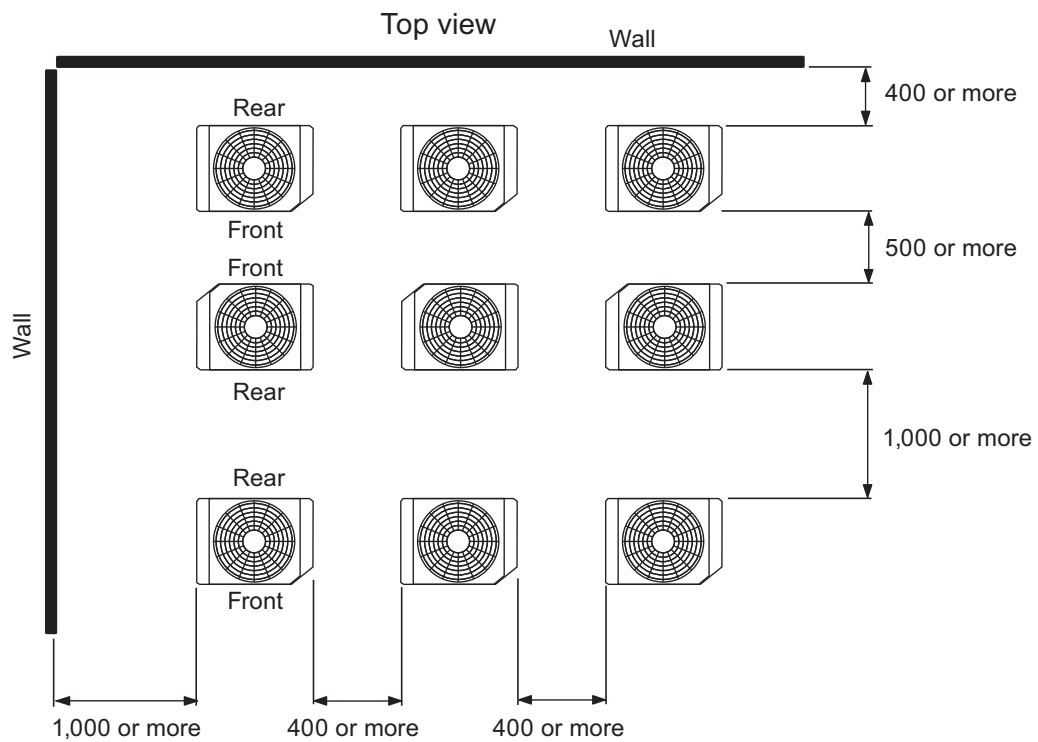
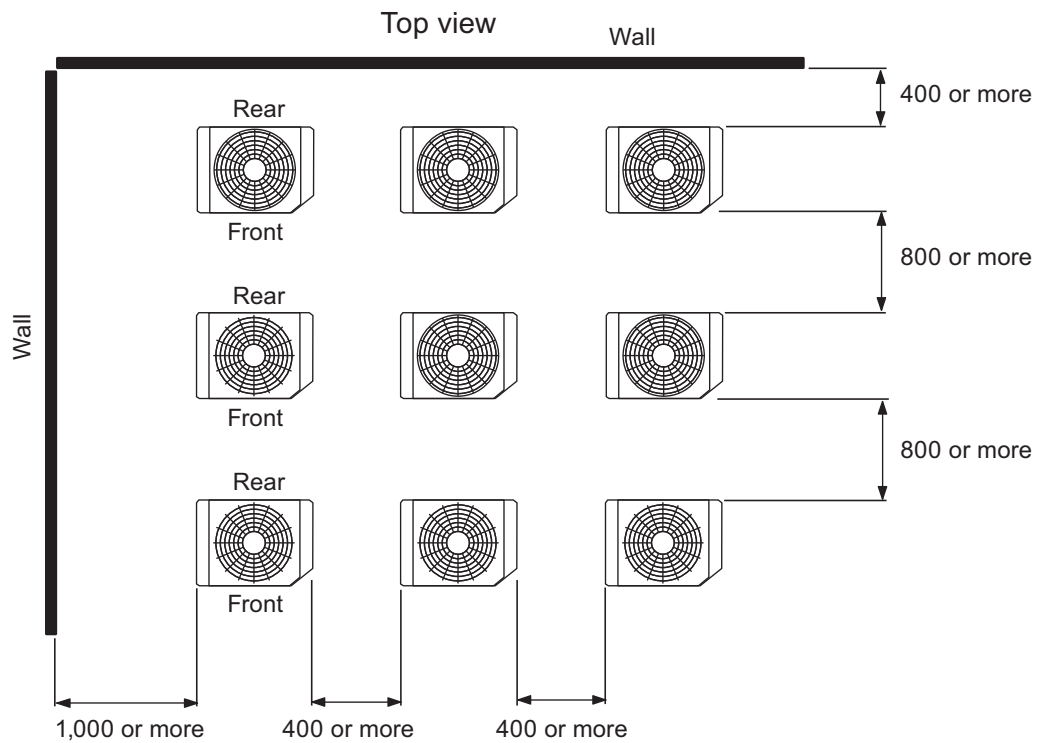
- **When installing with the front of the outdoor unit facing the wall side:**



## Concentrated installation

- The wall (without height restrictions) must not exist on both left and right sides of the outdoor unit. Also, the wall must not exist on both front and rear of the outdoor unit.
- Airflow resistance can be ignored when the distance from a wall or other equipment is more than 2 m.

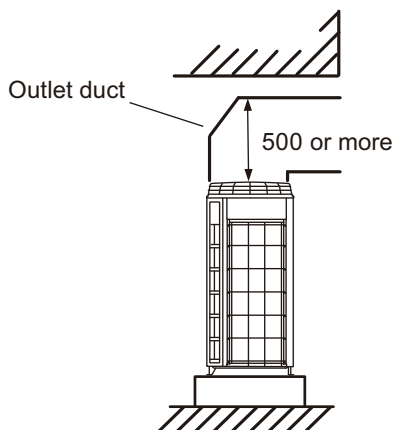
Unit: mm



## 4-3. 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 below.
- When an outlet duct, etc. is installed, the high static pressure mode must be set by push button. (Also, applies when a snow hood is installed.)

Unit: mm



### • High static pressure mode setting

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

Condition	High static pressure mode*1
$0 \text{ Pa} \leq \text{Static pressure}^{*2} \leq 30 \text{ Pa}$	Set to mode 1
$30 \text{ Pa} < \text{Static pressure}^{*2} \leq 80 \text{ Pa}$	Set to mode 2

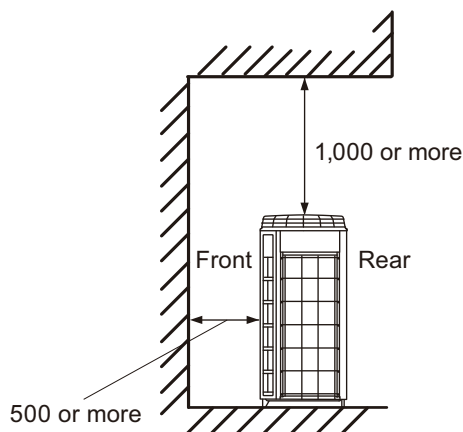
\*1: For function settings, refer to "[Setting list](#)" in Chapter 7. FUNCTION SETTINGS on page 07-75.

\*2: Static pressure is airflow resistance that includes the discharge duct resistance and additional resistance like discharge grille and so on.

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

- Provide 1 m or more clearance to ceiling.
- Do not locate wall at rear of the unit.
- Up to 3 units can be installed in this configuration.

Unit: mm



## 4-4. Concentrated installation example

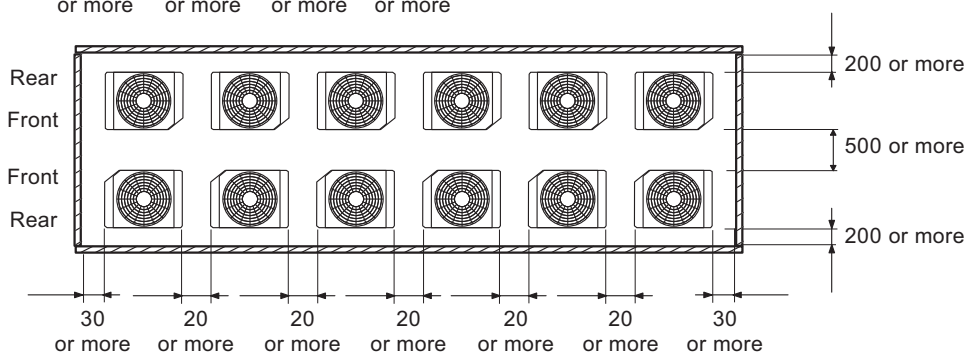
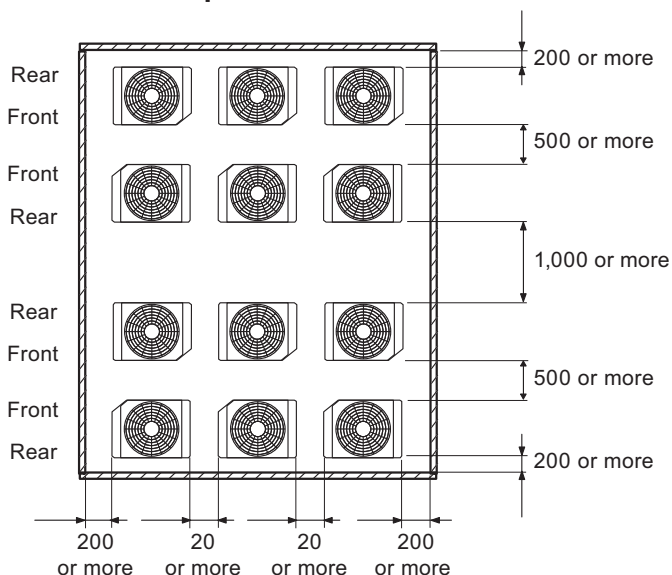
- When installing units in a group, in order to avoid short circuiting that could reduce capacity or cause a shutdown, install units with clearances equal to or greater than shown below.
- To prevent short circuiting, consider elevating the units and provide openings at the bottom of the wall for airflow. When installing more than the number of units shown below, contact your distributor or representative for installation recommendations.

### ■ Example 1

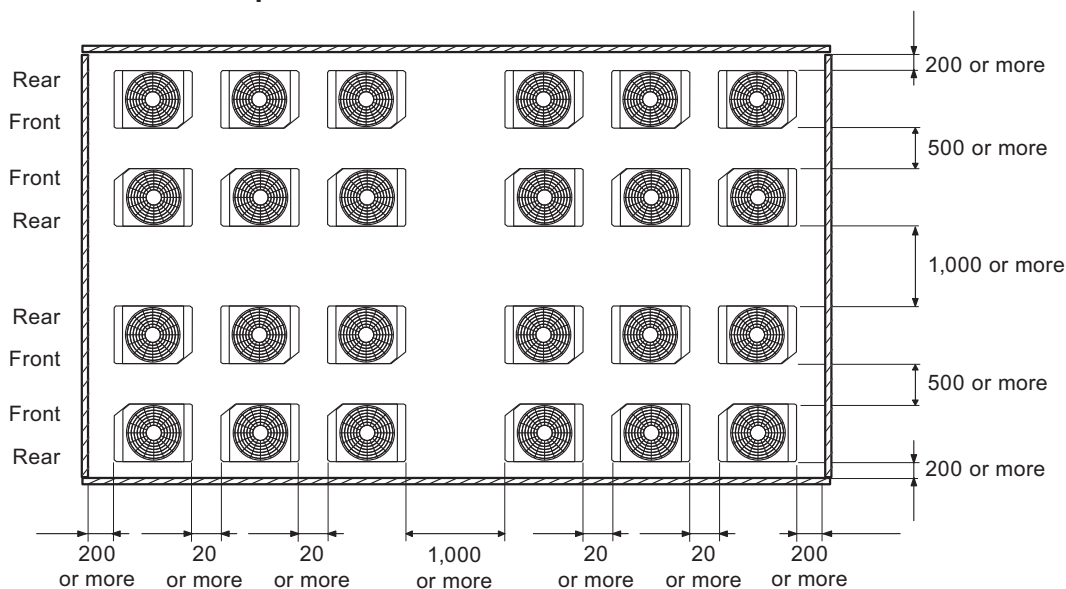
Wall height: All 500

Unit: mm

#### • 12 units installation example



#### • 24 units installation example



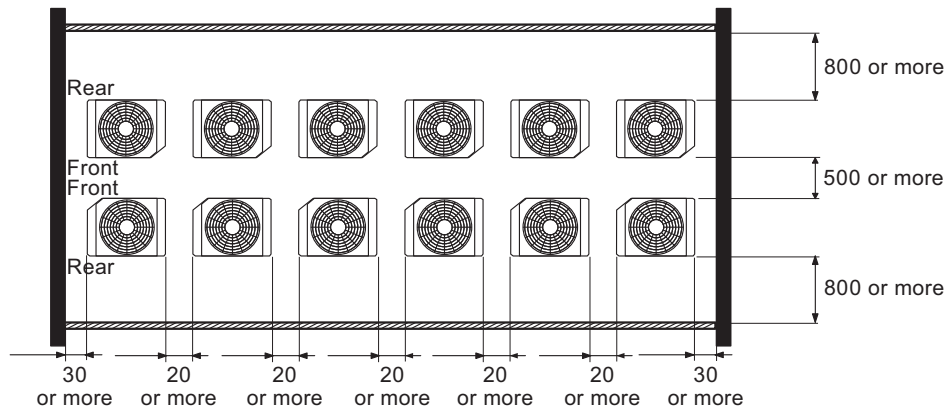
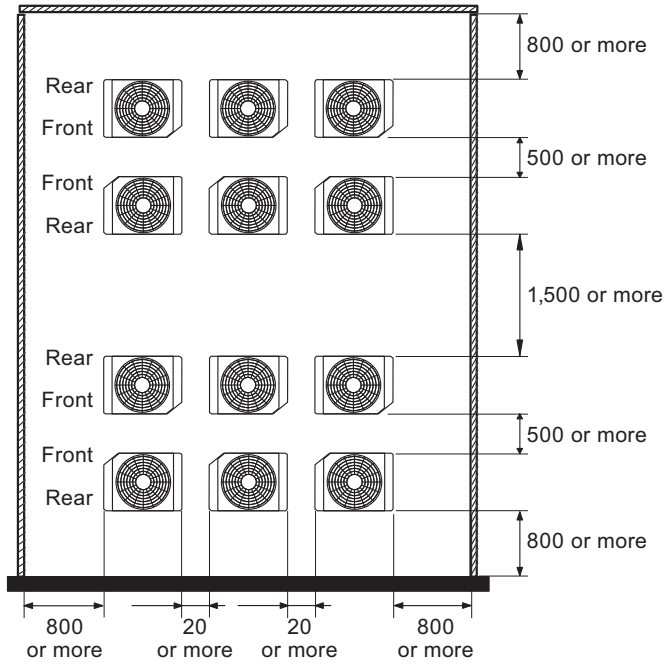
## Example 2

Wall height: All 1,700

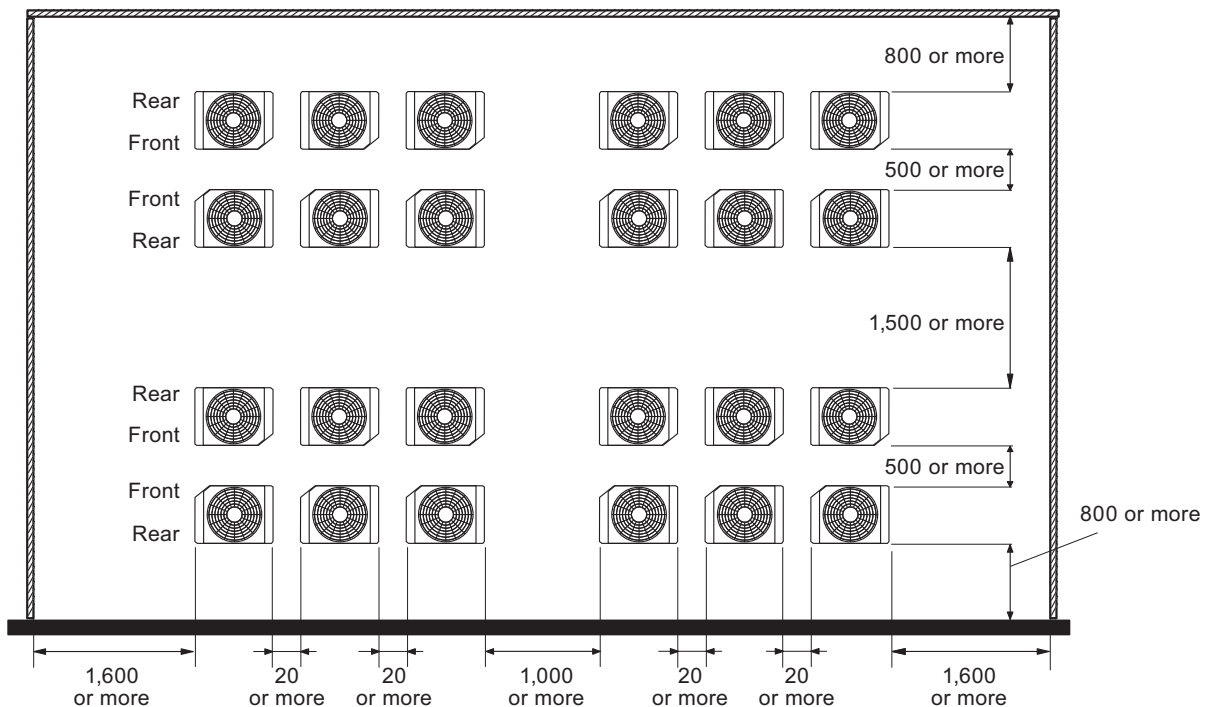
Unit: mm

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

### • 12 units installation example



### • 24 units installation example



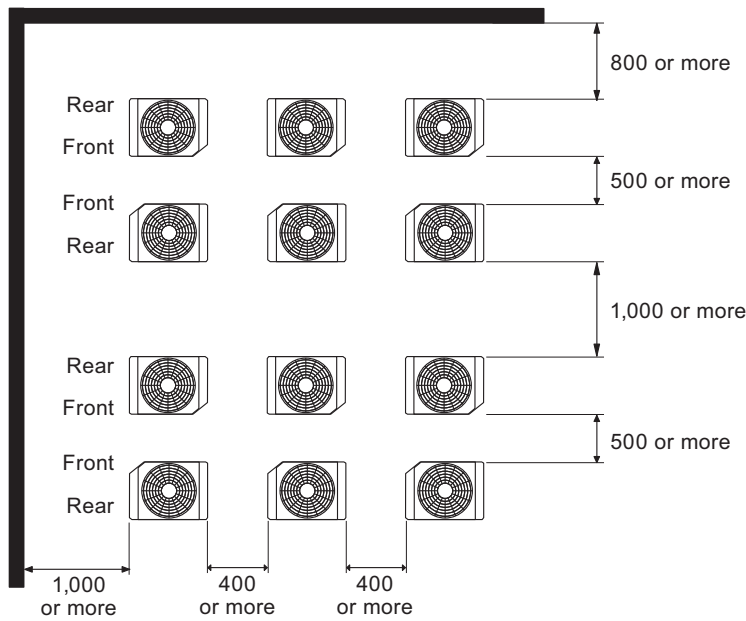
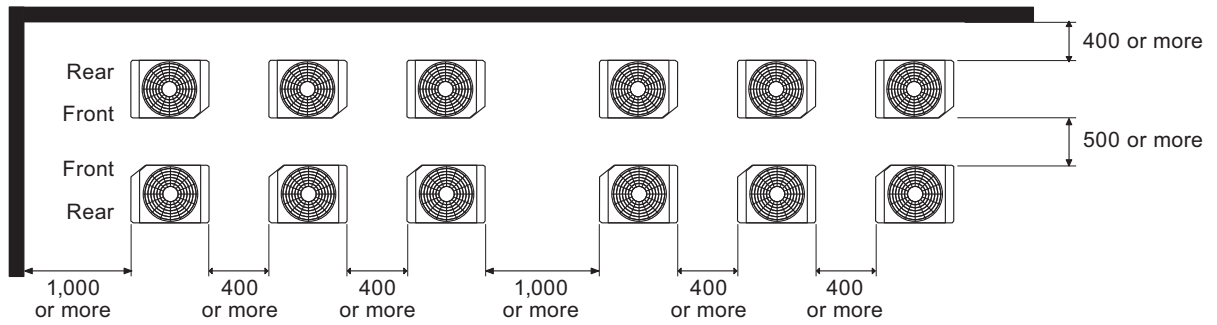
### ■ Example 3

Wall height is unrestricted

Unit: mm

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

• **12 units installation example**





## 4-5. Installation on each floor

### • Precaution when installing on each floor

- When installing the product on each floor, be careful because updraft may cause a short circuit. If a short circuit 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.
- Secure clearance for the refrigerant piping and electrical wiring.
- Install an outlet duct at each outdoor unit.

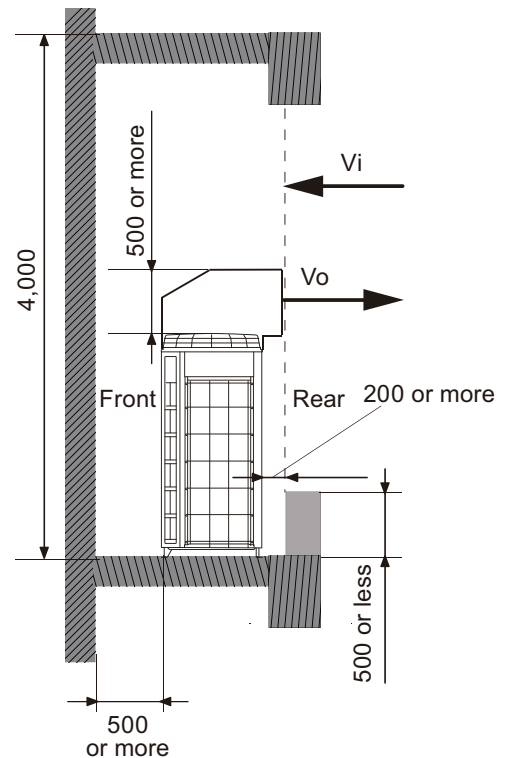
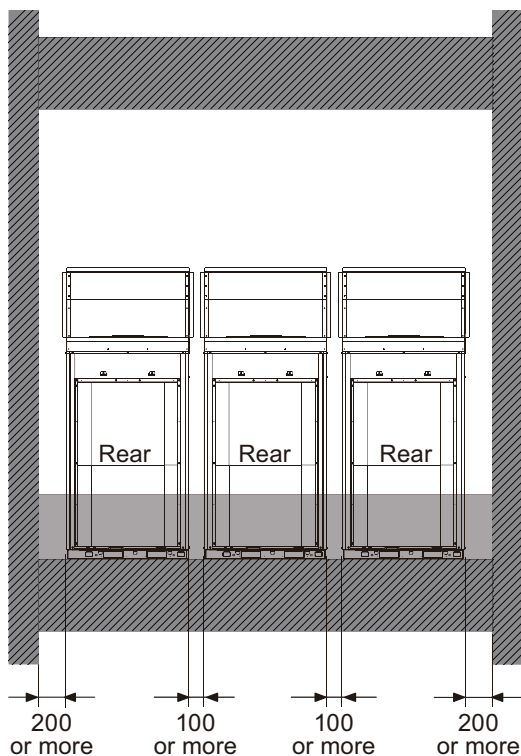
### • Installation example when installed on each floor

**NOTE:** If the installation differs from following example, be careful of short circuit.

Example	Height/Floor	Capacity/Floor	Installable floor number
		4,000 mm	48 HP

Unit: mm

Example of each floor



- The outlet air velocity ( $V_o$ ) = 5.5 to 7.5 m/s
- The intake air velocity ( $V_i$ ) = 1.2 m/s or less

### • 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  $0^\circ$  to  $20^\circ$  down. If installed facing up, short circuit is easily generated by updraft.
- Make the opening ratio of the outlet louver 75% or greater.