

1. Selecting the Installation Site

[1] Installation Conditions

Select the installation site in consultation with the client.

Select a site to install the outdoor unit that meets the following conditions:

- This unit is for outdoor installation only.
- The unit will not be subject to heat from other heat sources.
- The noise from the unit will not be a problem.
- The unit will not be exposed to strong winds.
- Water from the unit can be drained properly.
- To reduce the risk of fire, do not install the unit in a place where a flammable gas may be generated, migrate into, stagnate, or leak out into.
- Do not install the unit in a place where acidic solution or sulfuric sprays are frequently used.
- Do not install the unit in a place where large amounts of oil, steam, or sulfide gas are present.
- The space requirements (specified on pages 7 through 9) are met.

<1> Providing protection against winds

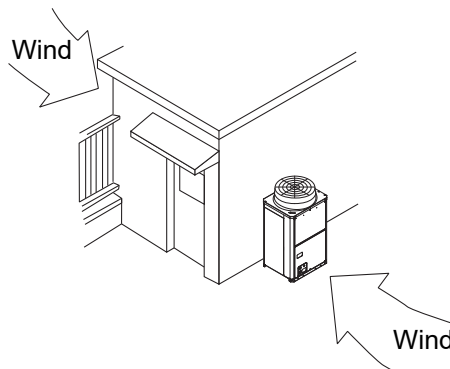
Using the figures at right as a reference, provide adequate protection against winds.

A unit installed alone is vulnerable to strong winds. Select the installation site carefully to minimize the effect of winds.

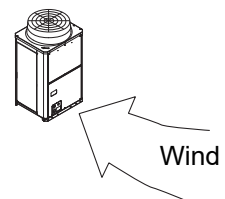
When installing a unit in a place where the wind always blows from the same direction, install the unit so that the outlet faces away from the direction of the wind.

Each unit requires the amount of air flow listed in the table below. Leave sufficient space around the unit for proper ventilation, and take the duct pressure loss into consideration when connecting a discharge duct.

Standard air flow rate	220 m ³ /min
Minimum required air flow rate	200 m ³ /min
Allowable external static pressure	10 Pa



- Install the outdoor unit in a place where it is not exposed to direct wind, such as behind a building.



- Install the outdoor unit so that the outlet/inlet faces away from the wind.

<2> Cold Climate Installation

Observe the following when installing the units in areas where snow or strong winds prevail.

- Avoid direct exposure to rain, winds, and snow.
- Icicles that may form under the foundation can fall and inflict personal injury or property damage. Select the installation site carefully to reduce these risks, especially when installing the unit on a roof.
- If the units are installed in the direct line of rain, winds, or snow, install the optional snow hood (on both the discharge and suction ducts). Use a snow net or snow fence as necessary to protect the unit.
- Install the unit on a base approximately twice as high as the expected snowfall.
- If the unit is continuously operated for a long time with the outside air temperature below the freezing point, install a heater at the base of the unit to prevent the water from freezing at the unit bottom.
- When using the unit in an outdoor temperature of -15°C or below, install a drain pan (with heater whose capacity is 320 W or more) at the bottom surface of the unit.

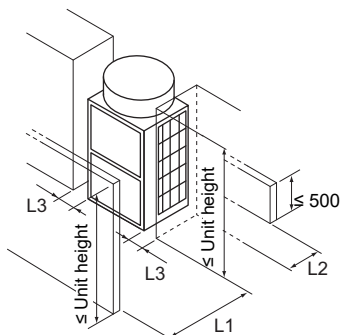
[2] Installation Space Requirements

Provide sufficient space around the unit for effective operation, efficient air movement, and ease of access for maintenance.

<1> Single unit installation

(1) When all walls are within their height limits*.

[mm]



* Height limit

Front/Right/Left	Same height or lower than the overall height of the unit
Rear	500 mm or lower from the unit bottom

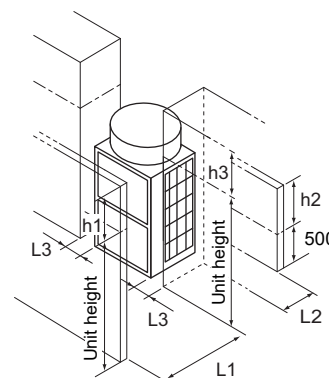
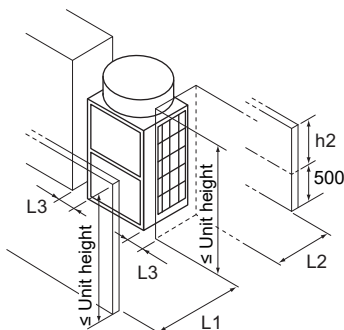
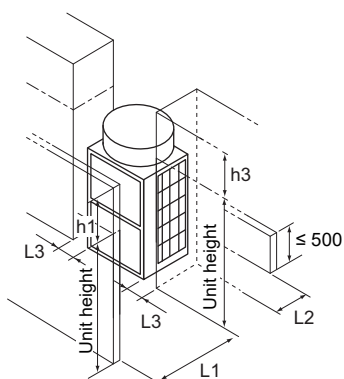
	Required minimum distance [mm]		
	L1 (Front)	L2 (Rear)	L3 (Right/Left)
When the distance behind the unit (L2) needs to be small	500	300	50

(2) When one or more walls exceed their height limits*.

When the wall(s) at the front and/or the right/left exceed(s) their height limits

When the wall at the rear exceeds its height limit

When all walls exceed their height limits



Add the dimension that exceeds the height limit (shown as "h1" through "h3" in the figures) to L1, L2, and L3 as shown in the table below.

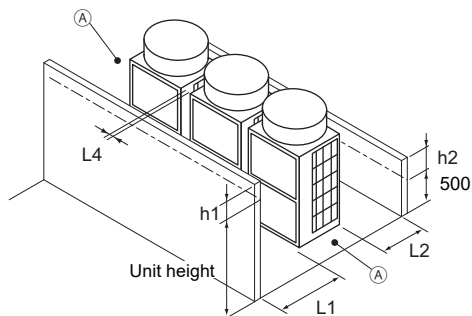
	Required minimum distance [mm]		
	L1 (Front)	L2 (Rear)	L3 (Right/Left)
When the distance behind the unit (L2) needs to be small	500 + h1	300 + h2	50 + h3

<2> Multiple unit installation

When installing multiple units, make sure to take into consideration factors such as providing enough space for people to pass through, ample space between blocks of units, and sufficient space for airflow. (The areas marked with Ⓐ in the figures below must be left open.)

In the same way as with the single unit installation, add the dimension that exceeds the height limit (shown as "h1" through "h3" in the figures) to L1, L2, and L3 as shown in the tables below.

(1) Side-by-side installation



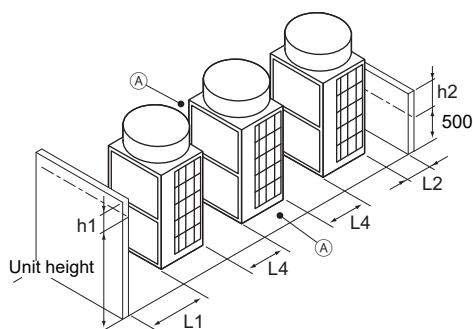
[mm]

Required minimum distance [mm]		
L1 (Front)	L2 (Rear)	L4 (Between)
$500 + h1$	$300 + h2$	100

Ⓐ Leave open in two directions.

(2) Face-to-face installation

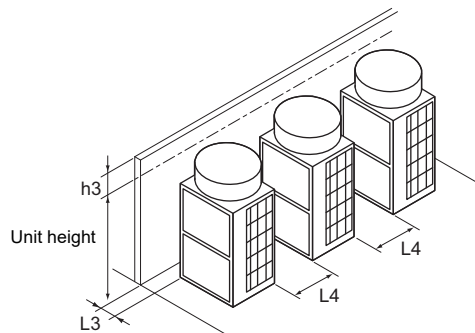
When there are walls in the front and rear of the block of units



Required minimum distance [mm]		
L1 (Front)	L2 (Rear)	L4 (Between)
500	300	500

Ⓐ Leave open in two directions.

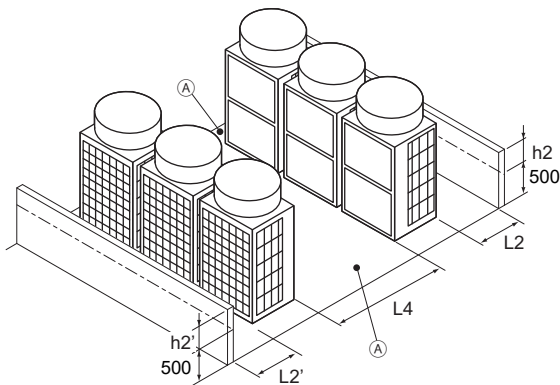
When there is a wall on either the right or left side of the block of units



Required minimum distance [mm]	
L3 (Right/Left)	L4 (Between)
$50 + h3$	500

(3) Combination of face-to-face and side-by-side installations

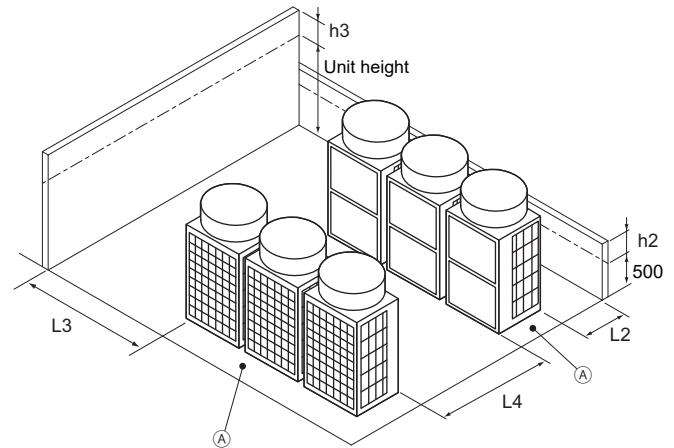
When there are walls in the front and rear of the block of units



Required minimum distance [mm]		
L2 (Right)	L2' (Left)	L4 (Between)
$300 + h_2$	$300 + h_2'$	1000

Ⓐ Leave open in two directions.

When there are two walls in an L-shape



Required minimum distance [mm]		
L2 (Right)	L3 (Right/Left)	L4 (Between)
$300 + h_2$	$1000 + h_3$	1000

[3] System installation restrictions

• Piping length restrictions

The maximum piping length is 60 m.

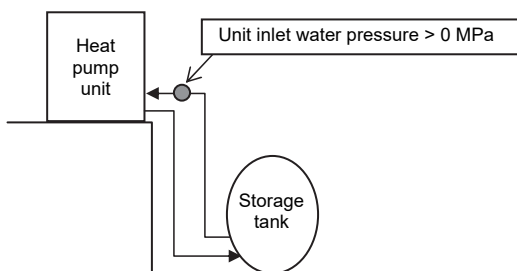
Select appropriate diameter pipes to prevent negative pressure from the pumping head and the pressure loss in the pipes.

Pumping head (when maximum flow rate is 17 ℓ/min): 70 kPa

• Installation height restrictions

- When the unit is installed above the storage tank

Decide the height so that the unit inlet water pressure will not be negative for the tank pressure.



- When the unit is installed below the storage tank

Decide the height so that the unit inlet water pressure will be 0.5 MPa or below for the tank pressure.

