

# COLD WEATHER SOLUTIONS GUIDE

Best practices for consistent low ambient performance





## Low Ambient Cooling

Full cooling performance at extreme conditions

The specially designed wind deflectors will block unwanted wind that could impede operation and will allow full airflow when required at higher ambient temperatures or in heating mode. The assembly also provides a more efficient defrost cycle when the unit is operating in heating mode. The complete Low Ambient Kit requires a hood with control damper assembly and wind deflectors. With the addition of a low ambient kit, CITY MULTI® Y-Series and R2-Series outdoor units feature 100% cooling capacity at outdoor temperatures down to -10°F. The wind deflector kit easily installs in the place of the existing wire guards, and the low ambient hood connects to the outdoor unit with plug-in electrical connections.



Full cooling performance when the wind blows

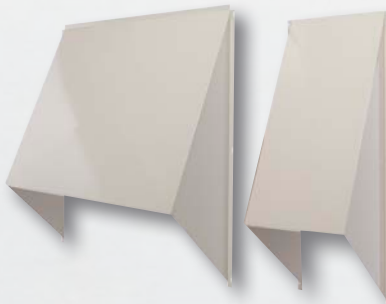
P-Series Light Commercial cooling and heating systems provide full capacity cooling down to 23° F during standard operation as delivered. The addition of a front wind baffle to the cabinet of the outdoor unit extends the cooling capacity down to 0° F outdoor ambient. Further adding rear and side Advanced Wind Baffles will extend full capacity operation down to -20°F

P-Series wind baffles control the airflow through the condenser coil, and also prevent the fan from counter-rotating in windy conditions.



# Cold Weather Solutions Guide

## Product overview



### Wind and Snow Accessories

Protect your cooling & heating investment no matter how nasty it gets outside

### Hail/Snow Guards

Mitsubishi Electric hail/snow guards are designed to protect the outdoor unit coil surfaces from hail damage or snow build-up in severe climates. Made of 20-gauge, hot-dipped galvanized G-90 steel, the hail/snow guards feature a heavy-duty polyester-based powder paint finish to match the outdoor units. Using existing wire guard fasteners, the hail/snow guards are easily installed to the sides and rear of the unit in just minutes.



### Hail/Snow Hoods

Mitsubishi Electric hail/snow hoods are made to the same specifications as the hail/snow guards, and protect the outdoor unit fan guard from hail damage and snow build-up in severe climates. Using existing guard fasteners, the hail/snow hoods are easily installed to the top of the unit in just minutes. Hail/snow hoods are sold separately, or can be ordered in a combination kit with hail/snow guards.



# Cold Weather Solutions Guide

## Heaters and Stands



### Base Pan Heaters

Prevent ice buildup even in the harshest climates



Mitsubishi Electric base pan heaters feature a heating coil controlled by the outdoor unit which prevents ice buildup. The base pan heater is ideal for low temperature, high humidity environments where the outdoor unit will be operating in heating mode for an extended period of time. A complete CITY MULTI® base pan heater kit order includes a relay box, the heating element(s), required mounting brackets, and all other associated items required for installation.

A complete M and P-Series base pan heater kit and associated hardware order includes the heating element(s), supports, wiring, and mounting materials.

It is highly recommended that Snow Hoods and Guards are installed any time Base Pan Heaters are used.



### Cold Weather Stands and Supports

Rise above the snow to achieve ultimate heating & cooling capacity

Mitsubishi Electric features multiple configurations of stands and supports for M-Series, P-Series, and CITY MULTI outdoor units. The sturdy stands and supports are designed to keep the outdoor unit above or off the ground and away from snow drifts in cold weather.



### **CITY MULTI Outdoor Units: U-Bar SuperStand with Feet**

- Rubber roof friendly
- Available in 12", 18", and 24" leg heights, adjustable in ¼" and ½" increments
- U-Bars made from 11 gauge steel square tubing
- Seismic and wind load certification available upon request



### **M-Series and P-Series: Adjustable Stand**

- Four points of anti-vibration isolation washers
- Adjustable footprint from 34" to 40" in 1" increments
- Max capacity of 400 pounds
- Available in 12" and 18" heights and in one fan and two fan sizes



### **M-Series and P-Series: Wall-Mount Bracket**

- 25" mounting rails
- Nine points of anti-vibration isolation
- 500 pounds max capacity





# INSTALLATION BEST PRACTICES

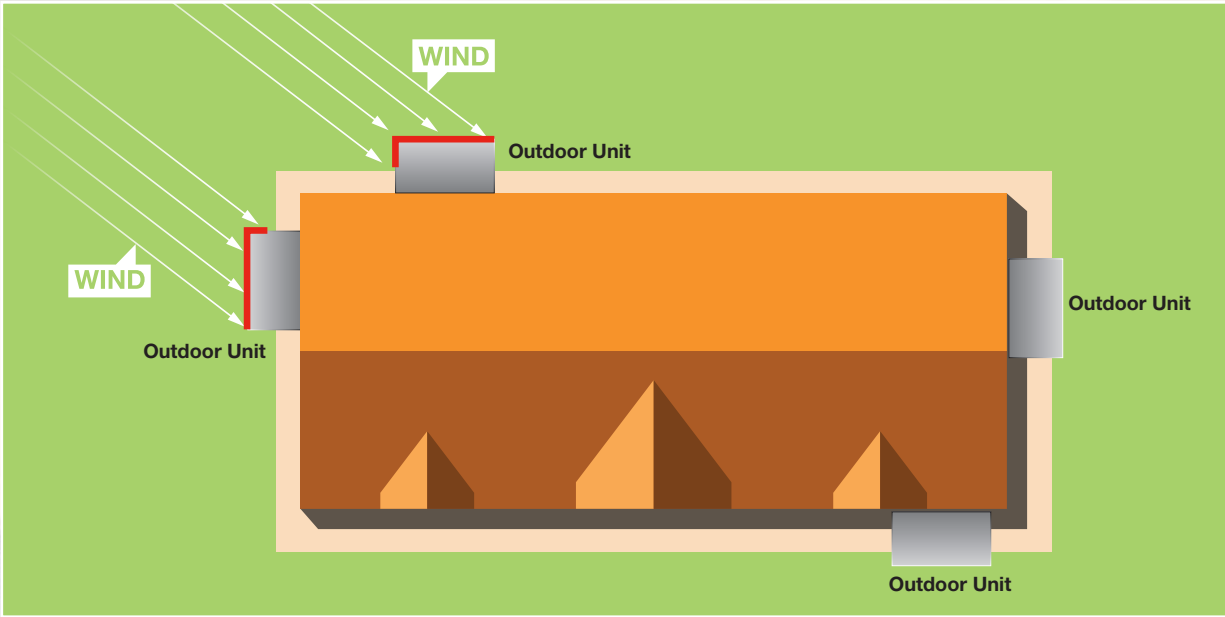
## Product Overview

### How will full outdoor unit capacity be achieved in a cold and snowy climate?

Wind and snow can significantly reduce capacity. To ensure full outdoor unit capacity is achieved, follow the best practices listed below to install the outdoor unit correctly. The three points apply to M-Series, P-Series, and CITY MULTI outdoor units.

### Installation location

- Be aware of the prevailing wind direction in winter and install the outdoor unit where it is as sheltered as possible
- Outdoor units are easily affected by wind
- Less influence of wind means a unit will run at a higher capacity



### Installation Tips: Drainage of Water

DO'S	DONT'S
Install the outdoor unit at a sufficient height from the ground to prevent problems with frozen drainage water	Install the units on top of one another as drainage water from the top unit may freeze on the bottom unit
Install the outdoor unit in an upright position to allow proper drainage	Install the outdoor units close to a pedestrian passage as frozen drainage water may cause a slip hazard
Use a steel stand or support, equivalent in width to the outdoor unit, that allows water to drain properly from the unit	

### Installation Tips: Snow Build-Up

- Utilize a stand to add sufficient height to protect the unit's open type heat exchanger from snow and prevent icicles from forming during defrost operation
- Add a snow hood in particularly cold or snowy regions
- Install the unit at a height above the highest snowfall depth
- Place the unit a sufficient distance from the edge of the roof to avoid falling snow burying the unit

ACCESSORY	SNOWY REGION	COLD REGION	NOTES
Drain socket & centralized drain pan	Not needed	Not needed	Provides better drainage to help prevent freezing
Unit stand	Needed	Needed	Enables proper drainage
Snow hood	Needed when installation position is subject to falling snow	Not needed	Prevents heat exchanger from being covered in snow
Base pan heater	Needed	Needed	<p>Prevents damage to the heat exchanger and pipes which may be caused when the base of the unit freezes</p> <p>In a cold-climate zone, use of a base pan heater is strongly recommended</p> <p>It is also highly recommended that snow/hail hood and guards are installed in addition to base pan Heater to keep atmospheric ice from building up on or inside of the outdoor unit.</p>



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