

Ice and Snow Removal on Metal Buildings

It is important to maintain your metal building during the coldest months of the year. Metal Buildings are designed for specific loadings. With an above average snowfall, it is important to avoid an overload condition and cause serious damage to your building.

It is not recommended to remove snow with personnel getting on the roof. Snow should be removed in a balanced manner and care should be taken to prevent damage to the roof panels, any mechanicals and/or fasteners. The use of metal tools or snow blowers is not recommended. If metal building has skylights, the snow may conceal their location. Extreme care should be exercised when working in the area of skylights.

Snow Removal Procedures

The following are some suggestions that generally apply, however it is recommended that the building manufacturer or a structural engineer be consulted before snow removal is initiated.

1. Remove all hanging icicles from eaves and gutters. These will be quite heavy and if snow hangs up on them during removal, it can only increase this load. Care must be exercised to not damage the building and to not endanger pedestrians.
2. Always provide proper safety precautions when working on the roof. If possible, remove snow without getting up on the roof. Using draglines through the snow, working from the endwalls, can sometimes accomplish this.
3. Place ladders at the end of the building so sliding snow will not dislodge them.
4. Never send just one person on a roof to remove snow.
5. Remove snow in a pattern that does not cause an unbalanced loading condition. Avoid large differences in snow depth between adjacent areas of the roof. Do not remove all of the snow from small areas and then move on to another area. Instead, remove the snow in layers from all over the roof. This gradually decreases the load.
6. Remove drifted areas first, down to a level with other snow. If an area has drifts four feet deep and the main roof is two feet deep, trim off the drifts to two feet before proceeding.
7. Remove snow from the eave towards the ridge, sliding the snow off the roof over the gutter.
8. Remove the snow from the middle one-third of each bay for the full width of the building, beginning with the most snow packed bay. Complete snow removal on the remainder of the building.
9. On gable buildings, remove snow on both sides of the ridge at the same time.

Snow Removal Procedures (continued)

10. Never use metal shovels on any type of roof. Do not use picks, axes or other sharp tools to break up ice on the roof. It is quite easy to damage roofing materials with these tools.
11. Do not remove snow to less than a 3" depth over roof sheets. Care must be taken to eliminate hitting panel fasteners, snow guards, etc. If an ice layer is next to a panel, it should be left, if not extraordinarily thick.
12. Care must be taken in removal of ice and snow around ventilator bases, pipe flashings, and HVAC units, due to the ease of damaging neoprene boots, pipes, conduits, etc.
13. Be cautious of snow or ice breaking away and sliding down the roof, even on low slope roof buildings.
14. Use extreme care when working along the edge of the roof.
15. Watch for extreme deflections and listen for unusual noises when snow and ice build-up conditions exist.

Snow Guards

Snow Guards prevent the dangerous movement of snow and ice by allowing the snow or ice to melt completely or drop off in small amounts preventing damage from avalanching snow while remaining practically invisible. They are a practical cost effective addition to any sloped metal roof in winter climates.

For best results, snow guards should be installed during the warm weather.

If you use the glue down type of snow guards, it requires 50-degree temperature or more for 30 days for 100% glue cure.

Snow guards are typically installed on metal roofs of commercial buildings to prevent snow from falling on customers, vehicles, or any damageable property. After the snowfall accumulates on a metal roof, heat causes a thaw/freeze condition that causes dangerous snow slides. Snow guards spread out the snow load and securely hold in place allowing snow and ice to melt away safely.

The correct spacing of snow guards is as important as the proper selection of materials that go into the design of a building. Spacing layouts are based on the roof pitch, panel runs from the ridge to the eave, panel widths and profile, and the snow load design of the building. Metal Building Parts & Sales has experienced subcontractors to install snow guards and will help select the best material and correct spacing of the snow guard system whether it be snow guards, snow rails, snow bars, or high rib ice dams.