

Cold Climate Installation Guidelines

Commercial HVAC



1. Overview

This document outlines general application guidelines on the installation of an outdoor unit(s) in a cold climate region. These guidelines are important as wind and snow can significantly reduce the capacity of the outdoor units. If these guidelines are not followed, defrost efficiency could also be negatively impacted including the possibility of damage to the units also.

2. How it Works

The following guidelines are recommended:

a. Installation Location

When possible, outdoor units should be installed where it is sheltered from the prevailing wind, snow, rain, hail etc. When this isn't possible, installing wind/snow guards and hoods are highly recommended.

b. Measures for Drainage of Water

During heating, condensate will be produced in the outdoor unit. Because of this, it is important to do the following things:

- Do not install outdoor units on top of one another as it may cause freezing damage to the bottom unit. Instead, place the units side by side (**as per figure 1 below**).
- Use a stand with a steel framework to allow water to drain properly. If not done, condensate could freeze inside the outdoor unit and may cause damage to the unit. Also, the width of the stand must not exceed the width of the unit (**as per figure 2 below**).
- Do not install the outdoor unit near walkways as the drained condensate may freeze along walkways and cause a slip hazard (**as per figure 3 below**).

c. Measures for Snow

Snow can negatively affect the outdoor unit. The following steps are recommended to mitigate:

- Use snow protection hoods as necessary (**as per figure 4 below**). Snow hoods prevent snow accumulation inside and outside the outdoor unit which will cover the heat exchanger.
- Do not install the units on the ground. Instead, install on a stand that will add sufficient height to protect the unit's heat exchanger from snow, and above regional snow level.

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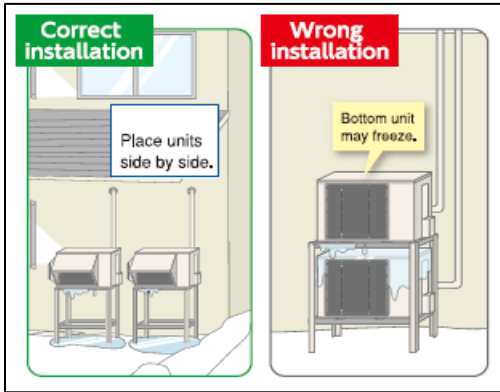


Figure 1: Units installed side by side

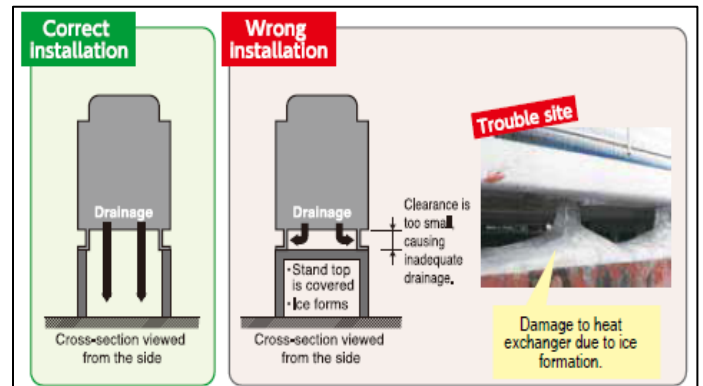


Figure 3: Units installed on stands

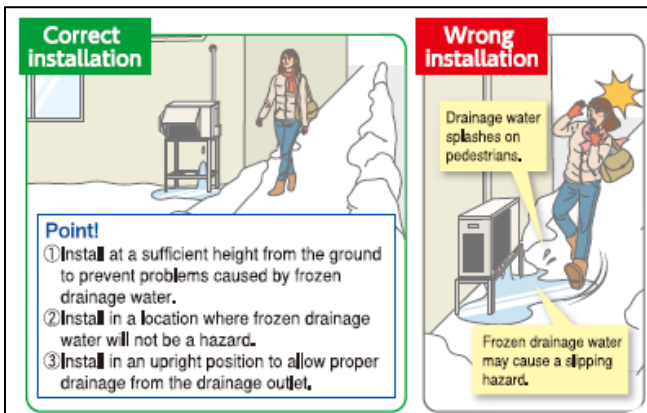


Figure 2: Precaution against installing units near walkways

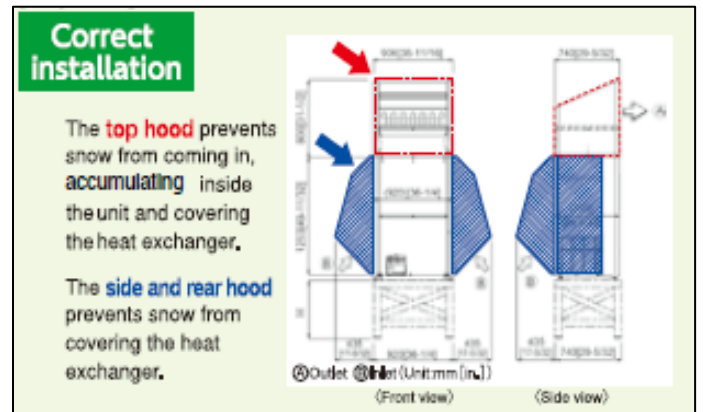


Figure 4: Snow Hood

d. Base and Panel Heaters

Base/panel heaters should be used whenever the unit is expected to be operated in the outdoor air temperatures below 0°C (32°F) for extended periods of time. This will help with preventing the formation of ice on the base of the unit and/or heat-exchanger. Please note that PUMY-H2i and CM-H2i series outdoor units already come equipped with base/panel heaters from factory.

Please also check application bulletin “AppNote_2000_22_001_Cold Climate Installation Guidelines” released earlier and installation manuals for additional references/guidelines.

Key Notes: Only MESCA provided accessories are permitted else it voids the warranty.